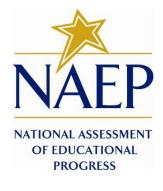
NATIONAL CENTER FOR EDUCATION STATISTICS NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

National Assessment of Educational Progress (NAEP) 2019 and 2020

Appendix K1

NAEP 2019 Student Questionnaires

OMB# 1850-0928 v.11



September 2018

Appendix F provides the library of possible items to be used in the NAEP 2019 and 2020 questionnaires. This appendix (Appendix K1) includes the final version of the NAEP 2019 Student questionnaires, as well as a summary of any minor, non-substantive, wording changes made as a result of pilot and cognitive interview results and final reviews. In addition, note that some of the questionnaires will utilize spiraling in order to minimize respondent burden while maximizing the amount of items that can be piloted. The spiral maps for these questionnaires are also included. The confidentiality citation has been updated in September 2018 and is consistent with that provided in Part A.

Abbreviation Key	
CAFS: Computer Access and Familiarity	
ESQ: Extended Student Questionnaire	
NIES: National Indian Education Study	

The items presented in this appendix are those to be used in the digitally based assessments. Some of the questionnaires will also be administered in paper based assessments. Adaptations to the item-level directions may be made, as appropriate (for example, "select one answer choice on each row" in DBA would become "fill in one oval on each line" in PBA).

Contents

Student Questionnaires	
Student Login Screen	5
Appendix K-1a: Summary of Changes Operational and Pilot Student Debrief	
Grades 4, 8, and 12	6
Appendix K-1b: Operational and Pilot Student Debrief Grades 4, 8, and 12	
	9
Appendix K-1c: Summary of Changes Operational Grade 4 Core	11
Appendix K-1d: Operational Grade 4 Core	17
Appendix K-1e: Summary of Changes Pilot Grade 4 Core	
Appendix K-1f: Pilot Grade 4 Core	31
Appendix K-1g: Spiral Map Grade 4 Core	
Appendix K-1h: Summary of Changes Operational Grade 8 Core	41
Appendix K-1i: Operational Grade 8 Core	49
Appendix K-1j: Summary of Changes Pilot Grade 8 Core	
Appendix K-1k: Pilot Grade 8 Core	65
Appendix K-1I: Spiral Map Grade 8 Core	74
Appendix K-1m: Summary of Changes Operational Grade 12 Core	
Appendix K-1n: Operational Grade 12 Core	87
Appendix K-1o: Summary of Changes Operational Grade 4 Reading	
Appendix K-1p: Operational Grade 4 Reading	103
Appendix K-1q: Summary of Changes Pilot Grade 4 Reading	110
Appendix K-1r: Pilot Grade 4 Reading	117
Appendix K-1s: Spiral Map Grade 4 Reading	125
Appendix K-1t: Summary of Changes Operational Grade 8 Reading	128
Appendix K-1u: Operational Grade 8 Reading	135
Appendix K-1v: Summary of Changes Pilot Grade 8 Reading	145
Appendix K-1w: Pilot Grade 8 Reading	154
Appendix K-1x: Spiral Map Grade 8 Reading	163
Appendix K-1y: Summary of Changes Operational Grade 12 Reading	167
Appendix K-1z: Operational Grade 12 Reading	175
Appendix K-1aa: Summary of Changes Operational Grade 4 Mathematics	
	186
Appendix K-1ab: Operational Grade 4 Mathematics	193
Appendix K-1ac: Summary of Changes Pilot Grade 4 Mathematics	200
Appendix K-1ad: Pilot Grade 4 Mathematics	208
Appendix K-1ae: Spiral Map Grade 4 Mathematics	

Appendix K-1af: Summary of Changes Operational Grade 8 Mathematics	
Appendix K-1ag: Operational Grade 8 Mathematics	
Appendix K-1ah: Summary of Changes Pilot Grade 8 Mathematics	
Appendix K-1ai: Pilot Grade 8 Mathematics	
Appendix K-1aj: Spiral Map Grade 8 Mathematics	
Appendix K-1ak: Summary of Changes Operational Grade 12 Mathematics	
Appendix K-1al: Operational Grade 12 Mathematics	
Appendix K-1am: Summary of Changes Operational Grade 4 Science	291
Appendix K-1an: Operational Grade 4 Science	
Appendix K-1ao: Summary of Changes Operational Grade 8 Science	
Appendix K-1ap: Operational Grade 8 Science	
Appendix K-1aq: Summary of Changes Operational Grade 12 Science	
Appendix K-1ar: Operational Grade 12 Science	
Appendix K-1as: Summary of Changes Operational Grade 4 NIES	
Appendix K-1at: Operational Grade 4 NIES	
Appendix K-1au: Summary of Changes Operational Grade 8 NIES	
Appendix K-1av: Operational Grade 8 NIES	
Appendix K-1aw: Summary of Changes Operational Grade 4 CAFS	
Appendix K-1ax: Operational Grade 4 CAFS	
Appendix K-1ay: Summary of Changes Operational Grade 8 CAFS	
Appendix K-1az: Operational Grade 8 CAFS	
Appendix K-1ba: Summary of Changes Operational Grade 12 CAFS	
Appendix K-1bb: Operational Grade 12 CAFS.	
Appendix K-1bc: Summary of Changes Operational Grade 4 ESQ	
Appendix K-1bd: Operational Grade 4 ESQ	
Appendix K-1be: Summary of Changes Operational Grade 8 ESQ	
Appendix K-1bf: Operational Grade 8 ESQ	
Appendix K-1bg: Summary of Changes Operational Grade 12 ESQ	
Appendix K-1bh: Operational Grade 12 ESQ	

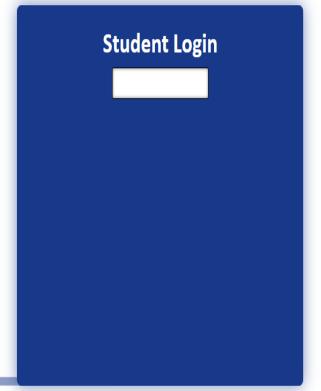
Student Login Screen

Welcome to NAEP



Grade 04 Booklet M151 School (FULCRUM), 9813151

Session: QC0401 Router: Disconnected Admin: Disconnected



According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this voluntary information collection is 1850-0928. The time required to complete this information collection is estimated to average 90 minutes, including the Considering the second system and the second considering the second system and the secon Assessment of Educational Progress (NAEP), National Center for Education Statistics (NCES), Potomac Center Plaza, 550 12th St., SW, 4th floor, Washington, DC 20202.

National Center for Education Statistics (NCES) is authorized to conduct NAEP by the National Assessment of Educational Progress Authorization Act (20 U.S.C. §9622). All of the information provided by participants may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). By law, every NCES employee as well as every NCES agent, such as contractors and NAEP coordinators, has taken an oath and is subject to a jail term of up to 5 years, a fine of \$250,000, or both if he or she willfully discloses ANY identifiable information about you. Electronic submission of your information will be monitored for viruses, malware, and other threats by Federal employees and contractors in accordance with the Cybersecurity Enhancement Act of 2015. The collected ation will be combined across respondents to produce statistical reports.

eNAEP version 4.1.1.34969, 9/6/18 9:27 AM (EST). Database version 673, 8/31/18 7:13 AM (EST) eNAEP Chrome Extension Version 3.1.5

Appendix K-1a: Summary of Changes Operational and Pilot Student Debrief Grades 4, 8, and 12

2019 Operational and Pilot Grade 4, 8, and 12 Debrief Student

Previous item		2019 item		D/A/ R/NC+	Rationale
1. How important was it to you to do well on this test?	VH240001	N/A		D	To keep
					student
Not very important					burden low,
D Somewhat important					-
© Important					this item was
Wery important O					dropped.
(2018 Grade 4, 8, and 12)					
	VICMIN		VH260313	NC	N/A
2. How easy or difficult was this test?		1. How easy or difficult was this test?			,.
D Extremely difficult		Extremely difficult			
D Quite difficult		D Quite difficult			
© Somewhat difficult		© Somewhat difficult			
D Somewhat easy		D Somewhat casy			
D Quite easy		D Quite easy			
© Extremely easy		D Extremely casy			
(2018 Grade 4, 8, and 12)		Issue: Debrief			
	VID33638		¥H333658	NC	N/A
3. How much effort did you apply to succeed on this test?		2. How much effort did you apply to succeed on this test?			,
No effort at all		No effort at all			
Very little effort		Very little effort			
© Some effort		© Some effort			
Quite a bit of effort		D Quite a bit of effort			
© A lot of effort		D A lot of effort			
2018 Grade 4, 8, and 12)		Issue: Debrief			
	VIETUSSO	N/A		D	To keep
How challenging was taking this test?					student
© Not challenging at all					
D A little challenging					burden low,
© Somewhat challenging					this item was
Quite challenging					dropped.
D Extremely challenging					
(2018 Grade 4, 8, and 12)					

2019 Operational and Pilot Grade 4, 8, and 12 Debrief Student						
Previous item	2019 item	D/A/ R/NC+	Rationale			
 5. How much time pressure did you feel when taking this test? No time pressure at all A little bit of time pressure Some time pressure Quite a bit of time pressure A lot of time pressure (2018 Grade 4, 8, and 12) 	N/A	D	To keep student burden low, this item was dropped.			

Appendix K-1b: Operational and Pilot Student Debrief Grades 4, 8, and 12

- 1. How easy or difficult was this test?
 - Extremely difficult
 - Quite difficult
 - © Somewhat difficult
 - © Somewhat easy
 - © Quite easy
 - © Extremely easy

- 2. How much effort did you apply to succeed on this test?
 - (No effort at all
 - [®] Very little effort
 - © Some effort
 - Quite a bit of effort
 - © A lot of effort

Appendix K-1c: Summary of Changes Operational Grade 4 Core

2019 Operational Grade 4 Core Student

Previous item	2019 item		D/A/ R/NC+	Rationale
 6. Are you Hispanic or Latino? Select one or more answer choices. (a) No, I am not Hispanic or Latino. (b) Yes, I am Mexican, Mexican American, or Chicano. (c) Yes, I am Puerto Rican or Puerto Rican American. (c) Yes, I am Cuban or Cuban American. (c) Yes, I am from some other Hispanic or Latino background. 	 3. Are you Hispanic or Latino? Select one or more answer choices. No, I am not Hispanic or Latino. Yes, I am Mexican, Mexican American, or Chicano. Yes, I am Puerto Rican or Puerto Rican American. Yes, I am Cuban or Cuban American. Yes, I am from some other Hispanic or Latino background. Issue: Race/Ethnicity 	. VII24037	NC	N/A
 Which of the following best describes you? Select one or more answer choices. White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander (2018 Grade 4)	 4. Which of the following best describes you? Select one or more answer choices. White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander Issue: Race/Ethnicity 	VII240388	NC	N/A
 8. About how many books are there in your home? The Few (0-10) Enough to fill one shelf (11-25) Enough to fill one bookcase (26-100) Enough to fill several bookcases (more than 100) 	 5. About how many books are there in your home? The Few (0-10) Enough to fill one shelf (11-25) Enough to fill one bookcase (26-100) Enough to fill several bookcases (more than 100) 	VII240186	NC	N/A
(2018 Grade 4)	Issue: Socioeconomic Status			

		2	019 O	perational Grade 4 Core S	Student				
Previous item				2019 item				D/A/ R/NC+	Rationale
9. Do you have any of the following in your home	e? Select one answer c	hoice on each row.	VH271104	6. Do you have any of the following in your hom	ne? Select one answer	choice on each row.	VH271104	R	Due to
	Yes	No			Yes	No			concerns
a. Access to the Internet	۵	ـ	VH271105	a. Access to the Internet	Ø	®	VH271105		about
b. Clothes dryer just for your family	0	٢	VH336756	b. Your own bedroom	0	®	VH336762		
c. Dishwasher	0	٢	VH336759	c. A desktop or laptop computer (including	۵	₪	VH591976		content
d. Your own bedroom c. A desktop or laptop computer (including	۵	٢	VH336762	Chromebooks) that you can use	0	Ū.			relevance and
Chromebooks) that you can use	۵	®	VH591976	d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	۵	ـ	VH271110		to keep
f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	٩	®	VH271110	e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can	۵	0	VH271112		student
g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	۵	٢	VH271112	usc					burden low, sub-items b
(2018 Grade 4)	(2018 Grade 4)			Issue: Socioeconomic Status					and c were dropped.
			VH354591		Sec. 2.		VH354591	NC	N/A
10. How often do you use the Internet for homew	vork at home?			How often do you use the Internet for homew	ork at home?				,
(D) Never				Never					
About once or twice a month				About once or twice a month					
© About once or twice a week				© About once or twice a week					
Almost every day Almost every day									
© Every day				© Every day					
(2018 Grade 4)				Issue: Technology Use					
	1.00		VH240190		Contraction (Sec. Sec.)		VH240190	NC	N/A
11. How many days were you absent from school i	in the last month?			8. How many days were you absent from school	l in the last month?			NC	N/A
(3) None				③ None					
① 1 or 2 days				1 or 2 days					
© 3 or 4 days				© 3 or 4 days					
D 5 to 10 days				\odot 5 to 10 days					
More than 10 days				© More than 10 days					
(2018 Grade 4)									
			111240190	Issue: School Climate				_	
VIDADIS9 12. How often do you talk about things you have studied in school with someone in your family?			9. How often do you talk about things you have studied in school with someone in your family?			NC	N/A		
Never or hardly ever			Solution Never or hardly ever						
① Once every few weeks			Once every few weeks						
© About once a week									
D Two or three times a week			© About once a week						
© Every day			 Two or three times a week Every day 						
				Lively day					
(2018 Grade 4)				Issue: Socioeconomic Status					

2019 Operational Grade 4 Core Student D/A/ 2019 item Rationale R/NC+ N/A NC 13. Do any of the following people live in your home? Select one answer choice on each 10. Do any of the following people live in your home? Select one answer choice on each row. Yes No Yes No ((a. Mother (1) (1) b. Stepmother /H27114 1 c. Foster mother or other female legal c. Foster mother or other female legal 0 1 1 H2711 guardian 0 ۲ 12711 d. Father 1 /H27114 ۲ ۲ 12711 e. Stepfather 0 (VH27114 f. Foster father or other male legal guardian 0 1 f. Foster father or other male legal guardian 0 VH27115 (1) Issue: Socioeconomic Status VH501060 VH591969 N/A NC 14. In this school year, how often did you use a laptop or desktop computer (including 11. In this school year, how often did you use a laptop or desktop computer (including Chromebooks) during your classes at school? Chromebooks) during your classes at school? Never Never

Previous item

row.

a. Mother

d. Father

Never
 Never

b. Stepmother

guardian

e. Stepfather

(2018 Grade 4)

In some classes

© In about half of the classes

 In more than half of the classes In all or almost all classes 	D In more than half of the classesD In all or almost all classes			
(2018 Grade 4)	Issue: Technology Use			
 NUTLION 15. In this school year, how often did you use a tablet (for example, Surface Pro, iPad, Kindle Fire) during your classes at school? ③ Never ④ In some classes ④ In about half of the classes ④ In more than half of the classes ④ In all or almost all classes 	 In this school year, how often did you use a tablet (for example, Surface Pro, iPad, Kindle Fire) during your classes at school? Never In some classes In about half of the classes In more than half of the classes In all or almost all classes 	NC	N/A	
(2018 Grade 4)	Issue: Technology Use			

In some classes

© In about half of the classes

2019 Operational Grade 4 Core Student

Previous item

20

VHTMAN

How much does each of the following statements describe a person like you? Select one answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I finish whatever I begin.	0	œ	0	Φ	Ð	VH271338
 I try very hard even after making mistakes. 	0	®	0	Ð	Ð	VH271339
c. I keep working hard even when I feel like quitting.	Ø	₿	Q	۵	©	VH271342
I keep trying to improve myself, even when it takes a long time to get there.	۵	Ð	Θ	Ø	Ð	VH271345

17.	How much does each of the following statements describe you? Select one answer choice on each row.	
-----	--	--

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a.	I finish whatever I begin.	Ø	۲	0	Ð	Ð	VH753142
b.	I try very hard even after making mistakes.	Ø	۵	Θ	Ð	Φ	VH733143
¢.	I keep working hard even when I feel like quitting.	٩	٩	θ	0	Φ	V10733245
d.	I keep trying to improve myself, even when it takes a long time to get there.	٩	Ð	θ	Ø	Φ	VH733144

(2018	Grade	4)

VH271367 In this school year, how often have you done each of the following? Select one answer choice on each row.

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a.	I started working on assignments right away rather than waiting until the last minute.	Θ	®	Ø	Φ	¢	VH271370
b.	I paid attention and resisted distractions.	۲	₿	0	Φ	Ð	VH271372
c.	I stayed on task without reminders from my teacher.	٨	8	0	Φ	Ð	VH271374
d.	I paid attention in class even when I was not interested.	٩	₿	0	۵	٢	VH271375

(2018	Grade	4)
-------	-------	----

019 item							D/A/ R/NC+	Rationale
13. How much does each choice on each row.	of the follow	R	After examining					
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			data from the
a. I finish whatever I begin.	Θ	®	O	Ø	Ū	VH733142		two versions
 I try very hard even after making mistakes. 	8	®	0	Φ	Ð	VH733143		of this item
c. I keep working hard even when I feel like quitting.	8	®	©	Ø	Œ	VH733145		that were administered
d. I keep trying to improve myself, even when it takes a long time to get there.	8	¢	Q	Φ	Ð	VH733144		in the pilot,
								of the item was dropped.

Issue: G	rit
----------	-----

15	5. In this school year, ho choice on each row.	w often have you done each of the following? Select one answer						NC	N/
ľ		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			
a.	I started working on assignments right away rather than waiting until the last minute.	Ø	®	©	Ø	Ð	VH271370		
b.	I paid attention and resisted distractions.	۵	₿	O	Φ	©	VH271372		
c.	I stayed on task without reminders from my teacher.	(3)	₿	Ø	Φ	D	VH271374		
d.	I paid attention in class even when I was not interested.	۵	®	Ø	Ø	Ð	VH271375		

Issue: Grit

15

2019 Operational Grade 4 Core Student

evious item							2019 item							D/A/ R/NC+	Rationale
9. How much does each one answer choice on	of the followi each row.	ng statements	describe a per	rson like you	Select	VH271749	14. How much does each choice on each row.	of the follow	ing statement	ts describe yo	u? Select one	answer	VH733149	R	After
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			examining data from t
. I like complex problems more than easy problems.	۵	٩	Q	Θ	٢	VH171750	 a. I like complex problems more than casy problems. 	0	9	0	0	©	VH733150		two version
I like activities that challenge my thinking abilities.	0	0	Ø	0	٢	VH271752	 b. I like activities that challenge my thinking abilities. 	0	θ	0	θ	Ð	VH733151		of this iten that were
I enjoy situations where I will have to think about something.	Θ	٩	Ø	Θ	٢	VH271753	c. I enjoy situations where I will have to think about something.	0	9	Ø	Ø	©	VH733155		administer in the pilot
I enjoy thinking about new solutions to problems.	۵	۵	Ø	Φ	٢	VH171756	d. I enjoy thinking about new solutions to problems.	۲	₿	Ø	Ð	©	VH733154		one versio
 How much does each choice on each row. 	n of the follow	ving statemen	ts describe yo	ou? Select one	answer	VH733149									of the iten was dropp
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me										
. I like complex problems more than easy problems.	۵	®	Ø	۵	٢	VH733150									
 I like activities that challenge my thinking abilities. 	. @	®	Ø	۵	¢	VH733151									
I enjoy situations where I will have to think about something.	۵	Φ	Ø	Ø	¢	VH733155									
d. I enjoy thinking about	۵	©	0	Ø	©	VH733154									
new solutions to problems.	-														
new solutions to problems.															
new solutions to problems. 018 Grade 4)	L		(a) - (-1)	5		VH271934	Issue: Desire for			(.l. (.ll	1.00		VH271934		
new solutions to problems. 018 Grade 4)			f the following	g ways about	your	VH271934	Issue: Desire for 16. In this school year, ho school? Select one ans	w often have	you felt any o	f the followin	g ways about :	your	VH271934	NC	N/A
new solutions to problems. 018 Grade 4) 21. In this school year, he			of the following About half of the time	g ways about More than half of the time	your All or almost all o the time		16. In this school year, ho	w often have	you felt any o	f the following About half of the time	g ways about the state of the s	your All or almost all of the time	VH271934	NC	N/A
new solutions to problems. D18 Grade 4) 21. In this school year, he school? Select one and . I felt awkward and out of place at school.	Never or hardly ever	n each row. Less than half of the	About half	More than half of the	All or almost all o	0f VH271942	16. In this school year, ho	w often have wer choice or Never or	you felt any o a each row. Less than half of the	About half	More than half of the	All or almost all of	VH271934 VH271942	NC	N/A
new solutions to problems. 018 Grade 4) 21. In this school year, h school? Select one an a. I felt awkward and out	Never or hardly ever	n each row. Less than half of the time	About half of the time	More than half of the time	All or almost all o the time	of	 16. In this school year, ho school? Select one ans a. I felt awkward and out 	w often have wer choice or Never or hardly ever	you felt any o each row. Less than half of the time	About half of the time	More than half of the time	All or almost all of the time		NC	N/A

Appendix K-1d: Operational Grade 4 Core

- 1. How easy or difficult was this test?
 - Extremely difficult
 - Quite difficult
 - © Somewhat difficult
 - Somewhat easy
 - Quite easy
 - © Extremely easy

VH333658

- 2. How much effort did you apply to succeed on this test?
 - No effort at all
 - Wery little effort
 - © Some effort
 - O Quite a bit of effort
 - A lot of effort
- 3. Are you Hispanic or Latino? Select one or more answer choices.
 - No, I am not Hispanic or Latino.
 - (1) Yes, I am Mexican, Mexican American, or Chicano.
 - © Yes, I am Puerto Rican or Puerto Rican American.

 - © Yes, I am from some other Hispanic or Latino background.

- 4. Which of the following best describes you? Select one or more answer choices.
 - White
 White
 - Black or African American
 - © Asian
 - American Indian or Alaska Native
 - © Native Hawaiian or other Pacific Islander
- 5. About how many books are there in your home?
 - ᢙ Few (0−10)
 - (B) Enough to fill one shelf (11–25)
 - © Enough to fill one bookcase (26–100)
 - © Enough to fill several bookcases (more than 100)

	Yes	No	
a. Access to the Internet	A	®	VH271105
b. Your own bedroom	A	®	VH336762
c. A desktop or laptop computer (including Chromebooks) that you can use	Ø	®	VH591976
d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	Ø	®	VH271110
e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Ø	6	VH271112

6. Do you have any of the following in your home? Select one answer choice on each row.

VH354591

VH271104

- 7. How often do you use the Internet for homework at home?
 - Never
 - (B) About once or twice a month
 - © About once or twice a week
 - Almost every day
 Almost every day
 - © Every day

- 8. How many days were you absent from school in the last month?
 - None
 None
 - 1 or 2 days
 - © 3 or 4 days
 - © 5 to 10 days
 - More than 10 days

- **9.** How often do you talk about things you have studied in school with someone in your family?
 - Never or hardly ever
 - [®] Once every few weeks
 - © About once a week
 - ◎ Two or three times a week
 - © Every day

VH271144

10. Do any of the following people live in your home? Select **one** answer choice on each row.

	Yes	No	
a. Mother	A	®	VH271145
b. Stepmother	æ	®	VH271146
c. Foster mother or other female legal guardian	Ø	®	VH271147
d. Father	A	®	VH271148
e. Stepfather	A	ഀ	VH271149
f. Foster father or other male legal guardian	æ	®	VH271150

- **11.** In this school year, how often did you use a **laptop or desktop computer** (including Chromebooks) during your classes at school?
 - Never
 - In some classes
 - \bigcirc In about half of the classes
 - \odot In more than half of the classes
 - © In all or almost all classes

- **12.** In this school year, how often did you use a **tablet** (for example, Surface Pro, iPad, Kindle Fire) during your classes at school?
 - Never
 - In some classes
 - © In about half of the classes
 - $\ensuremath{\textcircled{}}$ $\ensuremath{\textcircled{}}$ In more than half of the classes
 - © In all or almost all classes

VH733141

13. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I finish whatever I begin.	Ø	®	O	Ø	Ē	VH733142
b. I try very hard even after making mistakes.	۵	®	O	Ø	Ē	VH733143
c. I keep working hard even when I feel like quitting.	Ø	ß	Ø	0	Ē	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	Ø	ß	Ø	Ø	©	VH733144

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I like complex problems more than easy problems.	Ø	®	O	Ø	Ē	VH733150
b. I like activities that challenge my thinking abilities.	æ	ß	O	Ø	Ē	VH733151
c. I enjoy situations where I will have to think about something.	æ	(6)	Ø	Ø	¢	VH733155
d. I enjoy thinking about new solutions to problems.	Ø	ß	O	Ø	Ē	VH733154

14. How much does each of the following statements describe you? Select **one** answer choice on each row.

15. In this school year, how often have you done each of the following? Select **one** answer choice on each row.

All or Less than More than About half Never or almost all of half of the half of the hardly ever of the time time time the time a. I started working on assignments right away rather than VH271370 A B © D Ð waiting until the last minute. b. I paid attention and VH271372 A B \bigcirc \bigcirc Ð resisted distractions. c. I stayed on task without reminders VH271374 A B O \odot Ð from my teacher. d. I paid attention in class even when I was A B © D Ð VH271375 not interested.

VH733149

16. In this school year, ho school? Select one ans		the following	, ways a	bout y	rour	V
	_			-		

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a.	I felt awkward and out of place at school.	A	ß	O	Ø	Ē	VH271942
b.	I felt happy at school.	A	®	Ô	0	Ē	VH271944
c.	I felt that I learned something that I can use in my daily life.	Ø	B	Ø	0	Ē	VH336903

Appendix K-1e: Summary of Changes Pilot Grade 4 Core

2019 Pilot Grade 4 Core Student

Previous item				2019 item				D/A/ R/NC+	Rationale
 6. Are you Hispanic or Latino? Select one or more No, I am not Hispanic or Latino. Yes, I am Mexican, Mexican American, or C Yes, I am Puerto Rican or Puerto Rican American. Yes, I am Cuban or Cuban American. Yes, I am from some other Hispanic or Latin 	Chicano. erican.		VH2#087	 13. Are you Hispanic or Latino? Select one or mo No, I am not Hispanic or Latino. Yes, I am Mexican, Mexican American, or Yes, I am Puerto Rican or Puerto Rican An Yes, I am Cuban or Cuban American. Yes, I am from some other Hispanic or Later 	VII240357	NC	N/A		
(2017 Grade 4)				Issue: Race/Ethnicity					
 7. Which of the following best describes you? Selet White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander 	ct one or more answer	r choices.	VII220388	 14. Which of the following best describes you? S White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander 		swer choices.	VHI24038	NC	N/A
(2017 Grade 4)			VH240186	Issue: Race/Ethnicity			VH240186		
 8. About how many books are there in your home Few (0-10) Enough to fill one shelf (11-25) Enough to fill one bookcase (26-100) Enough to fill several bookcases (more than 			440 (0.555	 About how many books are there in your hom Few (0-10) Enough to fill one shelf (11-25) Enough to fill one bookcase (26-100) Enough to fill several bookcases (more that Issue: Socioeconomic Status		NC	N/A		
(2017 Grade 4) 9. Do you have any of the following in your hom-	e? Select one answer ch	noice on each row.	VH271104	2. Do you have any of the following in your home	2 Calact one approve	hoice on each your	VH880711	R	Sub-items b
a. Access to the Internet b. Clothes dryer just for your family c. Dishwasher d. Your own bedroom e. A desktop or laptop computer (including Chromebooks) that you can use	Yes © © © © © ©	N0 © © © © ©	VH271105 VH336756 VH336759 VH336762 VH336762 VH591976	a. Access to the Internet b. Your own bedroom c. Your own desktop or laptop computer (including Chromebooks) d. Your own tablet (for example, Surface Pro, iPad, or Kindle Fire)	Yes © © ©	N0 (D) (D) (D) (D)	VH271105 VH356762 VH853098 VH853090		and c were dropped to keep student burden low, and sub-item
 f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use 	0	0	VH271110 VH271112	e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One)	۵	۵	VH853089		e, f, and g were revised to examine performance
(2017 Grade 4)				Issue: Socioeconomic Status					of alternative item wording

Previous item				2019 item				D/A/ R/NC+	Rationale
10. How often do you use the Internet for home			VH354591				VH354591	NC	N/A
	work at nome:			3. How often do you use the Internet for homewor	k at home?				
Never				Never					
About once or twice a month				About once or twice a month					
About once or twice a week				© About once or twice a week					
Almost every day Almost every day									
© Every day				© Every day					
2017 Grade 4)				Issue: Technology Use					
11. How many days were you absent from school	l in the last month?		VH240190	4. How many days were you absent from school i	in the last month?	P.	VH240190	NC	N/A
None				 None 	and the second s				
① 1 or 2 days				1 or 2 days					
© 3 or 4 days									
© 5 to 10 days				© 3 or 4 days					
				© 5 to 10 days					
More than 10 days				More than 10 days					
(2017 Grade 4)				Issue: School Climate					
12. How often do you talk about things you have your family?	e studied in school w	ith someone in	VH240189	 How often do you talk about things you have your family? 	NC	N/A			
Never or hardly ever				Never or hardly ever					
③ Once every few weeks				③ Once every few weeks					
© About once a week				About once a week About once a week					
Two or three times a week				 Two or three times a week 					
 Two of three diffest a week Every day 				 Two of three threes a week D Every day 					
- Livery way				Lively uay					
(2017 Grade 4)				Issue: Socioeconomic Status					
 Do any of the following people live in your h row. 	nome? Select one ans	wer choice on each	VH271144	 Do any of the following people live in your h row. 	ome? Select one answ	wer choice on each	VH271144	NC	N/A
	Yes	No			Yes	No			
a. Mother	0	(8)	VH271145	a. Mother	۵	(1)	VH271145		
b. Stepmother	۵	(1)	VH271146	b. Stepmother	۵	٩	VH271146		
c. Foster mother or other female legal guardian	0	۲	VH271147	c. Foster mother or other female legal	۵	0	VH271147		
d. Father	0	٢	VI4271148	guardian d. Father	۵	1	VH271148		
e. Stepfather	0	٢	VH271149	e. Stepfather	8	0	VH271149		
f. Foster father or other male legal guardian	۲	®	VH271150	f. Foster father or other male legal guardian	•	®	VH271150		

2019 Pilot Grade 4 Core Student

revious item							2019 item	D/A/ R/NC+	Rationale					
 In this school year, how Chromebooks) during y 			or desktop co	mputer (inclu	ding	VH591969	 In this school year, how often did y Chromebooks) during your classes 		or desktop con	ıputer (includ	ing	VH591969	NC	N/A
Never Never							Never Never							
In some classes							③ In some classes							
 In about half of the classes 							© In about half of the classes							
In more than half of	the classes						In more than half of the classes							
In all or almost all c	lasses						In all or almost all classes							
2017 Grade 4)							Issue: Technology Use							
2017 Graue 4)		1.000				VH271276	+					VH271276	NC	NI / A
5. In this school year, hov Kindle Fire) during you			(for example,	Surface Pro, i	Pad,		8. In this school year, how often did ye Kindle Fire) during your classes at s		or example, Su	urface Pro, iPa	d,		NC	N/A
Never							③ Never							
In some classes							In some classes							
© In about half of the	classes						© In about half of the classes							
In more than half o	f the classes						In more than half of the classes							
© In all or almost all o	classes						© In all or almost all classes							
2017 Grade 4)														
							Issue: Technology Use							
16. How much does each one answer choice on		ing statements	s describe a pe	erson like you	? Select	VH271337	 How much does each of the fol choice on each row. 	owing statemer	nts describe yo	u? Select one	answer	VH733141	R	The stem of this item wa
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me		Not at a like me		Somewhat like me	Quite a bit like me	Very much like me			revised for
 a. I finish whatever I begin. 	۲	®	0	0	θ	VH271338	a. I finish whatever I begin.	٢	O	۵	©	VH733142		clarity.
 I try very hard even after making mistakes. 	8	٩	0	θ	θ	VH271339	b. I try very hard even	©	©	Ø	©	VH733143		
	I keep working hard even when I feel like quitting.						c. I keep working hard even when I feel like	6	O	Ø	Ð	VH733145		
even when I feel like							quitting. d. I keep trying to	-						

2019 Pilot Grade 4 Core Student

revious item							2019 item							D/A/ R/NC+	Rationale
17. In this school year, ho choice on each row.	w often have y	you done each	of the following	ng? Select one	answer	VH271367	10. In this school year, how often have you done each of the following? Select one answer choice on each row.							NC	N/A
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all o the time	f		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			
 I started working on assignments right away rather than waiting until the last minute. 	۲	٢	Ø	۵	θ	VH271370	a. I started working on assignments right away rather than waiting until the last minute.	8	⊕	Q	Θ	Ð	VH271370		
 I paid attention and resisted distractions. 	0	0	0	Φ	Ø	VH271372	b. I paid attention and	۵	®	Q	Ø	Ð	VH271372		
c. I stayed on task			0	Ø	Ð	VH271374	resisted distractions. c. I staved on task		©.	©	Ø	©	VH271374		
without reminders from my teacher.	(4)	6	Q	<u>e</u>			without reminders	8							
from my teacher. d. I paid attention in class even when I was not interested. 017 Grade 4)	۵	Ð	Ø	Ø	Ð	VH271375	from my teacher. d. I paid attention in class even when I was not interested. Issue: Grit	۵	¢	Q	Ø	¢	VH271375	_	
from my teacher. d. I paid attention in class even when I was not interested. 2017 Grade 4)	© of the followi	Ð	Ø	Ø			from my teacher. d. I paid attention in class even when I was not interested.	۵	¢					R	
from my teacher. d. I paid attention in class even when I was not interested. 2017 Grade 4) 18. How much does each	© of the followi	Ð	Ø	Ø		VH271375 VH271749	from my teacher. d. 1 paid attention in class even when I was not interested. Issue: Grit 11. How much does each	۵	¢					R	this item w
from my teacher. d. I paid attention in class even when I was not interested. 2017 Grade 4) 18. How much does each one answer choice on o	© of the followi each row. Not at all	The statements of the statement of the s	© s describe a pe	© rson like you Quite a bit	i? Select Very much	VH271375 VH271749	from my teacher. d. 1 paid attention in class even when I was not interested. Issue: Grit 11. How much does each	© of the follow Not at all	© ring statement A little bit	s describe you Somewhat	a? Select one a Quite a bit	unswer Very much like me		R	
from my teacher. d. I paid attention in class even when I was not interested. 017 Grade 4) 18. How much does each one answer choice on a 11 like complex problems more than	© of the followi each row. Not at all like me	D ng statements A little bit like me	© s describe a pe Somewhat like me	© rson like you Quite a bit like me	i? Select Very much like me	VH271,375	from my teacher. d. 1 paid attention in class even when I was not interested. Issue: Grit II. How much does each choice on each row. a. I like complex problems more than casy problems. b. I like activities that challenge my thinking abilities.	© of the follow Not at all like me	© ving statement A little bit like me	s describe you Somewhat like me	a? Select one a Quite a bit like me	unswer Very much like me	VH733149	R	this item w revised for
from my teacher. d. I paid attention in class even when I was not interested. 2017 Grade 4) 18. How much does each one answer choice on a a. I like complex problems more than easy problems. b. I like activities that challenge my thinking	© of the followi each row. Not at all like me ©	D ng statements A little bit like me D	© s describe a per Somewhat like me	© rson like you Quite a bit like me	1 ² Select Very much like me	VH271375 VH271376	from my teacher. d. 1 paid attention in class even when I was not interested. Issue: Grit II. How much does each choice on each row. a. 1 like complex problems more than easy problems. b. 1 like activities that challenge my thinking	© of the follow Not at all like me ©	© ing statement A little bit like me ©	s describe you Somewhat like me	n? Select one a Quite a bit like me	Very much like me D	VII733148 H1733150	R	

						201	9 Pilot Grade 4	Core S	tuden	t					
Previous item						2019 item						D/A/ R/NC+	Rationale		
19. In this school year, he school? Select one and	 In this school year, how often have you felt any of the following ways about your school? Select one answer choice on each row. 						12. In this school year, ho school? Select one ans	w often have wer choice or	you felt any o a each row.	of the followin;	g ways about y	your	VH271934	R	New sub-
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all o the time	f		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all o the time	f		items (d, e, and f) were
 I felt awkward and out of place at school. 	0	®	0	Θ	Θ	VH271942	a. I felt awkward and out of place at school.	۲	©	©	Ø	D	VH271942		added to
b. I felt happy at school.	۲	Ð	Q	Ø	Θ	VH271944	b. I felt happy at school.	۲	®	©	Ø	Ū	VH271944		expand
c. I felt that I learned something that I can use in my daily life.	۵	Φ	0	Ø	Φ	VH336903	c. I felt that I learned something that I can use in my daily life.	@	®	0	Ø	Ð	VH336903		measurement of this
							d. I worried about crime and violence at my school.	(6)	₪	0	Φ	©	VH271940		content.
							e. I felt my teachers treated me fairly.	۲	B	0	Ø	Ð	ÿH853117		
							 I felt safe on my way to or from school. 	0	ـ	0	0	Ð	VH853118		
(2017 Grade 4)							Issue: School Climate								
20. Write the ZIP code of y	our home add	ress in the bo	DX.			VII254028	N/A							D	Due to the time burden associated with completing
															this item and
															to keep
															student
															burden low,
															this item was
(2017 Grade 4)															dropped.

Appendix K-1f: Pilot Grade 4 Core

- 1. About how many books are there in your home?

 - (D) Enough to fill one shelf (11–25)
 - © Enough to fill one bookcase (26–100)
 - © Enough to fill several bookcases (more than 100)

2. Do you have any of the following in your home? Select **one** answer choice on each row.

	Yes	No	
a. Access to the Internet	A	B	VH271105
b. Your own bedroom	A	®	VH336762
c. Your own desktop or laptop computer (including Chromebooks)	Ø	®	VH853088
d. Your own tablet (for example, Surface Pro, iPad, or Kindle Fire)	Ø	®	VH853090
e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One)	Ø	®	VH853089

VH354591

- 3. How often do you use the Internet for homework at home?
 - Never
 Never
 - (B) About once or twice a month
 - © About once or twice a week
 - Almost every day
 Almost every day
 - © Every day

VH240186

- 4. How many days were you absent from school in the last month?
 - None
 None
 - 1 or 2 days
 - © 3 or 4 days
 - © 5 to 10 days
 - © More than 10 days

- **5.** How often do you talk about things you have studied in school with someone in your family?
 - Never or hardly ever
 - [®] Once every few weeks
 - © About once a week
 - Two or three times a week
 - © Every day

6. Do any of the following people live in your home? Select **one** answer choice on each row.

	Yes	No	
a. Mother	Ø	®	VH271145
b. Stepmother	$\textcircled{\ }$	®	VH271146
c. Foster mother or other female legal guardian	0	®	VH271147
d. Father	A	®	VH271148
e. Stepfather	A	®	VH271149
f. Foster father or other male legal guardian	A	®	VH271150

VH591969

VH271144

- 7. In this school year, how often did you use a **laptop or desktop computer** (including Chromebooks) during your classes at school?
 - Never
 - In some classes
 - © In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

- **8.** In this school year, how often did you use a **tablet** (for example, Surface Pro, iPad, Kindle Fire) during your classes at school?
 - Never
 Never
 - In some classes
 - © In about half of the classes
 - \odot In more than half of the classes
 - © In all or almost all classes

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I finish whatever I begin.	۵	B	0	D	Ē	VH733142
b. I try very hard even after making mistakes.	A	ß	0	Ø	Ē	VH733143
c. I keep working hard even when I feel like quitting.	Ø	ß	Ø	Ø	Ē	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	8	₿	Q	Ø	Ē	VH733144

9. How much does each of the following statements describe you? Select **one** answer choice on each row.

10. In this school year, how often have you done each of the following? Select **one** answer choice on each row.

VH271367

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a.	I started working on assignments right away rather than waiting until the last minute.	Ø	®	Ø	Θ	©	VH271370
b.	I paid attention and resisted distractions.	A	B	O	Ð	Ē	VH271372
c.	I stayed on task without reminders from my teacher.	Ø	B	Ø	Ø	©	VH271374
d.	I paid attention in class even when I was not interested.	Ø	ß	O	Ø	©	VH271375

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I like complex problems more than easy problems.	Ø	B	O	Ø	Ē	VH733150
b. I like activities that challenge my thinking abilities.	æ	B	Ø	Ø	©	VH733151
c. I enjoy situations where I will have to think about something.	æ	₿	Q	Ø	©	VH733155
d. I enjoy thinking about new solutions to problems.	Ø	ß	©	Ø	Ē	VH733154

11. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. I felt awkward and out of place at school.	A	®	O	Ø	Œ	VH271942
b. I felt happy at school.	A	®	Ô	O	Ē	VH271944
c. I felt that I learned something that I can use in my daily life.	æ	®	Ø	Ø	Ē	VH336903

B

B

B

 \odot

O

O

 \bigcirc

D

D

12. In this school year, how often have you felt any of the following ways about your school? Select **one** answer choice on each row.

13. Are you Hispanic or Latino? Select one or more answer choices.

A

A

A

- No, I am not Hispanic or Latino.
- [®] Yes, I am Mexican, Mexican American, or Chicano.
- © Yes, I am Puerto Rican or Puerto Rican American.
- ^(D) Yes, I am Cuban or Cuban American.
- © Yes, I am from some other Hispanic or Latino background.

14. Which of the following best describes you? Select one or more answer choices.

d. I worried about crime and violence at my

e. I felt my teachers

treated me fairly. f. I felt safe on my way

to or from school.

school.

- [®] Black or African American
- © Asian
- American Indian or Alaska Native
- © Native Hawaiian or other Pacific Islander

VH271934

VH271940

VH853117

VH853118

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Appendix K-1g: Spiral Map Grade 4 Core

Accnum	Grade	Grade 4 OMB PDF Sequence Number	Number of Grade 4 booklets item appears in	Grade 4 booklets item appears in
VH240186	4, 8, 12	01_00	3	1, 2, 3
VH880711	4, 8, 12	02_00	2	1, 2
VH271105	4, 8, 12	02_01	2	1, 2
VH336762	4, 8, 12	02_02	2	1, 2
VH853088	4, 8, 12	02_03	2	1, 2
VH853090	4, 8, 12	02_04	2	1, 2
VH853089	4, 8, 12	02_05	2	1, 2
VH354591	4, 8, 12	03_00	3	1, 2, 3
VH240190	4, 8, 12	04_00	1	3
VH240189	4, 8, 12	05_00	1	3
VH271144	4, 8, 12	06_00	2	1, 2
VH271145	4, 8, 12	06_01	2	1, 2
VH271146	4, 8, 12	06_02	2	1, 2
VH271147	4, 8, 12	06_03	2	1, 2
VH271148	4, 8, 12	06_04	2	1, 2
VH271149	4, 8, 12	06_05	2	1, 2
VH271150	4, 8, 12	06_06	2	1, 2
VH591969	4, 8, 12	07_00	1	3
VH271276	4, 8, 12	08_00	1	3
VH733141	4, 8, 12	09_00	2	1, 2
VH733142	4, 8, 12	09_01	2	1, 2
VH733143	4, 8, 12	09_02	2	1, 2
VH733145	4, 8, 12	09_03	2	1, 2
VH733144	4, 8, 12	09_04	2	1, 2
VH271367	4, 8, 12	10_00	2	1, 2
VH271370	4, 8, 12	10_01	2	1, 2
VH271372	4, 8, 12	10_02	2	1, 2
VH271374	4, 8, 12	10_03	2	1, 2
VH271375	4, 8, 12	10_04	2	1, 2

VH271944	Grade	Grade 4 OMB PDF Sequence Number	Number of Grade 4 booklets item appears in	Grade 4 booklets item appears in
VH733149	4, 8, 12	11_00	1	3
VH733150	4, 8, 12	11_01	1	3
VH733151	4, 8, 12	11_02	1	3
VH733155	4, 8, 12	11_03	1	3
VH733154	4, 8, 12	11_04	1	3
VH271934	4, 8, 12	12_00	2	1, 2
VH271942	4, 8, 12	12_01	2	1, 2
VH336903	4, 8, 12	12_02	2	1, 2
VH271940	4, 8, 12	12_03	2	1, 2
VH853117	4, 8, 12	12_04	2	1, 2
VH853118	4, 8, 12	12_05	2	1, 2
VH240387	4, 8, 12	13_00	3	1, 2, 3
VH240388	4, 8, 12	14_00	3	1, 2, 3

Appendix K-1h: Summary of Changes Operational Grade 8 Core

2019 O	perational Grade 8 Core Student			
Previous item	2019 item		D/A/ R/NC+	Rationale
 6. Are you Hispanic or Latino? Select one or more answer choices. (1) No, I am not Hispanic or Latino. (1) Yes, I am Mexican, Mexican American, or Chicano. (2) Yes, I am Puerto Rican or Puerto Rican American. (2) Yes, I am Cuban or Cuban American. (2) Yes, I am from some other Hispanic or Latino background. 	 3. Are you Hispanic or Latino? Select one or more answer choices. No, I am not Hispanic or Latino. Yes, I am Mexican, Mexican American, or Chicano. Yes, I am Puerto Rican or Puerto Rican American. Yes, I am Cuban or Cuban American. Yes, I am from some other Hispanic or Latino background. 	VID20387	NC	N/A
(2018 Grade 8)	Issue: Race/Ethnicity			
 Which of the following best describes you? Select one or more answer choices. White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander 	 4. Which of the following best describes you? Select one or more answer choices. White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander 	VIE4038	NC	N/A
(2018 Grade 8)	Issue: Race/Ethnicity			
 8. About how many books are there in your home? The Few (0-10) Enough to fill one shelf (11-25) Enough to fill one bookcase (26-100) Enough to fill several bookcases (more than 100) 	 5. About how many books are there in your home? Tew (0-10) Enough to fill one shelf (11-25) Enough to fill one bookcase (26-100) Enough to fill several bookcases (more than 100) 	V11240186	NC	N/A
(2018 Grade 8)	Issue: Socioeconomic Status			

2019 Operational Grade 8 Core Student **Previous item** 2019 item D/A/ Rationale R/NC+ R 9. Do you have any of the following in your home? Select one answer choice on each row. 6. Do you have any of the following in your home? Select one answer choice on each row. Due to Yes No Yes No concerns a. Access to the Internet 1 a. Access to the Internet 0 1 about b. Your own bedroom b. Clothes dryer just for your family 1 1 1 11367 . A desktop or laptop computer (including Chromebooks) that you can use . Dishwasher 1 content 0 d. Your own bedroom (1 relevance and d. A tablet (for example, Surface Pro, iPad, A desktop or laptop computer (including Ø 1 ⊕ Kindle Fire) that you can use Chromebooks) that you can use A smartphone (for example, iPhone, to keep A tablet (for example, Surface Pro, iPad, Ð Samsung Galaxy, HTC One) that you can 1 Kindle Fire) that you can use use student A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can Ø burden low. sub-items b and c were Issue: Socioeconomic Status (2018 Grade 8) dropped. VH354591 NC N/A 7. How often do you use the Internet for homework at home? 10. How often do you use the Internet for homework at home? Never (B) About once or twice a month About once or twice a month O About once or twice a week C About once or twice a week D Almost every day Every day (2018 Grade 8) Issue: Technology Use VH240190 NC N/A 11. How many days were you absent from school in the last month? 8. How many days were you absent from school in the last month? (None 1 or 2 days 1 or 2 days © 3 or 4 days © 3 or 4 days D 5 to 10 days D 5 to 10 days D More than 10 days D More than 10 days Issue: School Climate (2018 Grade 8) N/A NC 12. How often do you talk about things you have studied in school with someone in 9. How often do you talk about things you have studied in school with someone in your family? Never or hardly ever ③ Never or hardly ever

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

usc

Never

D Every day

None
 None

your family?

D Every day

(2018 Grade 8)

Once every few weeks

Two or three times a week

About once a week

③ Once every few weeks

D Two or three times a week

Issue: Socioeconomic Status

About once a week

D Every day

Previous item	2019 item		D/A/ R/NC+	Rationale	
 13. How far in school did your mother go? She did not finish high school. She graduated from high school. She had some education after high school. She graduated from college. I don't know. (2018 Grade 8) 	 In How far in school did your mother go? In She did not finish high school. In She graduated from high school. In She had some education after high school. In She graduated from college. I don't know. 	VIE20192	NC	N/A	
 14. How far in school did your father go? The did not finish high school. He graduated from high school. He had some education after high school. He graduated from college. I don't know. 	 WILDOWS 11. How far in school did your father go? Whe did not finish high school. Whe graduated from high school. Whe had some education after high school. Whe graduated from college. Whe I don't know. 	ART90168	NC	N/A	
(2018 Grade 8)	Issue: Socioeconomic Status				
 15. Does your mother work? Tes No I don't know. (2018 Grade 8)	 WB3678 12. Does your mother work? ③ Yes ③ No ④ I don't know. 	VIE3678	NC	N/A	
 16. Does your father work? Yes No I don't know. 	Issue: Socioeconomic Status 13. Does your father work? © Yes © No © I don't know.	VH256779	NC	N/A	
(2018 Grade 8)	Issue: Socioeconomic Status				

2019 Operational Grade 8 Core Student

Previous item						2019 item								D/A/ R/NC+	Rationale
17. Do any of the followir row.	g people live	in your home?	Select one an	swer choice or	n each	VH27[144	14. Do any of the followin row.	ng people live	în your home	e? Select one a	nswer choice	on each	VH271144	NC	N/A
			Yes	N	io l					Yes		No			
a. Mother		/	0		b ·	H271145	a. Mother			®		®	VH271145		
b. Stepmother			Ø		D	112.71145	b. Stepmother			0	-	0	VH271145		
 Foster mother or other f guardian 	emale legal	1	Ø		D	H278147	c. Foster mother or other	emale legal							
d. Father		-	۵	-	D	H171348	guardian	contract to got		(6)		0	VH271147		
e. Stepfather			Ø	_		H171148	d. Father			۲		•	VH271148		
f. Foster father or other m	ale legal guard	ian	٩		D	H171150	e. Stepfather			(8)		®	VH271149		
2018 Grade 8)							f. Foster father or other m			0		•	VH271150		
 8. In this school year, how Chromebooks) during y Never In some classes In about half of the open school of the school o	our classes at	use a laptop o school?	or desktop con	ıputer (includ	ing	VH591969	 15. In this school year, how Chromebooks) during Never In some classes In about half of the 	your classes at		9 or desktop co	omputer (inch	uding	VH591960	NC	N/A
In more than half of	the classes													1	
In all or almost all c	lasses						In more than half o								
							© In all or almost all	classes							
2018 Grade 8)						VH271276	Issue: Technolog	y Use					VH271276		
 19. In this school year, how Kindle Fire) during you: ③ Never ③ In some classes ③ In about half of the ④ In more than half of ④ In all or almost all of 	r classes at sel classes the classes		for example, S	urface Pro, iPa	ıd,		 In this school year, how often did you use a tablet (for example, Surface Pro, iPad, Kindle Fire) during your classes at school? Never In some classes In about half of the classes In more than half of the classes In all or almost all classes 						NC	N/A	
2018 Grade 8) 20. How much does each	of the followi	ng statements	describe a pe	mon like you	Salast	VH271337	Issue: Technolog						VH733141	D	After
one answer choice on	each row.						17. How much does each of the following statements describe you? Select one answer choice on each row.							R	examining
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			data from th
 a. I finish whatever I begin. 	0	⊕	0	0	θ	VH271338	a. I finish whatever I	۲	®	©	0	©	VH733142		two versions
 b. I try very hard even after making mistakes. 	θ	Ð	0	Ø	٢	VH271339	begin. b. I try very hard even	0	9	0	0	Φ	VH733143		of this item
c. I keep working hard even when I feel like quitting.	0	®	0	۵	Ð	VH271342	after making mistakes. c. I keep working hard even when I feel like	@	8	0	0	9	VH733145		that were
d. I keep trying to improve myself, even	Θ	æ	0	Ø	Ð	VH271345	quitting. d. I keep trying to improve myself, even								administere in the pilot,

2019 Operational Grade 8 Core Student

evious item							19 item						D/A/ R/NC+	Rationale
 How much does each choice on each row. 	of the followi	ng statements	s describe you	? Select one a	answer	VH733141	ue: Grit							of the item
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me									was dropped
I finish whatever I	©	D	©	©	©	VH733142								
begin. I try very hard even after making mistakes.	Ø	G	0	Ø	Φ	VH733143								
I keep working hard even when I feel like quitting.	۵	¢	©	Ø	Φ	VH733145								
I keep trying to improve myself, even when it takes a long time to get there.	۲	®	O	۵	Ð	VH733144								
018 Grade 8) 2. In this school year, how choice on each row.		Less than		More than	All or	VH271367	In this school year, how often have choice on each row.	you done each	1	ng? Select one More than	answer All or	VB271367	NC	N/A
	Never or hardly ever	half of the time	About half of the time	half of the time	almost all of the time		Never or hardly even	half of the	About half of the time	half of the time	almost all of the time			
. I started working on assignments right away rather than waiting until the last minute.	0	٩	Θ	Θ	٢	VH271370	started working on issignments right way rather than waiting until the last	Θ	Ø	۵	Ð	VH271370		
. I paid attention and resisted distractions.	0	9	0	Φ	٢	VH271372	paid attention and	•	©	0	©	VH271372		
I stayed on task without reminders from my teacher.	0	۲	Ø	٩	©	VH271374	esisted distractions.	0	o	0	©	VH271374		
. I paid attention in class even when I was not interested.	0	₿	Ø	Ø	Ð	VH271375	rom my teacher. paid attention in class even when I was @	®	0		©	VH271375		
018 Grade 8)							not interested.							
23. How much does each one answer choice or	n of the follow n each row.	ing statemen	ts describe a p	erson like you	1? Select	VH271749	How much does each of the follo choice on each row.	wing statemen	ts describe yo	u? Select one	answer	VH733149	R	After
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			examining data from t
 a. I like complex problems more than easy problems. 	Ø	⊕	Q	Ø	D	VH271750	like complex problems more than Ø	®	©	©	©	VH733150		two version
 I like activities that challenge my thinking 	. @	@	0	۵	¢	VH271752	easy problems. like activities that challenge my thinking ∞ abilities.	1	©	۵	Ø	VH733151		of this item that were
abilities.	0	۲	Ø	Ø	Θ	VH271753	enjoy situations where I will have to chink about	Ð	0	0	Θ	VH733155		administere
abilities. c. I enjoy situations where I will have to think about something.	۵		1						-	-	-	1000000		in the pilot,

2019 Operational Grade 8 Core Student

Previous item							2019 item							D/A/ R/NC+	Rationale
24. How much does each choice on each row.	of the follow	ing statement	s describe you	1? Select one	answer	VH733149	Issue: Desire for	Learning							of the item was dropped
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me										was dropped
a. I like complex problems more than easy problems.	0	٩	Ø	Ø	©	VH733150									
 I like activities that challenge my thinking abilities. 	0	۵	Ø	Ø	Θ	¥H733151									
c. I enjoy situations where I will have to think about something.	0	٩	0	Ø	θ	VH733155									
 I enjoy thinking about new solutions to problems. 	۵	θ	Ø	Φ	θ	VH733154									
2018 Crede 8)															
2018 Grade 8) 25. In this school year, h	ow often have	you felt any o	f the following	; ways about y	our	VH271034	20. In this school year, he	ow often have	you felt any o	of the following	gways about y	your	VH27(934	NC	N/A
school? Select one an	Never or	Less than	About half	More than	All or		school? Select one an	swer choice or		1		All or			
	hardly ever	half of the time	of the time	half of the time	almost all of the time			Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	almost all of the time			
 a. I felt awkward and out of place at school. 	60	æ	0	60	æ	VH271942	a. I felt awkward and out of place at school.	(3)	₿	O	Ø	O	VH271942		
 b. I felt happy at school. c. I felt that I learned 	G	Ð	0	Ð	Ð	VHI71044	b. I felt happy at school.	8	8	0	0	Ð	VH271944		
something that I can use in my daily life.	Ø	Ø	O	Ø	Ð	VICSWALL	c. I felt that I learned something that I can use in my daily life.	Θ	₿	©	Ø	Ð	VH336903		
2018 Grade 8)												•			
							Issue: School Clir	nate							
26. Write the ZIP code of y	our home add	ress in the boy	ς.			VH254028	N/A							D	Due to the
															time burden
															associated
															with
															completing
															this item an
															to keep
															student
															burden low,
															this item wa
														1	
															dropped.

2019 Operational Grade 8 Core Student										
Previous item	2019 item	D/A/ R/NC+	Rationale							
 2. Are you taking an art course now, or have you taken an art course this year? Yes No 	 21. Are you taking an art course this school year (for example, drawing, painting, or studio art)? 	A	This item was adapted from the arts questionnaire to assess student participation in arts							
(2016 Grade 8)	Issue: Educational Experiences		coursework							

Appendix K-1i: Operational Grade 8 Core

VH260313

- 1. How easy or difficult was this test?
 - Extremely difficult
 - Quite difficult
 - © Somewhat difficult
 - Somewhat easy
 - © Quite easy
 - © Extremely easy

VH333658

- 2. How much effort did you apply to succeed on this test?
 - No effort at all
 - Wery little effort
 - © Some effort
 - O Quite a bit of effort
 - A lot of effort
- 3. Are you Hispanic or Latino? Select one or more answer choices.
 - No, I am not Hispanic or Latino.
 - (1) Yes, I am Mexican, Mexican American, or Chicano.
 - © Yes, I am Puerto Rican or Puerto Rican American.

 - © Yes, I am from some other Hispanic or Latino background.

- 4. Which of the following best describes you? Select one or more answer choices.
 - White
 White
 - Black or African American
 - © Asian
 - American Indian or Alaska Native
 - © Native Hawaiian or other Pacific Islander
- 5. About how many books are there in your home?
 - ᢙ Few (0−10)
 - (B) Enough to fill one shelf (11–25)
 - © Enough to fill one bookcase (26–100)
 - © Enough to fill several bookcases (more than 100)

	Yes	No	
a. Access to the Internet	Ø	B	VH271105
b. Your own bedroom	a	®	VH336762
c. A desktop or laptop computer (including Chromebooks) that you can use	Ø	®	VH591976
d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	Ø	®	VH271110
e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	۵	®	VH271112

6. Do you have any of the following in your home? Select one answer choice on each row.

VH354591

VH271104

- 7. How often do you use the Internet for homework at home?
 - Never
 - (B) About once or twice a month
 - © About once or twice a week
 - Almost every day
 Almost every day
 - © Every day

- 8. How many days were you absent from school in the last month?
 - None
 None
 - 1 or 2 days
 - © 3 or 4 days
 - © 5 to 10 days
 - More than 10 days

9. How often do you talk about things you have studied in school with someone in your family?

- Never or hardly ever
- [®] Once every few weeks
- © About once a week
- Two or three times a week
- © Every day

10. How far in school did your mother go?

- ℬ She did not finish high school.
- [®] She graduated from high school.
- © She had some education after high school.
- She graduated from college.
- I don't know.

11. How far in school did your father go?

- He did not finish high school.
- [®] He graduated from high school.
- © He had some education after high school.
- He graduated from college.
- I don't know.

VH240192

VH336776

VH336779

12. Does your mother work?

(A) Yes

[®] No

© I don't know.

13. Does your father work?

(A) Yes

B No

© I don't know.

14. Do any of the following people live in your home? Select **one** answer choice on each row.

	Yes	No	
a. Mother	A	®	VH271145
b. Stepmother	æ	®	VH271146
c. Foster mother or other female legal guardian	Ø	®	VH271147
d. Father	æ	®	VH271148
e. Stepfather	A	®	VH271149
f. Foster father or other male legal guardian	æ	®	VH271150

VH591969

VH271144

- **15.** In this school year, how often did you use a **laptop or desktop computer** (including Chromebooks) during your classes at school?
 - Never
 - In some classes
 - © In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

- **16.** In this school year, how often did you use a **tablet** (for example, Surface Pro, iPad, Kindle Fire) during your classes at school?
 - Never
 Never
 - In some classes
 - © In about half of the classes
 - \odot In more than half of the classes
 - © In all or almost all classes

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I finish whatever I begin.	۵	B	0	D	Ē	VH733142
b. I try very hard even after making mistakes.	A	ß	0	Ø	Ē	VH733143
c. I keep working hard even when I feel like quitting.	Ø	ß	Ø	Ø	Ē	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	8	₿	Q	Ø	Ē	VH733144

17. How much does each of the following statements describe you? Select **one** answer choice on each row.

18. How much does each of the following statements describe you? Select **one** answer choice on each row.

VH733149

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
а.	I like complex problems more than easy problems.	Ø	ß	O	Ø	Ē	VH733150
b.	I like activities that challenge my thinking abilities.	Ø	ß	Ø	Ø	Ē	VH733151
c.	I enjoy situations where I will have to think about something.	0	®	Ø	Ø	¢	VH733155
d.	I enjoy thinking about new solutions to problems.	Ø	®	O	Ø	Ē	VH733154

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. I started working on assignments right away rather than waiting until the last minute.	Ø	®	Q	Ø	C	VH271370
b. I paid attention and resisted distractions.	A	B	O	Ø	Ē	VH271372
c. I stayed on task without reminders from my teacher.	Ø	ß	Ø	Ø	Ē	VH271374
d. I paid attention in class even when I was not interested.	Ø	®	O	D	Ē	VH271375

19. In this school year, how often have you done each of the following? Select **one** answer choice on each row.

20. In this school year, how often have you felt any of the following ways about your school? Select **one** answer choice on each row.

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. I felt awkward and out of place at school.	A	ß	0	Ø	©	VH271942
b. I felt happy at school.	A	®	Ô	O	Ē	VH271944
c. I felt that I learned something that I can use in my daily life.	Ø	ß	Ø	Ø	¢	VH336903

VH852900

VH271934

VH271367

21. Are you taking an art course this school year (for example, drawing, painting, or studio art)?

(A) Yes

B No

57

Appendix K-1j: Summary of Changes Pilot Grade 8 Core

Previous item				2019 item		D/A/ R/NC+	Rationale
 6. Are you Hispanic or Latino? Select one or mo Ø No, I am not Hispanic or Latino. Ø Yes, I am Mexican, Mexican American, or Ø Yes, I am Puerto Rican or Puerto Rican Ar Ø Yes, I am Cuban or Cuban American. Ø Yes, I am from some other Hispanic or Lat (2017 Grade 8)	Chicano. nerican.		VIC40397	 20. Are you Hispanic or Latino? Select one or more answer choices. No, I am not Hispanic or Latino. Yes, I am Mexican, Mexican American, or Chicano. Yes, I am Puerto Rican or Puerto Rican American. Yes, I am Cuban or Cuban American. Yes, I am from some other Hispanic or Latino background. 	VH240367	NC	N/A
 7. Which of the following best describes you? Select White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander (2017 Grade 8) 8. About how many books are there in your home Few (0-10) Enough to fill one shelf (11-25) Forwards to fill one hookcase (26 100) 		choices.	VILLOUS VILLOUS	 21. Which of the following best describes you? Select one or more answer White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander Issue: Race/Ethnicity About how many books are there in your home? Few (0-10) Enough to fill one shelf (11-25) 	viiZanss	NC	N/A N/A
 Enough to fill one bookcase (26–100) Enough to fill several bookcases (more than (2017 Grade 8) 	a 100)			 © Enough to fill one bookcase (26–100) © Enough to fill several bookcases (more than 100) Issue: Socioeconomic Status 			
9. Do you have any of the following in your home a. Access to the Internet b. Clothes dryer just for your family c. Dishwasher d. Your own bedroom e. A desktop or laptop computer (including Chromebooks) that you can use f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Select one answer ch	No No	VH271084 VH271108 VH271108 VH336756 VH336756 VH336759 VH336759 VH336750 VH336750 VH336751 VH591976 VH271110 VH271112	2. Do you have any of the following in your home? Select one answer choice Image: the second secon	No VHE071105 D VHE071105 D VHE07105 D VHE0700 D VHE000	R	Sub-items I and c were dropped to keep stude burden low and sub-ite e, f, and g were revise to examine performane of alternati

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item	2019 item		D/A/ R/NC+	Rationale
 Will 10. How often do you use the Internet for homework at home? Never About once or twice a month About once or twice a week Almost every day Every day 	 3. How often do you use the Internet for homework at home? ③ Never ④ About once or twice a month ④ About once or twice a week ④ Almost every day ④ Every day 	VHISSI	NC	N/A
(2017 Grade 8)		VH240190		
 11. How many days were you absent from school in the last month? O None 1 or 2 days 3 or 4 days 5 to 10 days More than 10 days 	 4. How many days were you absent from school in the last month? ③ None ① 1 or 2 days ③ 3 or 4 days ④ 5 to 10 days ④ More than 10 days Issue: School Climate		NC	N/A
(2017 Grade 8)				
 How often do you talk about things you have studied in school with someone in your family? Never or hardly ever Once every few weeks About once a week Two or three times a week Every day 	 5. How often do you talk about things you have studied in school with someone in your family? ③ Never or hardly ever ④ Once every few weeks ③ About once a week ④ Two or three times a week ④ Every day Issue: Socioeconomic Status	VIDAIJIN	NC	N/A
(2017 Grade 8)		VH240192		
 13. How far in school did your mother go? She did not finish high school. She graduated from high school. She graduated from college. I don't know. (2017 Grade 8) 	 6. How far in school did your mother go? ③ She did not finish high school. ④ She graduated from high school. ③ She had some education after high school. ③ She graduated from college. ④ I don't know. Issue: Socioeconomic Status		NC	N/A

			2019	9 Pilot Grade 8 Core Stud	ent				
Previous item				2019 item		D/A/ R/NC+	Rationale		
14. How far in school did your father go?			VH240193	7. How far in school did your father go?			VH240193	NC	N/A
 The did not finish high school. 				 He did not finish high school. 					
The did not missi high school.The graduated from high school.				The and not finish high school.He graduated from high school.					
 Definition and the second secon				 General and some education after high school. 					
 The final bonne culture of anter high sensor. The graduated from college. 				He graduated from college.					
I don't know.				© I don't know.					
(2017 Grade 8)				Issue: Socioeconomic Status					
15 D			VH336776				VH336776	NC	N/A
15. Does your mother work?				8. Does your mother work?					
© Yes				© Yes					
(b) No				③ No					
© I don't know.				© I don't know.					
2017 Grade 8)				Issue: Socioeconomic Status					
VIII3679				9. Does your father work?			VH336779	NC	N/A
⊘ Yes				⊘ Yes					
No No									
© I don't know.				© I don't know.					
(2017 Grade 8)									
	101		VH271144	Issue: Socioeconomic Status			VH271144	NG	N1 / A
 Do any of the following people live in your h row. 	iome: Select one ansv	ver choice on each		 Do any of the following people live in your row. 	home? Select one answ	er choice on each		NC	N/A
	Yes	No	1.00	1	Yes	No			
a. Mother	۵	٢	VH271145	a. Mother	(3)	®	VH271145		
b. Stepmother c. Foster mother or other female legal	۲	1	VH271146	b. Stepmother c. Foster mother or other female legal	۲	⊕	VH271146		
guardian	8	®	VH271147	c. Foster mother or other female legal guardian	۲	₿	VH271147		
d. Father e. Stepfather	(A)	© ©	VH271148 VH271149	d. Father	0	₿	VH271148		
f. Foster father or other male legal guardian	0	•	VH271150	e. Stepfather f. Foster father or other male legal guardian	(B)	6	VH271149 VH271150		
				1. Toster lattier of other male legal guardian	9				
(2017 Grade 8)			VH591969	Issue: Socioeconomic Status			VH591969		
18. In this school year, how often did you use a lap Chromebooks) during your classes at school?	otop or desktop comp	uter (including		11. In this school year, how often did you use a la Chromebooks) during your classes at school?	ptop or desktop compu	ter (including		NC	N/A
Solution Never				Never					
In some classes				In some classes					
© In about half of the classes				© In about half of the classes					
D In more than half of the classes				D In more than half of the classes					
D In all or almost all classes				In all or almost all classes					
(2017 Grade 8)				Issue: Technology Use				1	1

2019 Pilot Grade 8 Core Student

Previous item							2019 item							D/A/ R/NC+	Rationale
 9. In this school year, how Kindle Fire) during you ① Never ① In some classes ② In about half of the ③ In more than half o ④ In all or almost all o 	(for example,)	 I2. In this school year, how often did you use a tablet (for example, Surface Pro, iPad, Kindle Fire) during your classes at school? ③ Never ⑤ In some classes ⑥ In about half of the classes ⑥ In all or almost all classes Issue: Technology Use								N/A					
2017 Grade 8) 20. How much does each one answer choice on	of the followi each row.	ng statements	s describe a pe	rson like you	? Select	VH271337	13. How much does each choice on each row.	of the follow	ing statement	s describe you	Select one a	nswer	VH733141	R	The stem of
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			this item was revised for
a. I finish whatever I begin.	۲	₿	0	Ø	©	VH271338	a. I finish whatever I begin.	(9)	₿	Q	۵	©	VH733142		clarity.
 I try very hard even after making mistakes. 	8	®	0	0	Θ	VH271339	 b. I try very hard even after making mistakes. 	0	6	0	Ø	٢	VH733143		
 I keep working hard even when I feel like quitting. 	۵	۵	0	Θ	Ð	VH271342	c. I keep working hard even when I feel like quitting.	۵	٩	©	۵	Ð	VH733145		
d. I keep trying to improve myself, even when it takes a long time to get there.	۲	₿	Ø	Ø	Ð	VH271345	d. I keep trying to improve myself, even when it takes a long time to get there.	Θ	٩	Ø	Ø	٢	VH733144		
2017 Grade 8) 21. In this school year, he choice on each row.	w often have y Never or hardly ever	Less than half of the	of the followin About half of the time	More than half of the	All or almost all o	VH271367	Issue: Grit 14. In this school year, ho choice on each row.	w often have Never or	Less than	of the followi	More than	All or	VH271367	NC	N/A
a. I started working on	nardiy ever	time	of the time	time	the time		1	hardly ever	half of the time	of the time	half of the time	almost all the time	of		
assignments right away rather than waiting until the last minute.	۵	¢	Q	Ø	Ø	VH271370	 a. I started working on assignments right away rather than waiting until the last 	۵	⊕	Θ	θ	θ	VH271370		
 I paid attention and resisted distractions. 	۲	۲	Ø	Ø	Ð	VH271372	minute. b. I paid attention and	Ø	®	Q	©	©	VH271372		
 I stayed on task without reminders from my teacher. I paid attention in 	۵	٦	Q	Ø	¢	VH271374	resisted distractions. c. I stayed on task without reminders from my teacher.	۵	®	O	0	Ð	VH271374		
class even when I was not interested.	۵	ـ®	Ø	Ø	©	VH271375	d. I paid attention in class even when I was	0	®	©	Ø	©	VH271375		
class even when I was	۵	۵	Q	Ø	©	VH271375	d. I paid attention in	٨	Ø	Ø	Ø	©	VH271375		

2019 Pilot Grade 8 Core Student

Previous item							2019 item							D/A/ R/NC+	Rationale
22. How much does each one answer choice on		ing statement	s describe a p	erson like you	1? Select	VH271749	15. How much does each choice on each row.	of the follow	ing statemen	ts describe yo	u? Select one	answer	VH733149	R	The stem of this item was
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	1		revised for
a. I like complex problems more than easy problems.	۵	₿	Ø	Ø	¢	VH271750	a. I like complex problems more than easy problems.	0	®	©	۵	©	VH733150		clarity.
 I like activities that challenge my thinking abilities. 	0	₿	0	0	©	VH271752	 b. I like activities that challenge my thinking abilities. 	6	®	©	Ø	©	VH733151		
c. I enjoy situations where I will have to think about something.	۵	©	Ø	Ø	©	VH271753	c. I enjoy situations where I will have to think about something.	Θ	۵	Θ	۵	Ø	VH733155		
d. I enjoy thinking about new solutions to problems.	0	0	Q	Ø	¢	VH271756	 d. I enjoy thinking about new solutions to problems. 	8	®	©	Ø	Ð	VH733154		
(2017 Grade 8) 23. In this school year, ho school? Select one ans	w often have y	you felt any of 1 each row.	the following	; ways about y	our	VH271934	Issue: Desire for I	w often have	you felt any o	f the following	g ways about y	your	VII271934	R	New sub-
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all oi the time	Π		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time		and f)	items (d, e, and f) were
a. I felt awkward and out of place at school.	0	\$	0	Θ	Ð	VH271942	a. I felt awkward and out of place at school.	Ø	®	Q	©	©	VH271942		added to
 b. I felt happy at school. c. I felt that I learned 	٩	(1)	O	0	©	VH271944	b. I felt happy at school.	0	⊕	O	Ø	Ð	VH271944		expand
something that I can use in my daily life.	۲	(1)	0	0	Ð	VH336903	c. I felt that I learned something that I can use in my daily life.	Ø	۲	Q	٩	Θ	VH336903		measuremen of this
(2017 Grade 8)							 I worried about crime and violence at my school. 	8	®	©	۵	Ð	VH271940		content.
							e. I felt my teachers treated me fairly.	Ø	⊕	0	Θ	Ð	VH853117		
							f. I felt safe on my way to or from school.	@	۲	Q	٩	©	VH853115		
							Issue: School Clin	nate							
24. Write the ZIP code of y	our home add	lress in the bo	x.			VH254028	N/A							D	Due to the time burden associated with
(2017 Grade 8)															completing this item and to keep student burden low,

20	019 Pilot Grade 8 Core Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
			this item was dropped.
N/A	 17. Are you taking a language course other than English this school year (for example, Spanish, French, or Chinese)? Tes Yes No Issue: Educational Experiences	A A	This item was added to assess student involvement in coursework on languages (other than English).
 2. Are you taking an art course now, or have you taken an art course this year? Yes No 	 18. Are you taking an art course this school year (for example, drawing, painting, or studio art)? ① Yes ③ No 	A	This item was added to assess student involvement in art
(2016 grade 8) N/A	Issue: Educational Experiences	A	coursework. This item was added to assess student involvement in music
	Issue: Educational Experiences		coursework.

Appendix K-1k: Pilot Grade 8 Core

- 1. About how many books are there in your home?

 - (D) Enough to fill one shelf (11–25)
 - © Enough to fill one bookcase (26–100)
 - © Enough to fill several bookcases (more than 100)

2. Do you have any of the following in your home? Select **one** answer choice on each row.

	Yes	No	
a. Access to the Internet	A	B	VH271105
b. Your own bedroom	A	®	VH336762
c. Your own desktop or laptop computer (including Chromebooks)	Ø	®	VH853088
d. Your own tablet (for example, Surface Pro, iPad, or Kindle Fire)	Ø	®	VH853090
e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One)	Ø	®	VH853089

VH354591

- 3. How often do you use the Internet for homework at home?
 - Never
 Never
 - (B) About once or twice a month
 - © About once or twice a week
 - Almost every day
 Almost every day
 - © Every day

VH240186

- 4. How many days were you absent from school in the last month?
 - None
 None
 - I or 2 days
 - © 3 or 4 days
 - D 5 to 10 days
 - © More than 10 days

VH240189

- **5.** How often do you talk about things you have studied in school with someone in your family?
 - Never or hardly ever
 - [®] Once every few weeks
 - About once a week
 - Two or three times a week
 - © Every day
- 6. How far in school did your mother go?

 - [®] She graduated from high school.
 - $\hfill {\mbox{\scriptsize C}}$ She had some education after high school.
 - ☑ She graduated from college.
 - I don't know.

7. How far in school did **your father** go?

- ^(C) He did not finish high school.
- [®] He graduated from high school.
- © He had some education after high school.
- ^(D) He graduated from college.
- © I don't know.

8. Does your mother work?

- (A) Yes
- B No
- © I don't know.

9. Does your father work?

- (A) Yes
- B No
- © I don't know.

VH336776

10. Do any of the following people live in your home? Select **one** answer choice on each row.

	Yes	No	
a. Mother	Ø	®	VH271145
b. Stepmother	$\textcircled{\ }$	B	VH271146
c. Foster mother or other female legal guardian	0	®	VH271147
d. Father	A	®	VH271148
e. Stepfather	A	®	VH271149
f. Foster father or other male legal guardian	A	®	VH271150

VH591969

VH271144

- **11.** In this school year, how often did you use a **laptop or desktop computer** (including Chromebooks) during your classes at school?
 - (A) Never
 - In some classes
 - © In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

- **12.** In this school year, how often did you use a **tablet** (for example, Surface Pro, iPad, Kindle Fire) during your classes at school?
 - Never
 Never
 - In some classes
 - © In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I finish whatever I begin.	۵	B	0	D	Ē	VH733142
b. I try very hard even after making mistakes.	A	ß	0	Ø	Ē	VH733143
c. I keep working hard even when I feel like quitting.	Ø	ß	Ø	Ø	Ē	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	8	₿	Q	Ø	Ē	VH733144

13. How much does each of the following statements describe you? Select **one** answer choice on each row.

14. In this school year, how often have you done each of the following? Select **one** answer choice on each row.

VH271367

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
as av W	started working on ssignments right way rather than vaiting until the last ninute.	0	®	Ø	Θ	©	VH271370
b. Ij re	paid attention and esisted distractions.	8	B	0	Ø	Ē	VH271372
w	stayed on task vithout reminders com my teacher.	(9	B	Ø	0	¢	VH271374
cĺ	paid attention in lass even when I was ot interested.	(2)	ß	O	Ø	¢	VH271375

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I like complex problems more than easy problems.	Ø	ß	Ø	Ø	Ē	VH733150
b. I like activities that challenge my thinking abilities.	Ø	ß	Ø	Ø	©	VH733151
c. I enjoy situations where I will have to think about something.	æ	®	Q	Ø	©	VH733155
d. I enjoy thinking about new solutions to problems.	æ	ß	Ö	Ø	Ē	VH733154

15. How much does each of the following statements describe you? Select **one** answer choice on each row.

16. In this school year, how often have you felt any of the following ways about your school? Select **one** answer choice on each row.

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a.	I felt awkward and out of place at school.	Ø	B	0	Ø	Ē	VH271942
b.	I felt happy at school.	A	®	Ô	Ø	Ē	VH271944
с.	I felt that I learned something that I can use in my daily life.	Ø	B	Ø	Ø	¢	VH336903
d.	I worried about crime and violence at my school.	0	₿	0	0	¢	VH271940
e.	I felt my teachers treated me fairly.	Ø	B	0	0	Ē	VH853117
f.	I felt safe on my way to or from school.	Ø	B	0	Ø	Ē	VH853118

VH852895

VH271934

- 17. Are you taking a language course other than English this school year (for example, Spanish, French, or Chinese)?
 - (A) Yes
 - B No
 No

- **18.** Are you taking an art course this school year (for example, drawing, painting, or studio art)?
 - (A) Yes
 - B No

- **19.** Are you taking a music course this school year (for example, choir, band, or orchestra)?
 - (A) Yes
 - B No
 No

- 20. Are you Hispanic or Latino? Select one or more answer choices.
 - No, I am not Hispanic or Latino.
 - [®] Yes, I am Mexican, Mexican American, or Chicano.
 - © Yes, I am Puerto Rican or Puerto Rican American.
 - Yes, I am Cuban or Cuban American.
 - © Yes, I am from some other Hispanic or Latino background.

- 21. Which of the following best describes you? Select one or more answer choices.

 - Black or African American
 - © Asian
 - American Indian or Alaska Native
 - © Native Hawaiian or other Pacific Islander

Appendix K-11: Spiral Map Grade 8 Core

Accnum	Grade	Grade 8 OMB PDF Sequence Number	Number of Grade 8 booklets item appears in	Grade 8 booklets item appears in
VH240186	4, 8, 12	01_00	3	1, 2, 3
VH880711	4, 8, 12	02_00	2	1, 2
VH271105	4, 8, 12	02_01	2	1, 2
VH336762	4, 8, 12	02_02	2	1, 2
VH853088	4, 8, 12	02_03	2	1, 2
VH853090	4, 8, 12	02_04	2	1, 2
VH853089	4, 8, 12	02_05	2	1, 2
VH354591	4, 8, 12	03_00	3	1, 2, 3
VH240190	4, 8, 12	04_00	1	3
VH240189	4, 8, 12	05_00	1	3
VH240192	8, 12	06_00	2	1, 2
VH240193	8, 12	07_00	2	1, 2
VH336776	8, 12	08_00	2	1, 2
VH336779	8, 12	09_00	2	1, 2
VH271144	4, 8, 12	10_00	2	1, 2
VH271145	4, 8, 12	10_01	2	1, 2
VH271146	4, 8, 12	10_02	2	1, 2
VH271147	4, 8, 12	10_03	2	1, 2
VH271148	4, 8, 12	10_04	2	1, 2
VH271149	4, 8, 12	10_05	2	1, 2
VH271150	4, 8, 12	10_06	2	1, 2
VH591969	4, 8, 12	11_00	1	3
VH271276	4, 8, 12	12_00	1	3
VH733141	4, 8, 12	13_00	2	1, 2
VH733142	4, 8, 12	13_01	2	1, 2
VH733143	4, 8, 12	13_02	2	1, 2
VH733145	4, 8, 12	13_03	2	1, 2
VH733144	4, 8, 12	13_04	2	1, 2

Accnum	Grade	Grade 8 OMB PDF Sequence Number	Number of Grade 8 booklets item appears in	Grade 8 booklets item appears in
VH271367	4, 8, 12	14_00	1	3
VH271370	4, 8, 12	14_01	1	3
VH271372	4, 8, 12	14_02	1	3
VH271374	4, 8, 12	14_03	1	3
VH271375	4, 8, 12	14_04	1	3
VH733149	4, 8, 12	15_00	1	3
VH733150	4, 8, 12	15_01	1	3
VH733151	4, 8, 12	15_02	1	3
VH733155	4, 8, 12	15_03	1	3
VH733154	4, 8, 12	15_04	1	3
VH271934	4, 8, 12	16_00	1	3
VH271942	4, 8, 12	16_01	1	3
VH271944	4, 8, 12	16_02	1	3
VH336903	4, 8, 12	16_03	1	3
VH271940	4, 8, 12	16_04	1	3
VH853117	4, 8, 12	16_05	1	3
VH853118	4, 8, 12	16_06	1	3
VH852895	8, 12	17_00	2	1, 2
VH852900	8, 12	18_00	2	1, 2
VH852901	8, 12	19_00	2	1, 2
VH240387	4, 8, 12	20_00	3	1, 2, 3
VH240388	4, 8, 12	21_00	3	1, 2, 3

Appendix K-1m: Summary of Changes Operational Grade 12 Core

2019 Operational Grade 12 Core Student

Previous item	2019 item		D/A/ R/NC+	Rationale
 VILLANSE 5. Are you Hispanic or Latino? Select one or more answer choices. (a) No, I am not Hispanic or Latino. (b) Yes, I am Mexican, Mexican American, or Chicano. (c) Yes, I am Puerto Rican or Puerto Rican American. (c) Yes, I am Cuban or Cuban American. (c) Yes, I am from some other Hispanic or Latino background. 	 Are you Hispanic or Latino? Select one or more answer choices. No, I am not Hispanic or Latino. Yes, I am Mexican, Mexican American, or Chicano. Yes, I am Puerto Rican or Puerto Rican American. Yes, I am Cuban or Cuban American. Yes, I am from some other Hispanic or Latino background. Issue: Race/Ethnicity	VIE240387	NC	N/A
 Which of the following best describes you? Select one or more answer choices. White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander (2018 Grade 12)	 4. Which of the following best describes you? Select one or more answer choices. White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Islander Issue: Race/Ethnicity 	V1/240388	NC	N/A
 7. About how many books are there in your home? Ø Few (0–10) © Enough to fill one shelf (11–25) © Enough to fill one bookcase (26–100) Ø Enough to fill several bookcases (more than 100) 		VH240186	NC	N/A
(2018 Grade 12)	Issue: Socioeconomic Status			

2019 Operational Grade 12 Core Student **Previous item** 2019 item D/A/ Rationale R/NC+ R 8. Do you have any of the following in your home? Select one answer choice on each row. 6. Do you have any of the following in your home? Select one answer choice on each row. Due to Yes No Yes No concerns a. Access to the Internet 0 Φ a. Access to the Internet 0 about b. Clothes dryer just for your family b. Your own bedroom 1 Ð 1 11367 c. Dishwasher A desktop or laptop computer (including Chromebooks) that you can use 0 Ð content 0 d. Your own bedroom 0 0 relevance and d. A tablet (for example, Surface Pro, iPad, A desktop or laptop computer (including Ø 1 m 120 Kindle Fire) that you can use Chromebooks) that you can use A smartphone (for example, iPhone, to keep A tablet (for example, Surface Pro, iPad. 0 0 Samsung Galaxy, HTC One) that you can 1 Kindle Fire) that you can use use student A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can Ð Ø burden low. use sub-items b and c were Issue: Socioeconomic Status (2018 Grade 12) dropped. VH35459 VH354591 NC N/A 7. How often do you use the Internet for homework at home? 9. How often do you use the Internet for homework at home? Never Never About once or twice a month About once or twice a month C About once or twice a week C About once or twice a week Almost every day Every day D Every day (2018 Grade 12) Issue: Technology Use NC N/A 8. How many days were you absent from school in the last month? 10. How many days were you absent from school in the last month? (None (None 1 or 2 days 1 or 2 days © 3 or 4 days © 3 or 4 days D 5 to 10 days © 5 to 10 days D More than 10 days D More than 10 days Issue: School Climate (2018 Grade 12) N/A NC 11. How often do you talk about things you have studied in school with someone in 9. How often do you talk about things you have studied in school with someone in your family? your family? Never or hardly ever Never or hardly ever ③ Once every few weeks ③ Once every few weeks C About once a week C About once a week D Two or three times a week D Two or three times a week D Every day D Every day

(2018 Grade 12)

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Issue: Socioeconomic Status

2019 Op	erational Grade 12 Core Student			
Previous item	2019 item		D/A/ R/NC+	Rationale
 12. How far in school did your mother go? (2) She did not finish high school. (3) She graduated from high school. (4) She graduated from college. (4) I don't know. (2018 Grade 12)	 10. How far in school did your mother go? She did not finish high school. She graduated from high school. She had some education after high school. She graduated from college. I don't know. Issue: Socioeconomic Status 	VH240142	NC	N/A
 13. How far in school did your father go? Ite did not finish high school. Ite graduated from high school. Ite had some education after high school. Ite graduated from college. I don't know. (2018 Grade 12)	 How far in school did your father go? He did not finish high school. He graduated from high school. He had some education after high school. He graduated from college. I don't know. Issue: Socioeconomic Status	¥11240193	NC	N/A
 viiii viiii vii	 12. Does your mother work? ③ Yes ④ No ④ I don't know. 	VH336776	NC	N/A
(2018 Grade 12)	Issue: Socioeconomic Status			

		2019 Ope	erational Grade 12 Core Student			
Previous item			2019 item		0/A/ 2/NC+	Rationale
15. What does your mother do what she does at work.	o for work? Select the choice	viosana e that most closely describes	N/A	D)	Due to the substantial
@ Accountant	⁽²⁾ Farmer	④ Religious worker				time burden
@ Artist	⁽¹⁾ Firefighter	Repair technician				associated
Athlete	③ Grounds worker	③ Salesperson				with
Carpenter	③ Health aide	Scientist				completing
Tashier @	The Helper	Secretary				this item and
Cleaner	⑦ Housekeeper	Security guard				to keep
@ Clerk	@ Janitor	④ Server				student
College professor	② Lawyer	Social worker				burden low,
Construction worker	@ Librarian	Software developer				this item was
@ Cook	③ Manager	③ Stocker				
Customer service	⁽¹⁾ Marketing	1 Supervisor				dropped.
Day care worker	③ Mechanic	🐵 Surgeon				
Dental hygienist	Medical technician	③ Surveyor				
② Dentist	Military	Taxi driver				
Designer	Miner	D Teacher				
Doctor	D Nurse	Therapist				
② Education administrator	③ Office support	Transportation				
Electrician	③ Painter	Truck driver				
④ Engineer	@ Pharmacist	Weterinarian				
@ Executive	Police	Writer				
Factory worker	Receptionist	Other (Please specify):				
(2018 Grade 12)						
16. Does your father work?		VH336779	13. Does your father work?	VH336779	IC	N/A
 Does your lattier work: Yes 			 Does your father work? Ø Yes 			
[®] No			D No			
© I don't know.			© I don't know.			
(2018 Grade 12)			Issue: Socioeconomic Status			

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

revious item				2019 item				D/A/ R/NC+	Rationale
 What does your father do fo what he does at work. 	or work? Select the choice	that most closely describe	VH336885	N/A				D	Due to the substantial
@ Accountant	@ Farmer	Religious worker							time burder
@ Artist	⁽²⁾ Firefighter	Repair technician							
@ Athlete	Grounds worker Grounds Gro	Salesperson							associated
(B) Carpenter	(1) Health aide	Scientist							with
© Cashier	The Helper	Secretary							completing
Cleaner	@ Housekeeper	Security guard							this item an
© Clerk	Janitor	Server							to keep
College professor	Lawyer	 Social worker 							student
 Construction worker 	LawyerLibrarian	 Software developer 							burden low
 Cook 	Manager	 Bortware developer Stocker 							
Customer service	Manager Marketing	Supervisor							this item wa
Day care worker	MarketingMechanic	Surgeon							dropped.
Dental hygienist	Medical technician	Surveyor							
Dentist	Military	Taxi driver							
Designer	Miner Miner	Teacher							
③ Doctor	D Nurse	Therapist							
Education administrator	③ Office support	③ Transportation							
@ Electrician	③ Painter	Truck driver							
③ Engineer	@ Pharmacist	Seterinarian							
@ Executive	Police	Writer							
Factory worker	@ Receptionist	Other (Please specif	y):						
)18 Grade 12)							VH271144		
 Do any of the following people row. 			:h	 Do any of the following people live in you row. 	r home? Select one answ	er choice on each		NC	N/A
Mother	Yes				Yes	No			
Mother Stepmother	® 0		VH271145 VH271146	a. Mother	0	8	VH271145 VH271146		
Foster mother or other female lo guardian	egal 💿	٩	VH271147 VH271148	 b. Stepmother c. Foster mother or other female legal guardian 	© ©	0	VH271146 VH271147		
Father Stepfather	® @		VH271148 VH271149	d. Father	0	(1)	VH271148		
Foster father or other male legal			VH271150	e. Stepfather	(3)	0	VH271149		

2019 Operational Grade 12 Core Student

 19. In this school year, how often did you us Chromebooks) during your classes at sch Never In some classes In about half of the classes In more than half of the classes In all or almost all classes (2018 Grade 12) 20. In this school year, how often did you us Kindle Fire) during your classes at school Never In some classes In about half of the classes In some classes In about half of the classes In more than half of the classes In about half of the classes In about half of the classes In about half of the classes In all or almost all classes In all or almost all classes 	use a tablet (for exam			VILUEISER VILUEISER		our classes a classes f the classes classes / USE often did yo	t school?	or desktop co	mputer (inclu	ding	V11591968	NC	N/A
 20. In this school year, how often did you us Kindle Fire) during your classes at schoo O Never O In some classes O In about half of the classes O In more than half of the classes 		ole, Surface Pro,	iPad,	VH27(276-	16. In this school year, how	often did yo					VH271276		
 Kindle Fire) during your classes at school Never In some classes In about half of the classes In more than half of the classes 		ile, Surface Pro,	iPad,	VH271276			Second days				VH271276		
(2018 Grade 12)		 In this school year, how often did you use a tablet (for example, Surface Pro, iPad, Kindle Fire) during your classes at school? Never In some classes In about half of the classes In more than half of the classes In all or almost all classes 						NC	N/A				
 How much does each of the following st one answer choice on each row. 	statements describe a	person like you	? Select	VH271337	17. How much does each choice on each row.		ving statement	ts describe yo	a? Select one	answer	VH733141	R	After
	A little bit Somewh like me like me	t Quite a bit like me	Very much like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			examining data from th
a. I finish whatever I begin.	© ©	Ø	Θ	VH271338	a. I finish whatever I begin.	0	©	©	Ø	©	VH733142		two versions
b. I try very hard even after making mistakes.	© ©	Ø	Ð	VH271339	b. I try very hard even	•	®	0	Ø	Ð	VH733143		of this item
c. I keep working hard even when I feel like quitting.	۵ ۵	Ø	©	VH271342	after making mistakes. c. I keep working hard even when I feel like quitting.	0	®	Ø	Ø	Ð	VH733145		that were administere
d. I keep trying to improve myself, even when it takes a long time to get there. ∞	۵ ۵	Ø	Ð	VH271345	d. I keep trying to improve myself, even when it takes a long time to get there.	Θ	₿	0	θ	θ	VH733144		in the pilot, one version

Previou	s item						2019 item						D/A/ R/NC+	Rationale
 How much does eac choice on each row. 	h of the follow	wing statemen	ts describe yo	w? Select one	answer	VII733141								
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me									
 a. I finish whatever I begin. 	Ø	Ð	Ð	Ð	Ð	VH733142								
 b. I try very hard even after making mistakes 	۵	Ð	¢	Φ	æ	VHTATIAN								
c. I keep working hard even when I feel like quitting.	۵	⊕	ø	θ	θ	VH739148								
d. I keep trying to improve myself, even when it takes a long time to get there.	0	œ	0	Ð	Ø	VH/ATIAN								
018 Grade 12)														
23. In this school year, he choice on each row.	w often have y	you done each	of the followir	ng? Select one	answer	VIETINT	 In this school year, how often choice on each row. 	have you done	each of the follow	ing? Select one	answer	VH271367	NC	N/A
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time		Nev	v ovor hall of	the of the time	nan or the	All or almost all of	E		
a. I started working on assignments right away rather than waiting until the last minute.	Ø	æ	Ø	Φ	Φ	หลังขาะสาม	a. I started working on assignments right away rather than waiting until the last	tin	©	©	the time	VH271370		
b. 1 paid attention and resisted distractions.	0	Φ	0	8	Φ	VH071372	minute. b. I paid attention and					VH271372		
c. I stayed on task without reminders from my teacher.	Ø	œ	ø	0	₿	1071174	c. I stayed on task without reminders		0	0	Ð	VH271372		
d. I paid attention in class even when I was not interested.	Ø	Ð	0	θ	Φ	V9071075	from my teacher. d. I paid attention in	0		0	Ø	VH271375		
2018 Grade 12) 24. How much does each		ng statements	describe a per	rson like you?	Select	VH271749	Issue: Grit 18. How much does each of the	following stat	ements describe v	ou? Select one	answer	VH733149	R	After
one answer choice on							choice on each row.							examining
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	1	Not like			Quite a bit like me	Very much like me			data from
I like complex problems more than easy problems.	0	⊕	0	θ	θ	VH271750	a. I like complex problems more than a easy problems.	0 0	Ø	Ð	Ð	VH733150		two version of this iter
 I like activities that challenge my thinking abilities. 	٩	٢	٥	Φ	Ð	VH271752	b. I like activities that	D (D	O	Ø	Ð	VH733151		that were
Leniov situations	0	®	Ø	Ø	٢	VH271753	c. I enjoy situations where I will have to	D (D	©	Ø	Φ	VH733155		administe in the pilo
I enjoy situations where I will have to think about something. I enjoy thinking about	_						something.						1	1

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previou	s item						2019 item							D/A/ R/NC+	Rationale
. How much does each choice on each row.	1 of the follow	ving statemen	ts describe ye	ou? Select on	e answer	¥1173314Q									
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	1									
I like complex problems more than casy problems.	Ø	Ð	0	Ø	Φ	Y11733150									
I like activities that challenge my thinking abilities.	GD .	æ	9	Ø	Ð	VH733(5)									
l enjoy situations where I will have to think about something.	Ø	θ	0	Φ	θ	VH/20135									
I enjoy thinking about new solutions to problems.	۲	۲	ø	θ	Ð	111733154									
018 Grade 12)															
6. In this school year, ho school? Select one ans	w often have y swer choice or	you felt any of a each row.	the following	ways about y	our	VH271934	20. In this school year, ho school? Select one ans	w often have wer choice or	you felt any o n each row.	f the following	ways about y	your	VH271904	NC	N/A
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all o the time	f		
I felt awkward and out of place at school.	Ø	٩	0	Ø	Θ	VH271942	 a. I felt awkward and out of place at school. 	۲	®	0	Ø	©	VH271942		
I felt happy at school.	0	٢	Q	۵	Ð	VH271944	b. I felt happy at school.	@	®	O	0	Ð	VH271944		
I felt that I learned something that I can use in my daily life.	۵	Ð	Ø	Ø	Φ	VH336903	c. I felt that I learned something that I can use in my daily life.	Ø	®	Q	0	¢	VH336903		
018 Grade 12) 7. During this school ye each row.		ne following ha	ve you done? S	Select one ans	wer on	VH740697	Issue: School Clin 22. During this school ye each row.		e following ha	ive you done? S	elect one answ	wer on	VH740697	NC	N/A
			Yes	1	No					Yes	1	No			
. Taken the SAT or ACT Exams	College Entra	ince	۲		۲	VH740702	a. Taken the SAT or ACT Exams	College Entra	nce	Ø	1	•	VH740702		
Submitted the Free Ap Student Aid (FAFSA)		ederal	(8)		0	VH740703	b. Submitted the Free App Student Aid (FAFSA)	plication for Fe	ederal	۵		1	VH740703		
Applied to a 2-year col			0		٢	VH740704	c. Applied to a 2-year coll	lege		۲	e	6	VH740704	1	1
Been accepted to a 2-ye	-		6		6	VH740705	d. Been accepted to a 2-ye	ar college		۲	4	®	VH740705		
Applied to a 4-year col			(9)	_	6	VH740706	e. Applied to a 4-year coll	ege		۲		1	VH740706		
Been accepted to a 4-ye Applied to a certificate		ogram	0	-	®	VH740708	f. Been accepted to a 4-ye	ar college		@	1	ـ	VH740708		
at a school that provide training (such as electr mechanic, computer pr	es occupationa rician, beautici rogrammer, etc	ıl an, z.)	۵		٩	VH740709	g. Applied to a certificate at a school that provide training (such as electr mechanic, computer pr	es occupationa ician, beautici	l an,	۵		9	VH740709		
Been accepted to a tech program			0		ـ	VH740710	h. Been accepted to a tech			0	1 2 2 2	ഀ	VH740710		
Talked with a military			8		٢	VH740711	program				-		10174074		1
	у	1	8		(1)	VH740712	i. Talked with a military			0		•	VH740711		
Enlisted in the military					20.20		j. Enlisted in the military			(1)		®	VH740712	1	1
Enlisted in the military Applied for a full-time Been interviewed for a			0	-	®	VH740713 VH740714	k. Applied for a full-time			8		•	VH740713		

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

2019	Operational Grade 12 Core Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
 28. Which of the following best describes your high school program? General Academic or college preparatory Vocational or technical (2018 Grade 12) 	23. Which of the following best describes your high school program? © General © Academic or college preparatory © Vocational or technical Issue: Post High School Preparation		N/A
29. Write the ZIP code of your home address in the box.	IN/A	D	Due to the time burden associated with completing this item and to keep student burden low, this item was dropped.
 2. Are you taking an art course now, or have you taken an art course this year? ② Yes ③ No 	EXERTISE VII 21. Are you taking an art course this school year (for example, drawing, painting, or studio art)? Image: School year (for example, drawing, painting, or studio art)? Image: School year (for example, drawing, painting, or studio art)? Image: School year (for example, drawing, painting, or studio art)? Image: School year (for example, drawing, painting, or studio art)? Image: School year (for example, drawing, painting, or school year (for example, drawing, painting, paint	A	This item was adapted from the arts questionnaire to assess student participation in arts
(2016 Grade 8)	Issue: Educational Experiences		coursework.

Appendix K-1n: Operational Grade 12 Core

- 1. How easy or difficult was this test?
 - Extremely difficult
 - Quite difficult
 - © Somewhat difficult
 - Somewhat easy
 - Quite easy
 - © Extremely easy

VH333658

- 2. How much effort did you apply to succeed on this test?
 - No effort at all
 - Wery little effort
 - © Some effort
 - O Quite a bit of effort
 - A lot of effort
- 3. Are you Hispanic or Latino? Select one or more answer choices.
 - No, I am not Hispanic or Latino.
 - (1) Yes, I am Mexican, Mexican American, or Chicano.
 - © Yes, I am Puerto Rican or Puerto Rican American.

 - © Yes, I am from some other Hispanic or Latino background.

- 4. Which of the following best describes you? Select one or more answer choices.
 - White
 - Black or African American
 - © Asian
 - American Indian or Alaska Native
 - © Native Hawaiian or other Pacific Islander
- 5. About how many books are there in your home?
 - ᢙ Few (0−10)
 - (B) Enough to fill one shelf (11–25)
 - © Enough to fill one bookcase (26–100)
 - © Enough to fill several bookcases (more than 100)

	Yes	No	
a. Access to the Internet	A	®	VH271105
b. Your own bedroom	A	®	VH336762
c. A desktop or laptop computer (including Chromebooks) that you can use	Ø	®	VH591976
d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	Ø	6	VH271110
e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	@	®	VH271112

6. Do you have any of the following in your home? Select one answer choice on each row.

VH354591

VH271104

- 7. How often do you use the Internet for homework at home?
 - Never
 - (B) About once or twice a month
 - © About once or twice a week
 - Almost every day
 Almost every day
 - © Every day

- 8. How many days were you absent from school in the last month?
 - None
 None
 - 1 or 2 days
 - © 3 or 4 days
 - © 5 to 10 days
 - More than 10 days

9. How often do you talk about things you have studied in school with someone in your family?

- Never or hardly ever
- [®] Once every few weeks
- About once a week
- Two or three times a week
- © Every day

10. How far in school did your mother go?

- ℬ She did not finish high school.
- [®] She graduated from high school.
- © She had some education after high school.
- She graduated from college.
- I don't know.

11. How far in school did your father go?

- He did not finish high school.
- [®] He graduated from high school.
- © He had some education after high school.
- He graduated from college.
- I don't know.

VH240192

VH336779

12. Does your mother work?

(A) Yes

[®] No

© I don't know.

13. Does your father work?

(A) Yes

B No

© I don't know.

14. Do any of the following people live in your home? Select **one** answer choice on each row.

	Yes	No	
a. Mother	A	®	VH271145
b. Stepmother	æ	®	VH271146
c. Foster mother or other female legal guardian	Ø	®	VH271147
d. Father	æ	®	VH271148
e. Stepfather	A	®	VH271149
f. Foster father or other male legal guardian	æ	®	VH271150

VH591969

VH271144

- **15.** In this school year, how often did you use a **laptop or desktop computer** (including Chromebooks) during your classes at school?
 - Never
 - In some classes
 - © In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

- **16.** In this school year, how often did you use a **tablet** (for example, Surface Pro, iPad, Kindle Fire) during your classes at school?
 - Never
 Never
 - In some classes
 - © In about half of the classes
 - \odot In more than half of the classes
 - © In all or almost all classes

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I finish whatever I begin.	۵	B	0	D	Ē	VH733142
b. I try very hard even after making mistakes.	A	ß	0	Ø	Ē	VH733143
c. I keep working hard even when I feel like quitting.	Ø	ß	Ø	Ø	Ē	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	8	₿	Q	Ø	Ē	VH733144

17. How much does each of the following statements describe you? Select **one** answer choice on each row.

18. How much does each of the following statements describe you? Select **one** answer choice on each row.

VH733149

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
а.	I like complex problems more than easy problems.	(2)	B	O	Ø	Ē	VH733150
b.	I like activities that challenge my thinking abilities.	(9)	₿	Ø	Ø	Ē	VH733151
c.	I enjoy situations where I will have to think about something.	0	₿	O	Ø	¢	VH733155
d.	I enjoy thinking about new solutions to problems.	(2)	ß	O	Ø	Ē	VH733154

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. I started working on assignments right away rather than waiting until the last minute.	Ø	®	Ø	Ø	©	VH271370
b. I paid attention and resisted distractions.	A	B	0	Ø	Ē	VH271372
c. I stayed on task without reminders from my teacher.	æ	ß	Ø	Ø	¢	VH271374
d. I paid attention in class even when I was not interested.	ß	B	O	Ø	Ē	VH271375

19. In this school year, how often have you done each of the following? Select **one** answer choice on each row.

20. In this school year, how often have you felt any of the following ways about your school? Select **one** answer choice on each row.

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. I felt awkward and out of place at school.	A	ß	0	Ø	©	VH271942
b. I felt happy at school.	A	®	O	0	Ē	VH271944
c. I felt that I learned something that I can use in my daily life.	Ø	ß	Ø	Ø	Ē	VH336903

VH852900

VH271934

VH271367

21. Are you taking an art course this school year (for example, drawing, painting, or studio art)?

(D) Yes

B No
 No

95

	Yes	No	
a. Taken the SAT or ACT College Entrance Exams	Ø	®	VH740702
b. Submitted the Free Application for Federal Student Aid (FAFSA)	Ø	®	VH740703
c. Applied to a 2-year college	A	®	VH740704
d. Been accepted to a 2-year college	A	®	VH740705
e. Applied to a 4-year college	A	®	VH740706
f. Been accepted to a 4-year college	A	®	VH740708
g. Applied to a certificate or diploma program at a school that provides occupational training (such as electrician, beautician, mechanic, computer programmer, etc.)	0	₿	VH740709
h. Been accepted to a technical training program	Ø	₿	VH740710
i. Talked with a military recruiter	A	®	VH740711
j. Enlisted in the military	A	®	VH740712
k. Applied for a full-time job	A	®	VH740713
1. Been interviewed for a full-time job	A	®	VH740714

22. During this school year, which of the following have you done? Select **one** answer on each row.

VH240194

- 23. Which of the following best describes your high school program?
 - (A) General
 - Academic or college preparatory
 - © Vocational or technical

Appendix K-10: Summary of Changes Operational Grade 4 Reading

Previous item	2019 item	D/A/ R/NC+	Rationale
	VHOJELSO N/A	D	This item was
1. How often does your teacher ask you to read a book you have chosen yourself?			dropped to
 Never About once or twice a year 			keep student
 About once or twice a year About once or twice a month 			
 About once of twice a month About once or twice a week 			burden low
D Every day or almost every day			and create
			opportunity
			for future
(2017 Grade 4)			
	W0285	1032853	development.
2. How often does your teacher ask you to discuss new or difficult vocabulary?	17. How often does your teacher ask you to discuss new or difficult vocabulary?	NC	N/A
(2) Never	© Never		
D About once or twice a year	 About once or twice a year 		
C About once or twice a month	 About once of twice a year About once of twice a month 		
D About once or twice a week	 About once of twice a month About once or twice a week 		
© Every day or almost every day	 D Every day or almost every day 		
	D Every day of almost every day		
(2017 Grade 4)			
· · ·	Issue: Organization of Instruction		
3. For school this year, how often do you work in pairs or small groups to talk about		NC NC	N/A
5. For school this year, now orten do you work in pairs of small groups to tark about something that you have read?	18. For school this year, how often do you work in pairs or small groups to talk about something that you have read?		
D Never	Ø Never		
About once or twice a year	About once or twice a year		
C About once or twice a month	© About once or twice a month		
D About once or twice a week	About once or twice a week		
© Every day or almost every day	D Every day or almost every day		
(2017 Grade 4)	Issue: Organization of Instruction		
		NC	N/A
4. For school this year, how often do you have a class discussion about something that the class has read?	19. For school this year, how often do you have a class discussion about something that the class has read?		
D Never	D Never		
D About once or twice a year	About once or twice a year About once or twice a year		
© About once or twice a month	© About once or twice a month		
D About once or twice a week	About once or twice a week		
D Every day or almost every day	D Every day or almost every day		
(2017 Grade 4)	Issue: Organization of Instruction		

Previous item	2019 item	D/A/ R/NC+	Rationale
 5. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? Ø Never Ø Once Ø Two or three times 	 20. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? Mever Once Two or three times 	NC	N/A
© Four or five times	Four or five times		
	D More than five times		
(2017 Grade 4)	Issue: Organization of Instruction		
 6. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork and homework? © Less than 30 minutes © About 30 minutes © About 1 hour © About 2 hours © About 3 hours © 4 or more hours (2017 Grade 4)	 21. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork? D Less than 30 minutes About 30 minutes About 1 hour About 2 hours About 3 hours 4 or more hours Issue: Resources for Learning and Instruction 	R	The word "homework" was removed.
 7. In this school year, how often do you borrow reading materials (such as books or magazines) from your school library or media center? O Never O About once or twice a year O About once or twice a month O About once or twice a week O Every day or almost every day 	 22. In this school year, how often do you borrow reading materials (such as books or magazines) from your classroom library, school library, or media center? © Never © About once or twice a year © About once or twice a month © About once or twice a week © Every day or almost every day 	R	The phrase "classroom library" was added.
(2017 Grade 4)	Issue: Resources for Learning and Instruction		

Previous item							2019 item							D/A/ R/NC+	Rationale
 Do you think you wou answer choice on each 	ld be able to c row.	lo each of the	following who	en reading? Se	elect one	VHILING	 Do you think you wou answer choice on each 		lo each of the i	following who	en reading? Se	lect one	VH037056	NC	N/A
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			1 definitely can't	I probably can't	Maybe	I probably can	I definitely can			
 Figure out the meaning of a word you don't know by using other words in the text 	٩	Φ	Q	Θ	Φ	V11280845	 Figure out the meaning of a word you don't know by using other words in the text 	Ø	Đ	ø	Φ	θ	V71260848		
Explain the meaning of something you have read	Ø	Φ	0	Θ	Ð	VHZ62849	 Explain the meaning of something you have read 	Ø	0	0	Ð	0	VH260849		
Figure out the main idea of a text	0	Ð	0	0	θ	VH260851	c. Figure out the main idea of a text	۲	θ	0	0	Ø	VH2d0651		
 Find text in a reading passage to help you answer a question on a test 	Θ	0	Ø	Θ	θ	¥11286849	d. Find text in a reading passage to help you answer a question on a	θ	0	0	Ø	Φ	VN160859		
 Recognize when you don't understand something you are reading 	ଡ	0	0	0	θ	V11260861	test e. Recognize when you don't understand something you are reading	Ø	0	Ø	θ	θ	VW2200861		
		1	1	1			f. Recognize the		1	-	-				
		Φ	Ø	Ø	D Colora	VI1260053	difference between fact and opinion in a text	1	Ð	©	©	Ø	VHZMOSAT VH444012	P	The phrase
difference between fact and opinion in a	of the followi each row,	ng statements	s describe a po	erson like you	1 ² Select	VT(250063) VT(25092)	difference between fact and opinion in a text	ctors of the follow	ring statemen	ts describe yo	ou? Select one	answer	V1844012	R	The phrase person like"
difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on o	of the follow					V11260920	difference between fact and opinion in a text Issue: Student Fac 24. How much does each choice on each row.	ctors				answer	V1844012	R	person like" was remove
difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on a a. I want other students to think I am good at reading.	of the followi each row, Not at all	ng statements A little bit	s describe a po Somewhat	erson like you Quite a bit	if Select Exactly like	91050020 91050020 91050020	difference between fact and opinion in a text Issue: Student Fac 24. How much does each	ctors of the follow Not at all	ring statemen A little bit	ts describe yo Somewhat	ou? Select one Quite a bit	answer Exactly like	V1844012	R	person like' was remove and two sul
difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on o	of the followi each row, Not at all like me	ng statements A little bit like me	s describe a po Somewhat like me	erson like you Quite a bit like me	if Select Exactly like me		difference between fact and opinion in a text Issue: Student Fac 24. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for	Ctors of the follow Not at all like me	A little bit like me	ts describe ye Somewhat like me	Quite a bit like me	answer Exactly like me	VH64012	R	person like' was remove
difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on o a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is casy for	of the followi each row, Not at all like me	ng statements A little bit like me Ø	s describe a po Somewhat like me ©	Quite a bit like me D	1 ² Select Exactly like D	y1120092s	difference between fact and opinion in a text Issue: Student Fac 24. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arts	of the follow Not at all like me	ning statemen A little bit like me D	ts describe yo Somewhat like me ©	Quite a bit like me ©	e answer Exactly like me ©	VH844012 VH844065	R	person like" was remove and two sub items were
difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on a a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is casy for me. c. I want to look smart in comparison to the other students in my English/language arts class.	of the follow: each row, Not at all like me Ø	ng statements A little bit like me D	s describe a po Somewhat like me ©	Quite a bit like me D	f Select Exactly like me D	VIILAOS28 VIILAOS29	difference between fact and opinion in a text Issue: Student Fac 24. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arts class. d. I want to get better English/language arts grades than most other	ctors of the follow Not at all like me	ning statemen A little bit like me D D	somewhat like me ©	Quite a bit like me ©	Exactly like me ©	VHR4002 VHR4065 VHR4066	R	person like' was remove and two sul items were
difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on o one answer choice o one answer	of the follow: each row, Not at all like me Ø	ng statements A little bit like me D D	s describe a po Somewhat like me © ©	Quite a bit like me D D D	f Select Exactly like me D D D	VH2x0930	difference between fact and opinion in a text Issue: Student Fa 24. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arts class. d. I want to get better English/language arts	ctors of the follow Not at all like me @ @	ning statemen A little bit like me D D D	somewhat like me © ©	Quite a bit like me ©	Exactly like me D D D	V1844002 V1844065 V1844066 V1844068	R	person like' was remove and two sul items were

Previous item							2019 item							D/A/ R/NC+	Rationale
							25. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	ou? Select one	answer	Visition		
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			
							 a. I want to learn as much as possible in my English/language arts class. 	0	æ	Q	Ø	Φ	V1634096		
							b. I want to become a better reader this year.	Ø	B	Ø	Ð	θ	V#6844097		
							c. I want to understand as much as I can in my English/language arts class.	Ø	Ø	Ø	0	Φ	V74844098		
							d. I want to master a lot of new English/ language arts skills in my class.	۵	Ð	Ø	Ø	Ð	V1644100		
 How much does each one answer choice on 		ng statements	s describe a pe	erson like you	1? Select	11580102	Issue: Student Fa 26. How much does each choice on each row.	1. 1. 1. 1. T.	ving statemen	ts describe yo	u? Select one	answer	Villator	R	-
	cach row.	A little bit	Somewhat	Quite a bit	Exactly like		26. How much does each	of the follow	A little bit	Somewhat	Quite a bit	Exactly like	VIRMAILER	R	The phrase "a person like" was removed
one answer choice on a. Reading is one of my	each row.						 26. How much does each choice on each row. a. Reading is one of my 	of the follow	A little bit like me				V1844159	R	person like"
one answer choice on	cach row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other 	of the follow Not at all like me	A little bit	Somewhat like me	Quite a bit like me	Exactly like me		R	person like"
one answer choice on a. Reading is one of my favorite activities. b. I like talking about books with other	cach row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me ©	Exactly like me		 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is 	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bin like me D	Exactly like me	VH544169	R	person like"
 one answer choice on a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is 	Cach row. Not at all like me	A little bit like me D	Somewhat like me ©	Quite a bit like me ©	Exactly like me D		 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like ralking about books with other people. 	of the follow Not at all like me	A little bit like me D	Somewhat like me ©	Quite a bin like me ©	Exactly like me D	VH544109 VH5644170	R	
 a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. Leniov going to a 	cach row. Not at all like me © ©	A little bit like me ©	Somewhat like me © ©	Quite a bit like me © ©	Exactly like		 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a 	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me D D D	VH544109 VH544170 VH544170 VH548172	R	person like"
 one answer choice on favorite activities. b. I like talking about books with other people. c. I think reading is important. d. Lenioy going to a bookstore or a library. 	cach row. Not at all like me	A little bit like me © ©	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D		 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bin like me © ©	Exactly like D D D D	VH544109 VH544170 VH544170 VH548172	R	person like"
a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 2017 Grade 4) 11. Besides doing homewor © Less than 30 minutes	cach row. Not at all like me	A little bit like me © ©	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D	VIED40271 VIED40272 VIED40275 VIED40275	 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. Issue: Student Fa 27. Besides doing homewor © Less than 30 minute © About 30 minutes a 	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bin like me © ©	Exactly like D D D D	V98543100 V98543170 V9864372 V9864371		person like" was removed
a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 2017 Grade 4) 11. Besides doing homewor © Less than 30 minutes © About 1 hour a day	cach row.	A little bit like me © ©	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D	VIED40271 VIED40272 VIED40275 VIED40275	 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. Issue: Student Fa 27. Besides doing homewor the standard book standard minute the About 30 minutes a the About 1 hour a day	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bin like me © ©	Exactly like D D D D	V98543100 V98543170 V9864372 V9864371		person like" was removed
a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 2017 Grade 4) 11. Besides doing homewor © Less than 30 minutes	cach row.	A little bit like me © ©	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D	VIED40271 VIED40272 VIED40275 VIED40275	 26. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. Issue: Student Fa 27. Besides doing homewor © Less than 30 minute © About 30 minutes a 	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bin like me © ©	Exactly like D D D D	V98543100 V98543170 V9864372 V9864371		person like" was removed

Previous item							2019 item							D/A/ R/NC+	Rationale
 How often do you recei English/language arts o 	ve help from utside of scho	a tutor, family ool or after sch	y member, or 100l?	friend with		VIB32820	 How often do you receiv English/language arts ou 				friend with		VI032820	NC	N/A
Dever							© Never								
About once or twice About once or twice	e a year						D About once or twice	a year							
C About once or twice	 About once or twice a month About once or twice a week 						C About once or twice	a month							
About once or twice About once or twice	D About once or twice a week						About once or twice	a week							
D Every day or almost	 About once or twice a week Every day or almost every day 						© Every day or almost	every day							
2017 Grade 4)			 2017 Grade 4) 13. How often do you typically do each of the following things outside of school? Select one answer choice on each row. 						ning and	Instructi	on				
13. How often do you typi	cally do each each row.	1 of the follow	ing things out	side of school	l' Select	vatisones.	Issue: Resources f 29. How often do you typic one answer choice on e	cally do eac			11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	? Select	VII:3000	NC	N/A
13. How often do you typi	cally do each sach row. Never	About once or twice a year	About once or twice a month	side of school About once or twice a week	l' Select Every day or almost every day		29. How often do you typic	cally do eac			side of school	Select Every day or almost every day		NC	N/A
 How often do you type one answer choice on a. Talk about books (print or online) with other people 	each row.	About once or twice a	About once or twice a	About once or twice a	Every day or almost		29. How often do you typic	cally do eac ach row.	h of the follows	About once or twice a	side of school About once or twice a	Every day or almost		NC	N/A
 How often do you typi one answer choice on a. Talk about books (print or online) with 	each row. Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day		 29. How often do you typic one answer choice on e. a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print 	cally do eac ach row. Never	About once or twice a year	About once or twice a month	side of school About once or twice a week	Every day or almost every day		NC	N/A
 How often do you typp one answer choice on a. Talk about books (print or online) with other people Go to my local library to borrow books (print or online) c. Read blogs 	Never	About once or twice a year D	About once or twice a month	About once or twice a week	Every day or almost every day ©	Уналимот	 29. How often do you typic one answer choice on e a. Talk about books (print or online) with other people b. Go to my local library 	cally do eac ach row. Never Ø	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day ©	V112x0307	NC	N/A
 How often do you type one answer choice on a. Talk about books (print or online) with other people Go to my local library to borrow books (print or online) 	Never ©	About once or twice a year D	About once or twice a month ©	About once or twice a week ©	Every day or almost every day ©	VH2x0907 VH2x0911	 29. How often do you typic one answer choice on ex- a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print or online) 	cally do eac ach row. Never ©	About once or twice a year D D	About once or twice a month ©	About once or twice a week ©	Every day or almost every day ©	V11260907 V11260911	NC	N/A

Appendix K-1p: Operational Grade 4 Reading

- 17. How often does your teacher ask you to discuss new or difficult vocabulary?
 - (A) Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- VH332862
- **18.** For school this year, how often do you work in pairs or small groups to talk about something that you have read?
 - Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- **19.** For school this year, how often do you have a class discussion about something that the class has read?
 - Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- **20.** For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?
 - Never
 Never
 - Once
 Once
 - © Two or three times
 - Four or five times
 - © More than five times

- **21.** On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork?
 - (D) Less than 30 minutes
 - About 30 minutes
 - © About 1 hour
 - About 2 hours
 About 2 hours
 - © About 3 hours
 - © 4 or more hours

- **22.** In this school year, how often do you borrow reading materials (such as books or magazines) from your classroom library, school library, or media center?
 - Never
 - About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day
- **23.** Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Figure out the meaning of a word you don't know by using other words in the text	Ø	ഀ	O	Ø	¢	VH260848
b.	Explain the meaning of something you have read	Ø	B	O	Ø	Ē	VH260849
c.	Figure out the main idea of a text	A	B	0	Ø	Ē	VH260851
d.	Find text in a reading passage to help you answer a question on a test	Ø	₿	O	Ø	¢	VH260859
e.	Recognize when you don't understand something you are reading	Ø	₿	O	Ø	¢	VH260861
f.	Recognize the difference between fact and opinion in a text	Ø	₿	O	Ø	¢	VH260863

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want other students to think I am good at reading.	Ø	ß	O	Ø	Ē	VH844065
b.	I want to show others that my English/ language arts schoolwork is easy for me.	Ø	ഀ	Ø	Ø	¢	VH844066
c.	I want to look smart in comparison to the other students in my English/language arts class.	0	ഀ	Ø	Ø	¢	VH844068
d.	I want to get better English/language arts grades than most other students in my class.	۵	B	©	©	Ē	VH844070

24. How much does each of the following statements describe you? Select **one** answer choice on each row.

25. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible in my English/language arts class.	6	ß	0	Θ	Ē	VH844096
b. I want to become a better reader this year.	۵	B	O	Ø	Ē	VH844097
c. I want to understand as much as I can in my English/language arts class.	Ø	₿	Ø	Ø	©	VH844098
d. I want to master a lot of new English/ language arts skills in my class.	Ø	ഀ	Ø	Ø	©	VH844100

VH844081

- Somewhat Quite a bit Not at all A little bit **Exactly like** like me like me like me like me me a. Reading is one of my Ø VH844169 B O D Đ favorite activities. b. I like talking about books with other A B VH844170 \odot \bigcirc Ð people. c. I think reading is A B \bigcirc \odot Ð VH844172 important. d. I enjoy going to a A B O \bigcirc Ð VH844171
- **26.** How much does each of the following statements describe you? Select **one** answer choice on each row.

VH844168

27. Besides doing homework, how much time do you spend reading outside of school?

- (B) About 30 minutes a day
- © About 1 hour a day

bookstore or a library.

- About 2 hours a day
 About 2 hours a day
- © About 3 hours a day
- © 4 or more hours a day

VH332820

28. How often do you receive help from a tutor, family member, or friend with English/language arts **outside of school or after school**?

Never
 Never

- (B) About once or twice a year
- © About once or twice a month
- About once or twice a week
- © Every day or almost every day

29. How often do you typically do each of the following things outside of school ? Select	
one answer choice on each row.	

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a.	Talk about books (print or online) with other people	0	®	O	Ø	Ē	VH260907
b.	Go to my local library to borrow books (print or online)	0	®	Ø	Ø	Ē	VH260911
c.	Read blogs	A	®	©	O	Ē	VH260913
d.	Use social media (for example, Facebook, Twitter, Instagram)	Ø	®	Ø	Ø	Ē	VH333261
e.	Help friends with reading homework	A	®	O	D	Ē	VH260917

Appendix K-1q: Summary of Changes Pilot Grade 4 Reading

2019	Pilot Grade 4 Reading Student			
Previous item	2019 item	-	'A/ 'NC+	Rationale
 21. How often does your teacher ask you to read a book you have chosen yourself? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day (2017 Grade 4)	N/A	D		This item was dropped to reduce student burden and create opportunity for future development.
22. How often does your teacher ask you to discuss new or difficult vocabulary? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day	 1. How often does your teacher ask you to discuss new or difficult vocabulary? ① Never ① About once or twice a year ② About once or twice a month ③ About once or twice a week ① Every day or almost every day 	NC	2	N/A
(2017 Grade 4)	Issue: Organization of Instruction			
 23. For school this year, how often do you work in pairs or small groups to talk about something that you have read? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day 	 2. For school this year, how often do you work in pairs or small groups to talk about something that you have read? ② Never ③ About once or twice a year ③ About once or twice a month ④ About once or twice a week ④ Every day or almost every day 	VHISSING NC	2	N/A
(2017 Grade 4)	Issue: Organization of Instruction	100.5.5		
 24. For school this year, how often do you have a class discussion about something that the class has read? O Never O About once or twice a year O About once or twice a month O About once or twice a week O Every day or almost every day 	 3. For school this year, how often do you have a class discussion about something that the class has read? O Never O About once or twice a year O About once or twice a month O About once or twice a week O Every day or almost every day 	NC	2	N/A
(2017 Grade 4)	Issue: Organization of Instruction			

2019 Pilot Grade 4 Reading Student

Previous item	2019 item	D/A/ R/NC·	Rationale
 v 25. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? © Never © Once © Two or three times 	 5. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? © Never © Once © Two or three times 	NC	N/A
Tour or five timesMore than five times	 Two of three times Four or five times More than five times 		
(2017 Grade 4)	Issue: Organization of Instruction		
 26. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork and homework? Less than 30 minutes About 30 minutes About 1 hour About 2 hours About 3 hours 4 or more hours (2017 Grade 4) 	 6. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork? ② Less than 30 minutes ③ About 30 minutes ③ About 1 hour ③ About 2 hours ③ About 3 hours ③ 4 or more hours Issue: Resources for Learning and Instruction	Statio R	The word "homework" was removed.
 27. In this school year, how often do you borrow reading materials (such as books or magazines) from your school library or media center? ② Never ③ About once or twice a year ③ About once or twice a month ④ About once or twice a week ④ Every day or almost every day 	 11. In this school year, how often do you borrow reading materials (such as books or magazines) from your school (for example, a classroom library, school library, or media center)? © Never © About once or twice a year © About once or twice a month © About once or twice a week © Every day or almost every day	R	The phrase "classroom library" was added and "classroom library, school library, media center" was
(2017 Grade 4)	Issue: Resources for Learning and Instruction		bolded.

2019 Pilot Grade 4 Reading Student

Previous item							2019 item							D/A/ R/NC+	Rationale
28. Do you think you woul answer choice on each	ld be able to a row.	lo each of the l	following who	en reading? Se	lect one	VII337050	 Do you think you wou answer choice on each 	ild be able to c 1 row.	lo each of the	following wh	en reading? Se	lect one	VRUITUSU	R	A sub-item was added.
-	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			1 definitely can't	I probably can't	Maybe	I probably can	I definitely can			was added.
a. Figure out the meaning of a word you don't know by using other words in the text	Ø	θ	Q	Φ	θ	¥¥260848	 a. Figure out the meaning of a word you don't know by using other words in the text 	0	Ð	Q	0	Ø	VEI260848		
b. Explain the meaning of something you have read	٩	Θ	0	0	Φ	V13260549	 Explain the meaning of something you have read 	0	۲	Ø	0	Φ	VH260#49		
e. Figure out the main idea of a text	G	Ð	Θ	Ø	θ	VH280851	c. Figure out the main idea of a text	۲	Ð	ø	0	Φ	VH280851		
Find text in a reading passage to help you answer a question on a test	۵	۵	Ø	Ø	θ	VH260659	d. Find text in a reading passage to help you answer a question on a	Ø	œ	Q	Ø	Φ	VH260059		
e. Recognize when you don't understand something you are reading	٩	0	0	Ø	Ø	VHIMING	e. Recognize when you don't understand something you are	٩	®	¢	۵	Φ	VH560861		
reading.				1.000			reading f. Recognize the								
f. Recognize the difference between fact and opinion in a text	θ	Φ	Ø	θ	θ	VH200863	difference between fact and opinion in a text	۵	۵	Ø	0	Φ	VHD60683		
f. Recognize the difference between fact and opinion in a	Ø	Φ	Ø	۵	Ð	VH260863	fact and opinion in a	Ø	0	0	0	θ	VH26083		
f. Recognize the difference between fact and opinion in a text (2017 Grade 4) 29. How much does each a	of the follow					VH260663	fact and opinion in a text g. Use evidence from a text to support your answer Issue: Student Fa 13. How much does each	© actors	Ø	0	Ø	Ð		R	The phrase "a
f. Recognize the difference between fact and opinion in a text 2017 Grade 4)	of the follow				ið Select		fact and opinion in a text g. Use evidence from a text to support your answer Issue: Student Fa	© actors	Ø	0	Ø	Ð	VEB (1215	R	The phrase "a person like" was removed
 Recognize the difference between fact and opinion in a text 2017 Grade 4) 29. How much does each one answer choice on a a. 1 want other students to think I am good at 	of the follow each row. Not at all	ing statements A little bit	s describe a po	erson like you Ouire a bit	i ³ Select Exactly like		fact and opinion in a text g. Use evidence from a text to support your answer Issue: Student Fa 13. How much does each choice on each row.	© ACTORS of the follow Not at all	D ring statemen A little bit	© ts describe yo Somewhat	Du? Select one Quite a bit	D answer Exactly like	VEB (1215	R	person like" was removed and two sub-
 Recognize the difference between fact and opinion in a text 2017 Grade 4) 29. How much does each one answer choice on a a. Lwant other students 	of the follow: each row. Not at all like me	ing statements A little bit like me	s describe a pe Somewhat like me	erson like you Quite a bit like me	a ³ Select Exactly like me	VIENNOR	fact and opinion in a text g. Use evidence from a text to support your answer Issue: Student Fa 13. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for	© actors of the follow Not at all like me	© ring statemen A little bit like me	© ts describe yo Somewhat like me	D u? Select one Quite a bit like me	answer Exactly like me	V854(215	R	person like" was removed
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 Recognize the difference between fact and opinion in a text 2017 Grade 4) 29. How much does each one answer choice on a a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arts 	of the follow: each row. Not at all like me	A little bit like me D	s describe a pa Somewhar like me ©	Quite a bit like me ©	a' Select Exactly like D D	VIE26029	fact and opinion in a text g. Use evidence from a text to support your answer Issue: Student Fa 13. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arts class. d. I want to get better English/language arts grades than most other	© of the follow Not at all like me ©	© ring statemen A little bit like me ©	© ts describe yo Somewhat like me ©	© u? Select one Quite a bit like me ©	answer Exactly like me ©	VBBU235	R	person like" was removed and two sub- items were
 f. Recognize the difference between fact and opinion in a text (2017 Grade 4) (2017 Grade 4) (29. How much does each one answer choice on one answer choice on one answer choice on a comparison to the students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for me. c. I want to look smart in comparison to the students in my English/language arts class. d. I want to learn as much as possible in my English/language 	of the follow each row. Not at all like me Ø	A little bit like mc D D	s describe a po Somewhat like me © ©	Quite a bit like me © ©	a' Select Exactly like D D D	VIE26029	fact and opinion in a text g. Use evidence from a text to support your answer Issue: Student Fa 13. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arts class. d. I want to get better English/language arts	© actors of the follow Not at all like me © 0	© ring statemen A little bit like me © ©	© ts describe yo Somewhat like me © ©	© ui Select one Quite a bit like me © ©	answer Exactly like me ©	VBB1(235 VBB1(235 VBB1(235 VBB1(235 VBB1(235 VBB1(235) V	R	person like" was removed and two sub- items were

							2019 item							D/A/ R/NC+	Rationale
							 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	u? Select one	answer	VI883763		
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			
							 a. I want to learn as much as possible in my English/language arts class. 	۲	æ	٥	0	θ	V31853767		
							b. I want to become a better reader this year.	0	œ	0	Ø	Φ	¥1053177		
							c. I want to understand as much as I can in my English/language arts class.	۵	Ø	Ø	Ø	Φ	V2H853774		
							d. I want to master a lot of new English/ language arts skills in my class.	۵	٩	0	۵	Φ	VH834770		
	 How much does each of the following statements describe a person like you? Select one answer choice on each row. 			¥1889132	Issue: Student Fa 10. How much does each choice on each row.		ving statemen	ts describe yo	u? Select one	answer	VIDA4168	R	The phrase "a person like"		
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			was removed
a. Reading is one of my	۲	9	0	0	Φ	V112/0271	 Reading is one of my favorite activities. 	G	Ð	Ø	Ø	Φ	V768#1169		and a sub-
favorite activities.							tavorite activities.								
b. I like talking about books with other people,	٩	θ	θ	Ø	Φ	VH260272	 b. I like talking about books with other 	Ø	Ð	©	Ð	Φ	¥H844170		item was added
 b. I like talking about books with other 	Ø	0	9	@ 0	Ð	VH260272 VH260275	 b. I like talking about books with other people. c. I think reading is 	0	@	© ©	0	0 0	¥168444770 ¥16844472		item was added.
 b. I like talking about books with other people, c. I think reading is 	_						b. I like talking about books with other people.	2			-	1			
 h. I like talking about books with other people, c. I think reading is important. d. I enjoy going to a 	۵	Ø	Q	۵	Φ	VH260275	 b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a 	۲	Ð	Ø	Ø	Φ	VH844172		
 h. I like talking about books with other people, c. I think reading is important. d. I enjoy going to a 	۵	Ø	Q	۵	Φ	VH260275	 b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. e. I enjoy finding things 	© ©	®	Ø	©	Φ	V1844172 V1844171		
 b. 1 like talking about books with other people. c. 1 think reading is important. d. 1 enjoy going to a bookstore or a library. 	© ©	Ø	Ø	0	Ð	VH260275	 b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. e. I enjoy finding things to read online. 	© © © Ctors	© © ©	0	© ©	0 0 0	V1844172 V1844171	NC	
 h. 1 like talking about books with other people. c. 1 think reading is important. d. 1 enjoy going to a bookstore or a library. (2017 Grade 4) 31. Besides doing homewo © Less than 30 minut © About 30 minutes. 	© © rk, how much tes a day a day	Ø	Ø	0	Ð	VH260275 VH260277	 b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. e. I enjoy finding things to read online. Issue: Student Fa 7. Besides doing homewor © Less than 30 minute © About 30 minutes a 	© © Ctors k, how much rs a day	© © ©	0	© ©	0 0 0	V10844172 V10844171 V10844171	NC	added.
 b. 1 like talking about books with other people. c. 1 think reading is important. d. I enioy going to a bookstore or a library. (2017 Grade 4) 31. Besides doing homewo © Less than 30 minutes of About 30 minutes of About 1 hour a day 	© Trk, how much tes a day a day	Ø	Ø	0	Ð	VH260275 VH260277	 b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. e. I enjoy finding things to read online. Issue: Student Fa 7. Besides doing homewor © Less than 30 minute © About 30 minutes a © About 1 hour a day 	© © Ctors k, how much cs a day day	© © ©	0	© ©	0 0 0	V10844172 V10844171 V10844171	NC	added.
 h. 1 like talking about books with other people. c. 1 think reading is important. d. 1 enjoy going to a bookstore or a library. (2017 Grade 4) 31. Besides doing homewo © Less than 30 minut © About 30 minutes. 	© Trk, how much tes a day a day	Ø	Ø	0	Ð	VH260275 VH260277	 b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. e. I enjoy finding things to read online. Issue: Student Fa 7. Besides doing homewor © Less than 30 minute © About 30 minutes a 	© © Ctors k, how much :s a day day	© © ©	0	© ©	0 0 0	V10844172 V10844171 V10844171	NC	added.

Pilot Grade 4 Rea	ading St	udent					
2019 item						D/A/ R/NC+	Rationale
N/A						D	This item was dropped to reduce student burden and create opportunity for future development.
 How often do you receive schoolwork outside of sci 	e the following ty hool or after scho	pes of help with ool? Select one an	English/languag swer choice on a	e arts each row.	VB811176	A	This item was added.
	Never or t	wice a or twic	e a or twice :		ſ		
a. Help from a teacher	0	0 0	Ð	Ð	VH811190		
b. Help from a tutor	Ø	0 0	6	Φ	VH811192		
c. Help from a family member or friend	۲	0	Φ	Φ	VHS11195		
 d. Help from online resources (for example, websites or apps) 	Ø	0 0	Ø	Φ	VH811200		
9. How useful do you find e	ach of the follow	ing types of help	to understand y	our	VH811276	A	This item was added.
	Not useful at all	Somewhat useful	Very useful	I don't receive that type of help.			
a. Help from a teacher	۲	Ø	Q	Ø	VI3611287		
b. Help from a tutor	0	Ø	Ø	Ø	VERETIDAT		
c. Help from a family member or friend	Φ	٩	0	0	VHR11302		
d. Help from online resources (for example, websites or	5 @	Ø	0	0	VHALE304		
	2019 item N/A * N/A * N/A * 8. How often do you receive schoolwork outside of set a. Help from a teacher b. Hclp from a teacher b. Hclp from a totor c. Help from a family member or friend d. Help from online resources (for example, websites or apps) Issue: Resources for example, websites or apps) Issue: Resources for example, websites or apps) Issue: Resources for example, websites or apps) c. Help from a teacher b. Help from a tutor c. Help from a tutor c. Help from a family member or friend	2019 item N/A 8. How often do you receive the following ty schoolwork outside of school or after school work outside of school or after sch	2019 item N/A * N/A * N/A * N/A * S. How often do you receive the following types of help with schoolwork outside of school or after school? Select one and intersection of twice a work of the schoolwork outside of school or after school? Select one and intersection of twice a work of twice a work of the schoolwork outside of school or after school? Select one and intersection of twice a work of twice a work of the school of twice a work of the school of twice a work of the school of the school of twice a work of the school	2019 item N/A * N/A * N/A * 8. How often do you receive the following types of help with English/languag schoolwork outside of school or after school? Select one answer choice on or week in the school or after school? Select one answer choice on or week in the school or after school? Select one answer choice on or week in the school of the school or twice a intervent of twice in twice in twice in the school of twice in twice in twice in the school of twice in twice in twice in the school of twice in the school of twice in the school of twice in twice in twice in the school of twice in the school of twice in the school of twice in twice in twice in the school of twice in twice in twice in the school of twice in twice in the school of twice in the school of twice in twice in twice in twice in the school of twice in twice in twice in the school of twice in the school of twice in twice in twice in twice in the school of twice in twice in twice in the school of twice in the scho	2019 item N/A *. How often do you receive the following types of help with English/language arts schoolwork outside of school or after school? Select one answer choice on each row. <u>Never</u> <u>About once</u> <u>About once</u> <u>art week</u> <u>Every day or almost every day or twice a <u>month</u> <u>week</u> <u>every day or almost every day or twice a <u>month</u> <u>week</u> <u>every day or almost every day or twice a <u>month</u> <u>week</u> <u>every day or almost every day or twice a <u>month</u> <u>week</u> <u>every day or almost every day or twice a <u>month</u> <u>week</u> <u>every day or almost every day or twice a <u>month</u> <u>week</u> <u>every day or almost every day or twice is or twice a <u>month</u> <u>week</u> <u>every day or almost every day or almost every day or <u>almost every day or week</u> <u>thelp from a twore</u> <u>weeksites or apps</u> <u>Issue: Resources for Learning and Instruction</u> <u>A Help from a twore</u> <u>almost all</u> <u>somewhat</u> <u>Very useful I don't receive that type of help. Help from a twore</u> <u>almost all</u> <u>somewhat</u> <u>very useful do a <u>almost all</u> <u>a type of thelp.</u> </u></u></u></u></u></u></u></u></u>	2019 item N/A 8. How often do you receive the following types of help with English/language arts schoolwork outside of school or after school? Select one answer choice on each row. very day or school or after school? Select one answer choice on each row. Image: the school of the school or after school? Select one answer choice on each row. very day or twitter a school or after school? Select one answer choice on each row. Image: the school of the school of the school? Select one answer choice on each row. very day or twitter a school or after school? Select one answer choice on each row. Image: Resources for Learning and Instruction very school or after school or after school? Select one answer choice on each row. Summe Select one answer choice on each row. Image: Resources for Learning and Instruction very school or after school o	2019 item D/A/ R/NC+ N/A D N/A D * N/A D * How often do you receive the following types of help with English/language arts schoolwork outside of school or after school's Select one answer choice on each row. ************************************

2019 Pilot Grade 4 Reading Student

Previous item							2019 item							D/A/ R/NC+	Rationale
33. How often do you type one answer choice on		a of the follow	ing things out	side of school	? Select	VH2NDANS	12. How often do you typic one answer choice on e	ally do each each row.	of the following	g activities ou	side of school	? Select	VH83632	R	In the item stem,
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			"things" was
a. Talk about books (print or online) with other people	Ð	Ð	Ø	Ø	Ð	VEGAUSU/	a. Read online about topics I am interested in	٩	Ð	0	0	Φ	VIBUIRS		replaced wit "activities".
b. Go to my local library to borrow books (print or online)	θ	0	0	Φ	θ	¥11260911	 Talk about things I read with other people 	Φ	Ð	٥	0	Ð	VH853637		sub-item "c"
c. Read blogs	۵	٩	Ø	Ð	Ø	VH2609E1	 Borrow or download books from a local 	0	-	Ø	0	Ð	VHRSIAS		"Read blogs
 d. Use social media (for example, Facebook, Twitter, Instagram) 	۵	Ø	Ø	Φ	Φ	V11333261	library d. Use social media (for		®				-		was replace with "Read
e. Help friends with reading homework	Ð	Ð	Q	Φ	Ð	VH280917	example, Facebook, Twitter, Instagram)	Ø	®	Ø	0	Φ	VH853654		online abou
							e. Help friends with reading homework	0	Ø	0	0	Φ	VHIRS/659		topics I am
2017 Grade 4)							Issue: Student Fa	ctors							and moved sub-item "a In sub-item
															"b", "Go to my local
															library to
															borrow boo
															(print or
															online)" wa
															online)" wa
															online)" wa replaced wi "Borrow or download
															online)" wa replaced wi "Borrow or download books from
															online)" was replaced wit "Borrow or

Appendix K-1r: Pilot Grade 4 Reading

VH332853

- 1. How often does your teacher ask you to discuss new or difficult vocabulary?
 - Never
 Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

VH332862

- **2.** For school this year, how often do you work in pairs or small groups to talk about something that you have read?
 - Never
 - About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- **3.** For school this year, how often do you have a class discussion about something that the class has read?
 - Never
 Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

4. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Figure out the meaning of a word you don't know by using other words in the text	0	ഀ	O	Ø	Ē	VH260848
b.	Explain the meaning of something you have read	Ø	B	O	Ø	Ē	VH260849
c.	Figure out the main idea of a text	Ø	B	0	Ø	Ē	VH260851
d.	Find text in a reading passage to help you answer a question on a test	0	₿	O	Ø	Ē	VH260859
e.	Recognize when you don't understand something you are reading	6	₿	O	Ø	¢	VH260861
f.	Recognize the difference between fact and opinion in a text	0	₿	O	Ø	Ē	VH260863
g.	Use evidence from a text to support your answer	0	₿	O	Ø	Ē	VH811215

VH588774

- **5.** For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?
 - Never
 - Once
 Once
 - © Two or three times
 - D Four or five times
 - © More than five times

- 6. On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork?
 - (D) Less than 30 minutes
 - About 30 minutes
 About 30 minutes
 - © About 1 hour
 - D About 2 hours
 - © About 3 hours
 - © 4 or more hours

- VH598686
- 7. Besides doing homework, how much time do you spend reading outside of school?
 - (a) Less than 30 minutes a day
 - (B) About 30 minutes a day
 - © About 1 hour a day
 - About 2 hours a day
 - © About 3 hours a day
 - © 4 or more hours a day

8. How often do you receive the following types of help with English/language arts schoolwork **outside of school or after school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Help from a teacher	Ø	®	Ô	O	Ē	VH811190
b. Help from a tutor	A	®	Ô	O	Ē	VH811192
c. Help from a family member or friend	A	B	O	Ø	Ē	VH811196
d. Help from online resources (for example, websites or apps)	0	®	Ø	Ø	Ē	VH811200

9. How useful do you find each of the following types of help to understand your English/language arts schoolwork? Select **one** answer choice on each row.

	Not useful at all	Somewhat useful	Very useful	I don't receive that type of help.	
a. Help from a teacher	A	®	O	D	VH811287
b. Help from a tutor	A	®	O	D	VH811291
c. Help from a family member or friend	B	B	O	Ø	VH811302
d. Help from online resources (for example, websites or apps)	۵	₿	O	Ø	VH811304

VH811176

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
	Reading is one of my favorite activities.	Ø	B	0	Ø	Ē	VH844169
· ·	I like talking about books with other people.	(9)	B	0	Ø	©	VH844170
	I think reading is important.	Ø	B	0	Ø	Ē	VH844172
d.	I enjoy going to a bookstore or a library.	Ø	B	0	Ø	Ē	VH844171
	I enjoy finding things to read online.	Ø	B	O	Ø	Ē	VH853415

10. How much does each of the following statements describe you? Select **one** answer choice on each row.

- **11.** In this school year, how often do you borrow reading materials (such as books or magazines) from your school (for example, a **classroom library**, **school library**, or **media center**)?
 - (A) Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

12. How often do you typically do each of the following activities **outside of school**? Select **one** answer choice on each row.

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a.	Read online about topics I am interested in	Ø	ß	Ø	Ø	¢	VH853656
b.	Talk about things I read with other people	8	B	0	Ø	Ē	VH853657
с.	Borrow or download books from a local library	0	ß	Ø	Ø	¢	VH853655
d.	Use social media (for example, Facebook, Twitter, Instagram)	0	®	Ø	Ø	Ē	VH853654
e.	Help friends with reading homework	(2)	B	0	D	Ē	VH853658

13. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want other students to think I am good at reading.	Ø	ß	Ø	Ø	Ē	VH853764
b.	I want to show others that my English/ language arts schoolwork is easy for me.	0	(9	0	Ø	Ē	VH853765
c.	I want to look smart in comparison to the other students in my English/language arts class.	0	ഀ	Ø	Ø	¢	VH853766
d.	I want to get better English/language arts grades than most other students in my class.	0	₿	Ø	Ø	¢	VH853776

VH853747

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible in my English/language arts class.	Ø	®	Q	Ø	©	VH853767
b. I want to become a better reader this year.	A	B	0	Ø	Ē	VH853777
c. I want to understand as much as I can in my English/language arts class.	Ø	®	Ø	Ø	©	VH853774
d. I want to master a lot of new English/ language arts skills in my class.	۵	ß	Q	Ø	¢	VH853770

14. How much does each of the following statements describe you? Select **one** answer choice on each row.

Appendix K-1s: Spiral Map Grade 4 Reading

Grade	Grade 4 OMB PDF Sequence Number	Number of Grade 4 booklets item appears in	Grade 4 booklets item appears in
4, 8	11_00	3	1, 2, 3
4, 8	12_00	2	1, 2
4, 8	12_01	2	1, 2
4, 8	12_02	2	1, 2
4, 8	12_03	2	1, 2
4, 8	12_04	2	1, 2
4, 8	12_05	2	1, 2
4, 8	06_00	3	1, 2, 3
4, 8	10_00	2	1, 2
4, 8	10_01	2	1, 2
4, 8	10_02	2	1, 2
4, 8	10_03	2	1, 2
4, 8	10_04	2	1, 2
4, 8	10_05	2	1, 2
4, 8	08_00	2	1, 2
4, 8	08_01	2	1, 2
4, 8	08_02	2	1, 2
4, 8	08_03	2	1, 2
4, 8	08_04	2	1, 2
4, 8	09_00	2	1, 2
4, 8	09_01	2	1, 2
4, 8	09_02	2	1, 2
4, 8	09_03	2	1, 2
4, 8	09_04	2	1, 2
4, 8	07_00	1	3
4,8	04_00	1	3
	04_01		
4, 8		1	3
	4, 8 4, 8 4, 8 4, 8 4, 8 4, 8 4, 8 4, 8	Grade Sequence Number 4, 8 11_00 4, 8 12_00 4, 8 12_01 4, 8 12_02 4, 8 12_03 4, 8 12_05 4, 8 12_05 4, 8 10_00 4, 8 10_01 4, 8 10_02 4, 8 10_03 4, 8 10_05 4, 8 08_00 4, 8 00 4, 8 09_01 4, 8 09_01 4, 8 09_01 4, 8 09_01 4, 8 09_02 4, 8 09_03 4, 8 09_04 4, 8 07_00 4, 8 04_00 04_01 04_01	GradeGrade 4 OMB PDF Sequence NumberGrade 4 booklets item appears in $4, 8$ 11_00 3 $4, 8$ 12_00 2 $4, 8$ 12_01 2 $4, 8$ 12_02 2 $4, 8$ 12_03 2 $4, 8$ 12_04 2 $4, 8$ 12_05 2 $4, 8$ 10_00 2 $4, 8$ 10_02 2 $4, 8$ 10_02 2 $4, 8$ 10_02 2 $4, 8$ 10_05 2 $4, 8$ 10_05 2 $4, 8$ 08_00 2 $4, 8$ 08_02 2 $4, 8$ 08_03 2 $4, 8$ 08_03 2 $4, 8$ 08_01 2 $4, 8$ 09_01 2 $4, 8$ 09_02 2 $4, 8$ 09_01 2 $4, 8$ 09_02 2 $4, 8$ 09_01 2 $4, 8$ 09_02 2 $4, 8$ 09_01 2 $4, 8$ 09_01 2 $4, 8$ 09_01 2 $4, 8$ 09_02 2 $4, 8$ 09_01 2 $4, 8$ 09_02 2 $4, 8$ 09_01 2 $4, 8$ 09_00 2 $4, 8$ 09_00 1 $4, 8$ 09_00 1 $4, 8$ 09_00 1 $4, 8$ 09_00 1 $4, 8$ 01_0 1

VH260849		04_02		
	4, 8		1	3
VH260851		04_03		
	4, 8		1	3
VH260859	4, 8	04_04	1	3
VH260861		04_05		
	4, 8		1	3
VH260863		04_06		
	4, 8		1	3
VH811215	4,8	04_07	1	3
VH853747	4, 8	13_00	1	3
VH853764	4, 8	13_01	1	3
VH853765	4, 8	13_02	1	3
VH853766	4, 8	13_03	1	3
VH853776	4, 8	13_04	1	3
VH853763	4,8	14_00	1	3
VH853767	4, 8	14_01	1	3
VH853777	4, 8	14_02	1	3
VH853774	4, 8	14_03	1	3
VH853770	4, 8	14_04	1	3
VH332853	4	01_00	1	3
VH332862	4	02_00	1	3
VH332871	4	03_00	1	3
VH588774	4, 8,12	05_00	1	3

Appendix K-1t: Summary of Changes Operational Grade 8 Reading

Previous item							2019 item							D/A/ R/NC+	Rationale
 For your English/langu following? Select one a 			w often do you	do each of th	e	VHD32887	22. For your English/langu following? Select one a	age arts class nswer choice	this year, how on each row.	w often do you	1 do each of th	ic	VH032802	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day o almost every day	r		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day o almost every day	r		
a. Have a class discussion about something that the whole class has read	Ø	9	Ø	0	θ	V18132863	a. Have a class discussion about something that the whole class has read	۵	٩	Ø	۵	Φ	V18332884		
b. Work in pairs or small groups to talk about something that you have read	0	0	Ð	Ø	Φ	VI1132889	 Work in pairs or small groups to talk about something that you have read 	Ø	Θ	Ø	Ð	Φ	VH332889		
2017 Grade 8)						VH2540254	Issue: Organizatio						V1250254		
 In your English/langua passage, how often doe choice on each row. 	ge arts class t s your teache	his year, when r ask you to d	n reading a sto lo the followin	ry, article, or 1g? Select one	other answer		 In your English/langua passage, how often doe choice on each row. 							R	A sub-item was droppe
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
 Evaluate the main evidence in a persuasive/argument passage 	Ð	θ	0	Φ	Φ	V11260256	 a. Evaluate the main evidence in a persuasive/argument passage 	œ	Ð	ø	Ø	θ	VH260266		
 Analyze the author's organization of information in a passage 	٩	θ	Θ	Ø	Φ	VH333142	 Analyze the author's organization of information in a passage 	Ø	Ð	Ð	0	Φ	VEI333142		
 Critique the author's craft or technique 	٨	₿	Ø	0	Φ	VH533144	раззаде								
2017 Grade 8) 3. In your English/langu passage, how often do choice on each row.						VH333074	Issue: Organizatio	uage arts class	this year, whe	en reading a sto do the followir	ory, article, or o 193 Select one :	other answer	¥1533074	R	A sub-item was droppe
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			Never or	Once in a	Sometimes	Often	Always or almost			
a. Summarize the passage	۵	œ	0	Ø	Ð	VH333075	a. Summarize the	hardly ever	while			always			
b. Interpret the meaning of the passage	۵	۲	0	Ø	©	VH333076	b. Interpret the meaning	Ø	Ð	©	۵	Ð	VH333075		
c. Question the motives or feelings of the characters	Ø	®	Ø	Φ	¢	VH333079	of the passage c. Question the motives or feelings of the	8	@ @	0	0	0	VH333076 VH333079		
d. Identify the main ideas of the passage	۲	ø	0	Φ	Ø	VH333078	characters d. Identify the main idea	s ø	Ð	Q	Ø	©	VH333078-		
e. Identify the themes of	(4)	⊕	0	Φ	Ð	VH333094	of the passage e. Identify the themes of	60	•	0	9	0	VH333094		
the passage		12 1000		1-2-11		VH333077	the passage	Q	Ψ.	Q	e	Q	**1030094		
	(8)	۲	Ø	۵	٢	VH5330/7									

Previous item	2019 item	D/A/ R/NC+	Rationale
 4. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? Ø Never 	 25. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? 	NC	N/A
© Once	D Once		
© Two or three times	Two or three times		
D Four or five times	Four or five times		
	© More than five times		
(2017 Grade 8)	Issue: Organization of Instruction		
5. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork?	26. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork?	NC	N/A
D Less than 30 minutes	© Less than 30 minutes		
D About 30 minutes	About 30 minutes		
© About 1 hour	© About 1 hour		
D About 2 hours	D About 2 hours		
© About 3 hours	D About 3 hours		
© 4 or more hours	© 4 or more hours		
(2017 Grade 8)	Issue: Resources for Learning and Instruction		
6. In this school year, how often do you borrow reading materials (such as books or magazines) from your classroom library, school library, or media center?	27. In this school year, how often do you borrow reading materials (such as books or magazines) from your classroom library, school library, or media center?	NC	N/A
© Never	@ Never		
D About once or twice a year	D About once or twice a year		
C About once or twice a month	© About once or twice a month		
About once or twice a week About once or twice a week	D About once or twice a week		
© Every day or almost every day	© Every day or almost every day		
(2017 Grade 8)	Issue: Resources for Learning and Instruction		

revious item							2019 item							D/A/ R/NC+	Rationale
Do you think you woo answer choice on each		lo each of the f	ollowing wh	en reading? Se	lect one	VIPABAT	28. Do you think you wou answer choice on each		lo each of the f	following wł	ien reading? Se	elect one	VH2mma7	NC	N/A
	I definitely can't	I probably can't	Maybe	I probably can	l definitely can			1 definitely can't	I probably can't	Maybe	I probably can	I definitely can			
 Figure out the meaning of a word you don't know by using other words in the text 	3	Ø	Ø	Ø	Ð	¥11280648	 Figure out the meaning of a word you don't know by using other words in the text 	Ø	Ð	0	0	θ	VH2/0845		
 Explain the meaning of something you have read 	Ø	Ð	0	θ	θ	VH260549	Explain the meaning of something you have read	Ø	Ð	0	0	Φ	VH2/0849		
 Figure out the main idea of a text 	٩	۲	O	Θ	Θ	V112/0651	c. Figure out the main idea of a text	Ø	œ	0	0	Θ	VH2NORST		
 Find text in a reading passage to help you answer a question on a test 	8	Ø	θ	θ	Ð	V112/0839	d. Find text in a reading passage to help you answer a question on a	٩	8	9	0	Φ	VH260859		
 Recognize when you don't understand 	æ	0	Ø	θ	θ	VIELOUN	e. Recognize when you don't understand	Ø	œ	©.	œ	Ð	VH2(086)		
something you are reading 2017 Grade 8) 8. Do you think you wo		lo each of the f	ollowing wh	en reading? Se	lect one	VIIMUND	something you are reading Issue: Student Fa	ctors	o each of the f	ollowing wh	en reading? Se	lect one	VIBILIDO	NC	N/A
something you are reading	uld be able to o h row.	I probably	ollowing wh Maybe	1 probably	I definitely	VIBILIZO	reading	Ctors Id be able to c row. 1 definitely	I probably		I probably	1 definitely	VIIAI I IIO	NC	N/A
something you are reading 2017 Grade 8) 8. Do you think you wo	uld be able to e h row.					VIENDAS	Issue: Student Fa 29. Do you think you wou answer choice on each a. Recognize the difference between fact and opinion in a	Ctors Id be able to c row.		ollowing wh Maybe ©			VYRAI 100	NC	N/A
something you are reading 2017 Grade 8) 8. Do you think you wo answer choice on each 4. Recognize the difference between fact and opinion in a text 5. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	uld be able to o h row. I definitely can't ©	I probably can't	Maybe	1 probably can	I definitely can		reading Issue: Student Fac 29. Do you think you wou answer choice on each a. Recognize the difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or	Ctors Id be able to c row. I definitely can't	I probably can't	Maybe	I probably can	1 definitely can		NC	N/A
something you are reading 2017 Grade 8) 8. Do you think you wor answer choice on each difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate) c. Critique an author's craft or technique	uld be able to o h row. 1 definitely can't	I probably can't	Maybe ©	1 probably can	I definitely can	VH290863	reading Issue: Student Fa 29. Do you think you wou answer choice on each a. Recognize the difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate) c. Critique an author's	Ctors Id be able to c row. 1 definitely can't	I probably can't	Maybe ©	I probably can	1 definitely can D	VHDADec3	NC	N/A
something you are reading 2017 Grade 8) 8. Do you think you wor answer choice on each 4. Recognize the difference between fact and opinion in a text 5. Judge the reliability of sources (for example, how a website might be biased or inaccurate) c. Critique an author's	uld be able to o h row. I definitely can't \$	I probably can't ©	Maybe ©	1 probably can ©	I definitely can ©	VHENNES?	reading Issue: Student Fac 29. Do you think you wou answer choice on each a. Recognize the difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	ctors Id be able to o row. I definitely can't ϖ	1 probably can't D	Maybe ©	t probably can ©	1 definitely can ©	V11246863 V11246863	NC	N/A

Previous item							2019 item							D/A/ R/NC+	Rationale
9. How much does each one answer choice or		ing statement	s describe a p	erson like you	l Select	VIEN025	30. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	ou? Select one	answer	VH844052	R	The phrase "a person like"
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like			was removed
 I want other students to think I am good at reading. 	Φ	Ð	Q	Φ	Ð	VH260828	 a. I want other students to think I am good at reading. 	ø	Ð	Q	Ø	Ð	VIBLOOKS		and two sub- items were
b. I want to show others that my English/ language arts schoolwork is easy for me.	0	œ	θ	θ	θ	V1f260929	b. I want to show others that my English/ language arts schoolwork is easy for me.	Ø	Ð	Ø	Θ	θ	V1844066		added.
 I want to look smart in comparison to the other students in my English/language arts class. 	Ø	œ	0	۵	θ	V11260930	c. I want to look smart in comparison to the other students in my English/language arts	۵	0	0	0	θ	¥H844068		
I want to learn as much as possible in my English/language arts class.	۵	Ð	Ø	۵	Ø	VH260931	class, d. 1 want to get better English/language arts grades than most other	۵	œ	Q	0	θ	¥70844070		
 I want to become a better reader this year. 	Ø	Ø	©	Θ	θ	VH266934	students in my class. 31. How much does each	of the follow	ving statemen	ts describe ve	u? Select one	answer	YIBHHOIT		
 I want to understand as much as I can in my English/language arts 	Ø	ø	0	0	θ	VH260938	choice on each row.		u .						
class.		1 - A						Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			
							 a. I want to learn as much as possible in my English/language arts class. 	Ø	Θ	Q	Ø	Φ	Viteleow		
							b. I want to become a better reader this year.	Θ	Ð	0	0	θ	VH844097		
							c. I want to understand as much as I can in my English/language arts class.	Ø	0	Ø	0	Ø	VIISIAN		
							 I want to master a lot of new English/ language arts skills in my class. 	٩	Φ	Ø	0	Θ	VIENCE		
2017 Grade 8)				1.1		ViB60112	Issue: Student Fa			1			VHESTING		The shares (
 How much does each one answer choice or 	1 each row.						 How much does each choice on each row. 							R	The phrase "a person like"
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			was removed
			O	0	Φ	VH260271	 Reading is one of my favorite activities. 	Θ	Ø	Ø	٩	Ð	VH844169		
 Reading is one of my favorite activities. 	۵	Ð					b. I like talking about							1	
favorite activities. b. I like talking about books with other people.		®	Ø	Ø	Ð	V18240272	books with other people.	0	0	Ø	Ø	θ	VH844170		
favorite activities. b. I like talking about books with other	٩			Ø	Ð	V11260272 V14260275	books with other	8	0	0	0	0 0	VH844170 V1844172		

Previous item							2019 item							D/A/ R/NC+	Rationale
11. Besides doing homew	vork, how mucl	h time do you	spend reading	outside of scl	nool?	VH5skos5	33. Besides doing homey	vork, how muc	ch time do you	spend reading	outside of sc	hool?	V1099686	NC	N/A
D Less than 30 min	utes a day						Less than 30 min	intes a dav		1					
About 30 minute About 30 minute							Dess than 00 minute Dess than 00 minute								
About 1 hour a d	av						© About 1 hour a d								
D About 2 hours a d							 About 1 hour a u About 2 hours a c 	2							
About 3 hours a	day														
4 or more hours a	day						About 3 hours a								
~								a day							
(2017 Grade 8)							Issue: Student F	actors							
12. How often do you re English/language art				friend with		V1032820	35. How often do you rea English/language arts				friend with		VH032820	NC	N/A
Never Never							D Never								
About once or tw	vice a vear						About once or tw A	ice a vear							
About once or tw A							C About once or tw								
About once or tw A							About once or tw								
© Every day or alm							and the state of the state of the								
The second second second second	our every unly						Every day or alm	ost every day							
(2017 Grade 8)															
							Issue: Resource	s for Lear	rning and	Instructi	on				
 How often do you ty online)? Select one : 	pically read eac answer choice o	ch of the follow on each row.	ving outside o	f school (print	: or	431261065	34. How often do you ty online)? Select one	ypically read ca answer choice	sch of the follow on each row.	wing outside o	f school (prin	t or	VID4068	R	Sub-items
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day e almost every day	r		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			were removed.
a. Stories or novels	Ø	Ð	Q	θ	Θ	VE1261866	a. Stories or novels	Ø	0	Θ	Ð	Φ	VH261056		
b. Poems	۲	٩	Ø	Ø	Ð	V11261067	b. E-mails	Ø	œ	Ø	Ø	Φ	VH261074		
	0	0	0	0	0	VERIA IDAS	e. Text messages	۹	Ð	Ø	0	Φ	VH261075		
c. Plays	8	0	0	0 0	0	VE0517513 VE051070	d. Biographies	Ø	Ø	0	0	Ð	VH617043		
d. Biographies			0	0	0	VH261071									
d. Biographies e. Comic books		CD												1	1
d. Biographies	0	0	O	Θ	θ	VHz61074									

Previous item							2019 item							D/A/ R/NC+	Rationale
 How often do you typi one answer choice on e 	cally do eac each row.	h of the followi	ing things out	side of school	II Select	142540904	36. How often do you typi one answer choice on o		h of the follow	ing things out	side of schoo	I? Select	VII260906	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			
a. Talk about books (print or online) with other people	۵	Ð	0	Φ	Φ	\$10.000T	 a. Talk about books (print or online) with other people 	۵	۵	©.	0	Φ	V11250907		
b. Go to my local library to borrow books (print or online)	0	Ð	Ø	0	θ	V#269911	b. Go to my local library to borrow books (print or online)	0	Ø	Ø	θ	Φ	V10560911		
c. Read blogs	٢	9	Q	Ø	Ø	VIII.s091.8	c. Read blogs	٩	0	0	0	Ð	VH2/0913		
d. Use social media (for example, Facebook, Twitter, Instagram)	۲	٩	0	Θ	Φ	VH383261	d. Use social media (for example, Facebook, Twitter, Instagram)	۵	Ø	Ø	Ø	Ð	VH333261		
e. Help friends with reading homework	٩	٢	Ø	۵	Θ	V11260917	e. Help friends with reading homework	Ø	œ	Q	Ø	Φ	VEI260917		

Appendix K-1u: Operational Grade 8 Reading

22. For your English/language arts class this year, how often do you do each of the following? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Have a class discussion about something that the whole class has read	Ø	®	Ø	Ø	Ð	VH332888
b. Work in pairs or small groups to talk about something that you have read	Ø	®	Ø	Ø	Ð	VH332889

23. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Select **one** answer choice on each row.

	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a. Evaluate the main evidence in a persuasive/argument passage	Ø	®	O	Ø	¢	VH260256
b. Analyze the author's organization of information in a passage	(8)	®	Ø	Θ	Ē	VH333142

VH260254

24. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Select **one** answer choice on each row.

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Summarize the passage	Ø	ß	O	0	Ē	VH333075
b.	Interpret the meaning of the passage	A	B	0	0	Ē	VH333076
c.	Question the motives or feelings of the characters	(9)	ß	Ø	Θ	Ē	VH333079
d.	Identify the main ideas of the passage	Ø	B	O	Ø	Ē	VH333078
e.	Identify the themes of the passage	Ø	ß	O	Ø	Ē	VH333094

VH588774

- **25.** For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?
 - Never
 - Once
 Once
 - © Two or three times
 - Four or five times
 - © More than five times

VH598636

- **26.** On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork?
 - (D) Less than 30 minutes
 - About 30 minutes
 About 30 minutes
 - © About 1 hour
 - D About 2 hours
 - C About 3 hours
 - ④ 4 or more hours

- **27.** In this school year, how often do you borrow reading materials (such as books or magazines) from your classroom library, school library, or media center?
 - Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Figure out the meaning of a word you don't know by using other words in the text	0	ഀ	Q	Ø	©	VH260848
b.	Explain the meaning of something you have read	Ø	B	O	Ø	¢	VH260849
c.	Figure out the main idea of a text	Ø	B	0	D	Ē	VH260851
d.	Find text in a reading passage to help you answer a question on a test	0	ഀ	Q	Ø	©	VH260859
e.	Recognize when you don't understand something you are reading	8	ß	©	Ø	Ē	VH260861

28. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Recognize the difference between fact and opinion in a text	A	®	O	Ø	¢	VH260863
b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	A	®	Ø	Ø	¢	VH260857
c. Critique an author's craft or technique	Ø	®	O	Ø	Ē	VH260866
d. Use evidence from a text to support my answer	Ø	®	O	Ø	Ē	VH616841
e. Identify the author's perspective in a persuasive text	Ø	®	C	D	Ē	VH260868

29. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

30. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
t	want other students o think I am good at eading.	Ø	₿	Ø	Ø	Ē	VH844065
t la s	want to show others hat my English/ anguage arts schoolwork is easy for ne.	0	ഀ	Ø	Ø	¢	VH844066
c o E	want to look smart in comparison to the other students in my English/language arts class.	0	ഀ	0	Ø	¢	VH844068
E g	want to get better English/language arts grades than most other students in my class.	Ø	ഀ	Q	Ø	¢	VH844070

VH844052

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible in my English/langua arts class.	n ge	®	©	٥	¢	VH844096
b. I want to become a better reader this y		®	C	D	Ē	VH844097
c. I want to understan as much as I can in English/language a class.	my	ß	©	Ø	¢	VH844098
d. I want to master a of new English/ language arts skills my class.		ß	C	Ø	Œ	VH844100

31. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	Reading is one of my favorite activities.	A	B	O	Ø	Ē	VH844169
b.	I like talking about books with other people.	Ø	ß	O	Ø	¢	VH844170
c.	I think reading is important.	۵	B	O	Ø	Ē	VH844172
d.	I enjoy going to a bookstore or a library.	A	®	©	D	Ē	VH844171

32. How much does each of the following statements describe you? Select **one** answer choice on each row.

VH598686

VH844168

33. Besides doing homework, how much time do you spend reading outside of school?

- (D) Less than 30 minutes a day
- (B) About 30 minutes a day
- © About 1 hour a day
- About 2 hours a day
 About 2 hours a day
- © About 3 hours a day
- © 4 or more hours a day

142

34. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Stories or novels	A	®	Ô	O	Ē	VH261066
b. E-mails	A	®	Ô	O	Ē	VH261074
c. Text messages	A	®	Ô	O	Ē	VH261075
d. Biographies	A	®	Ô	O	Ē	VH617043

VH332820

VH261065

35. How often do you receive help from a tutor, family member, or friend with English/language arts **outside of school or after school**?

- Never
 Never
- [®] About once or twice a year
- © About once or twice a month
- About once or twice a week
- © Every day or almost every day

36. How often do you typically do each of the following things outside of school? S	elect
one answer choice on each row.	

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a.	Talk about books (print or online) with other people	Ø	ß	O	Ø	¢	VH260907
b.	Go to my local library to borrow books (print or online)	(9	ß	Ø	0	¢	VH260911
c.	Read blogs	A	®	Ô	O	Ē	VH260913
d.	Use social media (for example, Facebook, Twitter, Instagram)	(9	ß	O	Ø	¢	VH333261
e.	Help friends with reading homework	8	B	O	Ø	Ē	VH260917

Appendix K-1v: Summary of Changes Pilot Grade 8 Reading

Previous item

 For your English/language arts class this year, how often do you do each of the following? Select one answer choice on each row. 												
		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day						
a.	Have a class discussion about something that the whole class has read	Ø	Φ	Ø	0	Φ	VF1072848					
b.	Work in pairs or small groups to talk about something that you have read	٩	Ð	Θ	Ø	Φ	VELEX2889					

26. In your English/language arts class this year, when reading a story, article passage, how often does your teacher ask you to do the following? Select choice on each row.	or other one answer
---	------------------------

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Evaluate the main evidence in a persuasive/argument passage	Θ	Ø	Ø	0	θ	¥11240256
b.	Analyze the author's organization of information in a passage	Ø	₽	0	9	θ	VHOREING
c.	Critique the author's craft or technique	۲	٩	۵	0	Φ	V10333144

2019 item							D/A/ R/NC+	Rationale
 For your English/lang following? Select one 				do each of th	e	VH02087	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			
 a. Have a class discussion about something that the whole class has read 	Ø	Ð	9	0	θ	VHILIDIAN		
b. Work in pairs or small groups to talk about something that we have read	۹	۲	Ø	θ	Φ	Va1652035		
Issue: Organizati	Carl ald -	Sec. C. La La Carda	n reading a sto	ry. article. or	other	V11260254	NC	N/A
passage, how often do choice on each row.	es your teache	r ask you to d	lo the followin	g? Select one	answer			
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
a. Evaluate the main evidence in a persuasive/argument passage	۵	Ð	θ	θ	θ	VH260236		
Analyze the author's organization of information in a passage	Ð	œ	0	θ	θ	VH00142		
Issue: Organization	age arts class t	this year, when	n reading a sto lo the followir	ry, article, or g? Select one	other answer	VIEDUTA	R	A sub-ite
 In your English/langu passage, how often do ehoice on each row. 	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
passage, how often do	Never or hardly ever		Sometimes ©	Often ©	almost	VH333075		
passage, how often do choice on each row.	hardly ever	while			almost always	VHEXXX075 VHEXXX076		
passage, how often do choice on each row.	hardly ever ©	while D	Ø	0	almost always Ф			
 a. Summarize the passage b. Interpret the meaning of the passage c. Question the motives or feelings of the 	bardly ever	while D D	Ø	0	almost always Ф	Viktken78		
a. Summarize the passage b. Interpret the meaning of the passage c. Question the motives or feelings of the characters d. Identify the main ideas	hardly ever © © ©	while (D) (D) (D) (D) (D) (D) (D) (D)	0	0	almost always Ф Ф	VIELLEI76 VIELLIN79		

(2017 Grade 8)

(2017 Grade 8)

27. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Select one answer choice on each row.

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Summarize the passage	Ø	@	Φ	0	Φ	VI1833075
b.	Interpret the meaning of the passage	٩	٩	٥	0	Φ	V1533a07e
c.	Question the motives or feelings of the characters	٩	Ð	Ø	0	Ð	V11333079
d.	Identify the main ideas of the passage	۵	⊕	Ø	۵	Φ	VIESJ3078
e.	Identify the themes of the passage	۵	6	Q	ø	Ð	Alterson
f.	Analyze two or more texts on the same topic	۹	θ	0	Ø	Φ	VH553877

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

- 1

Previous item		2019 item		D/A/ R/NC+	Rationale
 28. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? Once Once Two or three times Four or five times More than five times (2017 Grade 8) 	VIESNI 778	 17. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading? 	VII:58274	NC	N/A
		Issue: Organization of Instruction			
 29. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork and homework? © Less than 30 minutes © About 30 minutes © About 1 hour © About 2 hours © About 3 hours © 4 or more hours 		 6. On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork? © Less than 30 minutes © About 30 minutes © About 1 hour © About 2 hours © About 3 hours © 4 or more hours Issue: Resources for Learning and Instruction	VR0mik	R	The word "homework" was removed.
 30. In this school year, how often do you borrow reading materials (such as books or magazines) from your school library or media center? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day 		 13. In this school year, how often do you borrow reading materials (such as books or magazines) from your school (for example, a classroom library, school library, or media center)? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day Issue: Resources for Learning and Instruction	VIBS0176-	R	The phrase "classroom library" was added and "classroom library, school library, media center" was

Previous item							2019 item							D/A/ R/NC+	Rationale
 Do you think you wou answer choice on each 		lo each of the f	ollowing wh	en reading? Se	lect one	VH260847	Do you think you wou answer choice on each		lo each of the I	following wh	en reading? Se	lect one	VH200847	NC	N/A
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			I definitely can't	1 probably can't	Maybe	I probably can	I definitely can			
 Figure out the meaning of a word you don't know by using other words in the text 	Θ	Θ	0	Θ	θ	¥71280548	 a. Figure out the meaning of a word you don't know by using other words in the text 	Ø	θ	θ	θ	θ	VHSKARK		
Explain the meaning of something you have read	Ø	Ø	0	Ø	Ø	11260649	Explain the meaning of something you have read	Ø	Ð	Ø	Ø	Θ	VH262889		
c. Figure out the main idea of a text	Ø	¢	Ø	ø	Ð	VH280851	c. Figure out the main idea of a text	۲	θ	0	0	Ð	VH260851		
d. Find text in a reading passage to help you answer a question on a test	8	θ	0	Ø	θ	V11260859	d. Find text in a reading passage to help you answer a question on a test	Ø	θ	0	θ	θ	VH260859		
e. Recognize when you	112.2	5	θ	0	Ð	VHD60#61	e. Recognize when you don't understand		•	0		Ð	VIISION		
don't understand something you are reading 2017 Grade 8)	۵	Ð					something you are reading	©							
something you are reading	ild be able to c 1 row.	lo each of the I	ollowing wh	en reading? Se		411611200	something you are reading	octors ild be able to o i row.	lo each of the t		en reading? Se	lect one	VH611300	R	In sub-item "d", "my
 something you are reading (2017 Grade 8) 32. Do you think you wou answer choice on each 	ild be able to c				lect one I definitely can	411611200	something you are reading Issue: Student Fa 8. Do you think you wou	ctors						R	
something you are reading 2017 Grade 8) 32. Do you think you wou	ild be able to o row. I definitely	lo each of the f	ollowing wh	en reading? Se	I definitely	411611200	something you are resding Issue: Student Fa & Do you think you won answer choice on each a. Recognize the difference between fact and opinion in a	Ctors ald be able to a row.	to each of the t	following wh	en reading? Se	lect one		R	"d", "my answer" was
something you are reading 2017 Grade 8) 32. Do you think you wou answer choice on each difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	ald be able to o a row. I definitely can't	lo each of the f I probably can't	iollowing wh Maybe	en reading? Se I probably can	I definitely can	-91611200-	something you are reading Issue: Student Fa 8. Do you think you wou answer choice on each a. Recognize the difference between	Ctors ald be able to o row. I definitely can't	lo each of the f I probably can't	following wh Maybe	en reading? Se I probably can	lect one	VH611300	R	"d", "my answer" was replaced with
something you are reading 2017 Grade 8) 32. Do you think you wou answer choice on each difference between lact and opinion in a text b. ludge the reliability of sources (for example, how a website might be biased or inaccurate) c. Critique an author's ctaft or technique	ald be able to o a row. I definitely can't	lo each of the f	following wh Maybe ©	en reading? Se	I definitely can D	V10(130)	something you are reading Issue: Student Fa 8. Do you think you wou answer choice on each a. Recognize the difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate) c. Critique an author's	ald be able to a row.	lo each of the l I probably can't ©	following wh Maybe ©	en reading? Se I probably can ©	lect one I definitely can ©	VH511300	R	"d", "my answer" was replaced with "your
something you are reading 2017 Grade 8) 32. Do you think you wou answer choice on each a. Recognize the difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate) c. Critique an author's	ald be able to o a row. I definitely can't ©	lo each of the f I probably can't D	ollowing wh Maybe ©	en reading? Se I probably can ©	I definitely can ©	V10/1300- V10/200663 V10/200667	something you are reading Issue: Student Fa 8. Do you think you wou answer choice on each difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	ctors ald be able to a n row. I definitely can't ©	to each of the t I probably can't ©	Maybe ©	en reading? Se I probably can ©	lect one 1 definitely Can C	VH51300 VH52686X VH256857	R	"d", "my answer" was replaced wit "your

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item							2019 item								Rationale
 How much does each one answer choice on 		ing statements	describe a po	rson like you	? Select	VH299026	15. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? Select one	answer	VH853747	R	The previous matrix was
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like			separated
 a. I want other students to think I am good at reading. 	۹	0	0	ø	Φ	V11260928	a. I want other students to think I am good at	۵	œ	0	Ð	θ	VH853764		into two
 h. I want to show others that my English/ language arts schoolwork is easy for me. 	۵	Ø	Ø	۵	ø	VH260929	reading. b. I want to show others that my English/ language arts schoolwork is easy for me.	۲	œ	0	Ð	θ	VH853763		matrices of achievement goals items
c. I want to look smart in comparison to the other students in my English/language arts class.	Ø	Θ	0	Ð	θ	VH260430	 c. I want to look smart in comparison to the other students in my English/language arts class. 	Ø	œ	Ø	ø	Ð	VE1853766		(performance and mastery) In order to
d. I want to learn as much as possible in my English/language arts class.	۵	۵	0	Φ	Ø	V11260931	d. 1 want to get better English/language arts grades than most other	٩	Ð	Ø	θ	Φ	VH853776		create indices
 I want to become a better reader this year. 	¢	۲	9	۵	Φ	V21260934	students in my class.								performance
f. I want to understand as much as I can in my English/language arts class.	۵	Φ	Ø	۵	Φ	¥H160938	16. How much does each choice on each row.	of the follow	ring statemen	ts describe yo	a? Select one	answer	V0833763		and mastery goals based
(2017 Crade 0)								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			on a total of
(2017 Grade 8)							 a. I want to learn as much as possible in my English/language arts class. 	Ø	Φ	0	Φ	Φ	V1853767		at least 4 items,
							b. I want to become a better reader this year.	Ð	œ	0	Ð	Φ	VH853777		VH844052
							c. I want to understand as much as I can in my English/language arts class.	۲	Ð	0	θ	θ	VH853774		and VH844081
							d. I want to master a lot of new English/ language arts skills in my class.	Ø	Ð	0	Ø	Φ	VH853770		were added. The stem was revised from
							Issue: Student Fa	ctors							"describe a person like you" to "describe you".

Previous item							2019 item							D/A/ R/NC+	Rationale
 How much does each one answer choice or 		ing statement	s describe a p	erson like you	1? Select	VII599132	12. How much does each choice on each row.	of the follow	ving statemen	its describe ye	ou? Select one	answer	V30663168	R	The phrase "a person like"
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			was removed
a. Reading is one of my favorite activities.	Ø	Ð	Q	٥	Φ	VH260271	a. Reading is one of my favorite activities.	Ø	Ð	Ø	Ð	Ð	VHEALINE		and a sub-
b. I like talking about books with other people.	٩	0	0	Ø	Ð	VH260272	b. I like talking about books with other people.	۲	Ð	Ø	θ	Ð	VH844170		item was added.
c. I think reading is important.	٩	Ð	Ø	ø	Ð	VH260275	c. I think reading is important.	۲	٩	Ø	Ø	Φ	VH844172		added.
d. I enjoy going to a bookstore or a library.	۲	Ð	Ø	٩	Ð	V11260277	d. I enjoy going to a bookstore or a library.	۲	Ð	٥	Ð	Ø	Y318+4171		
							e. I enjoy finding things to read online.	۹	Ð	¢	ø	Ø	VHKA3474		
(2017 Grade 8)							Issue: Student Fa	ctors			•				
 About 30 minutes About 1 hour a day About 2 hours a da About 3 hours a da 4 or more hours a (2017 Grade 8) 	y iy iy		0				 About 30 minutes a About 1 hour a day About 2 hours a day About 3 hours a day 4 or more hours a day Issue: Student Fa 	y				-			
 36. How often do you rece English/language arts Ø Never Ø About once or twi Ø About once or twi Ø About once or twi Ø Every day or almost 	outside of scho ce a year ce a month ce a week			friend with		VUITERAL	N/A							D	This item was dropped to reduce student burden and create opportunity
(2017 Grade 8)															for future development

Previous item							2019 item							D/A/ R/NC+	Rationale
37. How often do you typ online)? Select one an	ically read ea swer choice o	ch of the follow on each row.	ving outside o	f school (print	or	VIDel065	3. How often do you type online)? Select one an			wing outside o	f school (print	or	VH291065	R	Sub-items
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			were removed.
a. Stories or novels	0	0	©.	Ø	0	VH281068	a. Stories or novels	0		©	®		VH261056		
, Poems	۲	0	Ø	0	Ð	VH261067	b. Biographics	8	8	0 0	9 0	0 0	VH612043		
. Plays	Ø	Ø	Q	Ø	Φ	VH2a (Invit	c. E-mails	9	0	0	0	Ð	VH261074		
Biographies	0	0	0	0	Φ	43163 6363	d. Text messages	9 9	0	0	0	0	VH261073		
Comic books	0	Ø	0	0	Φ	VH281070			1		-				
Magazines	Ø	Ø	0	Ø	Φ	VH261071									
E-mails . Text messages	0	0	0 0	0 0	0 0	VH261074 VH261075									
2017 Grade 8) 8. How often do you typ one answer choice on		n of the follow	ing things out	side of school	l Select	VIEWOON	14. How often do you typi one answer choice on	cally do each	of the followin	g activities ou	tside of school	? Select	VHRS3652	R	In the item stem,
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			"things" was replaced wit
. Talk about books (print or online) with other people	0	Ð	0	0	θ	VH260907	a. Read online about topics I am interested in	0	6	Ø	Ø	Ð	VH853656		"activities".
 Go to my local library to borrow books (print or online) 	0	۵	Ø	0	θ	VH280911	b. Talk about things I read with other people	۲	Ð	©	Φ	Φ	VH853657		sub item "a" "Talk about
. Read blogs . Use social media (for	٩	Ø	0	٩	Ð	VH260913	 Borrow or download books from a local 	Ø	œ	0	Ø	Φ	VH853655		
example, Facebook, Twitter, Instagram)	۵	۵	0	Ð	Ð	VH333261	library d. Use social media (for example, Facebook,	0	0	Ø	Ø	Ð	V10853654		books (print or online)
 Help friends with reading homework 	٩	٢	0	۵	Ð	VPD80917	Twitter, Instagram)			-	÷				with other
							e. Help friends with reading homework	Ø	۵	O	Ð	Ð	VHSRAAR		people" was
2017 Grade 8)							Issue: Student Fa	ctors							replaced wit "Talk about things I read with other people" and was moved t sub-item "b" In sub-item "c", "Read blogs" was replaced wit "Read online

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

	2019 Pilot Grade 8 Re	eading	g Stude	nt					
Previous item	2019 item							D/A/ R/NC+	Rationale
									am interested in" and moved to sub-item "a". In sub-item "b", "Go to my local library to borrow books (print or online)" was replaced with "Borrow or download books from a local library" and moved to sub-item "c".
N/A	9. How often do you receins schoolwork outside of	ive the follo school or af Never	About once or twice a			erts ch row. Every day or almost	VIRTU26	A	This item was added.
			year	month	week	every day			
	a. Help from a teacher b. Help from a tutor	0	0	0 0	0	Ð	VH811190 VH811192		
	c. Help from a family		-						
	member or friend d. Help from online	Ø	٩	0	0	0	Vitetii96		

Previous item	2019 item							D/A/ R/NC+	Rationale
N/A	11. How useful do you find English/language arts s	l each of the f choolwork? S	ollowing typ elect one an	pes of help to iswer choice	o understand yo on each row.	ur	VHNHTM	A	This item was added.
		Not used all	ul at So	mewhat useful	Very useful	I don't receive that type of help.			added.
	a. Help from a teacher	۲		0	Ø	0	VH811287		
	b. Help from a tutor	Ø		0	Ø	Ð	VH811291		
	c. Help from a family member or friend	٩	11.1	٩	Ø	Φ	VHa11302		
	 d. Help from online resource (for example, websites on apps) 			Ð	0	Φ	V1011304		
N/A	Issue: Resources 10. Do you think you wou answer choice on each	ld be able to d				elect one	¥#8(1222	A	This item wa
		I definitely can't	I probably can't	Maybe	I probably	I definitely can			auueu.
	a. Recognize the author's nse of figurative language (for example, symbolism, similes, metaphors, or personification)	۵	٩	0	۵	Φ	VII811229		
	 b. Evaluate the author's use of features in a text (for example, figurative language, voice, or transition words) 	Ø	۵	0	Ð	Φ	VH011227		
	c. Recognize tools the author is using (for example, rhyme, imagery, examples, or repetition)	Ø	Φ	0	0	Φ	VI661)231		
	d. Evaluate the strength and quality of evidence used by the author to support his or her position	۲	₿	0	ø	Φ	VH61)233		
	e. Evaluate the author's use of multimedia or non-print text (e.g., texts including images, infographics, or animations)	۵	۵	Ø	Ø	Φ	¥10013237		

Appendix K-1w: Pilot Grade 8 Reading

1. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Select **one** answer choice on each row.

	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a. Evaluate the main evidence in a persuasive/argument passage	Ø	®	O	Ø	Θ	VH260256
b. Analyze the author's organization of information in a passage	0	6	0	Ø	Θ	VH333142

2. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Figure out the meaning of a word you don't know by using other words in the text	0	ß	Q	Ø	Ē	VH260848
b.	Explain the meaning of something you have read	0	ß	Ø	Ø	Ē	VH260849
c.	Figure out the main idea of a text	Ø	B	0	D	Ē	VH260851
d.	Find text in a reading passage to help you answer a question on a test	0	₿	Ø	Ø	¢	VH260859
e.	Recognize when you don't understand something you are reading	0	₿	Ø	Ø	Ē	VH260861

VH260254

3. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Stories or novels	A	®	Ô	O	Ē	VH261066
b. Biographies	A	®	Ô	O	Ē	VH617043
c. E-mails	A	®	Ô	Ø	Ē	VH261074
d. Text messages	۵	®	O	D	Ē	VH261075

4. For your English/language arts class this year, how often do you do each of the following? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Have a class discussion about something that the whole class has read	Ø	®	O	Ø	Ð	VH332888
b. Work in pairs or small groups to talk about something that we have read	Ø	®	O	Ø	¢	VH652035

VH261065

5. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Select **one** answer choice on each row.

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Summarize the passage	Ø	®	O	Ø	Ē	VH333075
b.	Interpret the meaning of the passage	Ø	®	0	Ø	Ē	VH333076
c.	Question the motives or feelings of the characters	Ø	ß	Ø	0	Ē	VH333079
d.	Identify the main ideas of the passage	Ø	®	0	Ø	Ē	VH333078
e.	Identify the themes of the passage	Ø	B	O	Ø	Ē	VH333094

6. On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork?

- (Less than 30 minutes
- About 30 minutes
 About 30 minutes
- © About 1 hour
- D About 2 hours
- © About 3 hours
- © 4 or more hours

VH333074

- 7. Besides doing homework, how much time do you spend reading outside of school?

 - About 30 minutes a day
 - © About 1 hour a day
 - About 2 hours a day
 About 2 hours a day
 - © About 3 hours a day
 - © 4 or more hours a day

VH611300

8. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Recognize the difference between fact and opinion in a text	0	₿	Ø	Ø	¢	VH260863
b.	Judge the reliability of sources (for example, how a website might be biased or inaccurate)	0	₿	Ø	Ø	¢	VH260857
c.	Critique an author's craft or technique	8	B	O	D	Ē	VH260866
d.	Use evidence from a text to support your answer	0	B	Ø	Ø	Ē	VH811215
e.	Identify the author's perspective in a persuasive text	0	ß	O	Ø	Ē	VH260868

VH811176

9. How often do you receive the following types of help with English/language arts schoolwork **outside of school or after school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Help from a teacher	A	®	©	Ø	Ē	VH811190
b. Help from a tutor	A	®	Ô	Ø	Ē	VH811192
c. Help from a family member or friend	۵	®	O	Ø	Ē	VH811196
d. Help from online resources (for example, websites or apps)	Ø	ß	O	Ø	Ē	VH811200

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Recognize the author's use of figurative language (for example, symbolism, similes, metaphors, or personification)	0	0	Q	Ø	¢	VH811229
b.	Evaluate the author's use of features in a text (for example, figurative language, voice, or transition words)	0	9	Ø	Ø	¢	VH811227
c.	Recognize tools the author is using (for example, rhyme, imagery, examples, or repetition)	Ø	℗	Ø	Ø	¢	VH811231
	Evaluate the strength and quality of evidence used by the author to support his or her position	0	(9	0	Ø	Ē	VH811233
e.	Evaluate the author's use of multimedia or non-print text (e.g., texts including images, infographics, or animations)	Ø	Ø	Q	Ø	¢	VH811237

10. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

11. How useful do you find each of the following types of help to understand your English/language arts schoolwork? Select **one** answer choice on each row.

	Not useful at all	Somewhat useful	Very useful	I don't receive that type of help.	
a. Help from a teacher	A	®	Ô	D	VH811287
b. Help from a tutor	A	®	Ô	D	VH811291
c. Help from a family member or friend	۵	B	O	Ø	VH811302
d. Help from online resources (for example, websites or apps)	Ø	®	Ø	Ø	VH811304

12. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	Reading is one of my favorite activities.	${}^{}$	B	0	Ø	©	VH844169
b.	I like talking about books with other people.	6	B	Ø	Ø	Ē	VH844170
c.	I think reading is important.	${}^{}$	B	0	Ø	Ē	VH844172
d.	I enjoy going to a bookstore or a library.	8	B	0	D	Ē	VH844171
e.	I enjoy finding things to read online.	(3)	ß	0	Ø	Ē	VH853415

VH853176

- **13.** In this school year, how often do you borrow reading materials (such as books or magazines) from your school (for example, a **classroom library**, **school library**, or **media center**)?
 - Never
 - B About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

VH811276

14. How often do you typically do each of the following activities **outside of school**? Select **one** answer choice on each row.

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a.	Read online about topics I am interested in	Ø	ß	Ø	Ø	¢	VH853656
b.	Talk about things I read with other people	Ø	B	0	Ø	Ē	VH853657
c.	Borrow or download books from a local library	Ø	ß	Ø	Ø	¢	VH853655
d.	Use social media (for example, Facebook, Twitter, Instagram)	6	®	O	Ø	Ē	VH853654
e.	Help friends with reading homework	A	B	0	Ø	Ē	VH853658

15. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
to	want other students o think I am good at eading.	۵	ß	O	Ø	¢	VH853764
tl la so	want to show others hat my English/ anguage arts choolwork is easy for ne.	(9	Θ	Ø	0	¢	VH853765
C O O E	want to look smart in omparison to the ther students in my inglish/language arts lass.	0	ഀ	Ø	Ø	©	VH853766
E gi	want to get better English/language arts rades than most other tudents in my class.	0	₿	O	Ø	¢	VH853776

VH853747

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible in my English/language arts class.	æ	ß	O	Ø	C	VH853767
b. I want to become a better reader this year.	Ø	®	O	Ø	Ē	VH853777
c. I want to understand as much as I can in my English/language arts class.	۲	®	Ø	Ø	©	VH853774
d. I want to master a lot of new English/ language arts skills in my class.	Ø	®	C	Ø	¢	VH853770

16. How much does each of the following statements describe you? Select **one** answer choice on each row.

VH588774

- 17. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?
 - Never
 - Once
 Once
 - © Two or three times
 - Four or five times
 - © More than five times

162

Appendix K-1x: Spiral Map Grade 8 Reading

Accnum	Grade	Grade 8 OMB PDF Sequence Number	Number of Grade 8 booklets item appears in	Grade 8 booklets item appears in
VH853176	4, 8	13_00	3	1, 2, 3
VH853652	4, 8	14_00	2	1, 2
VH853656	4, 8	14_01	2	1, 2
VH853657	4, 8	14_02	2	1, 2
VH853655	4, 8	14_03	2	1, 2
VH853654	4, 8	14_04	2	1, 2
VH853658	4, 8	14_05	2	1, 2
VH598636	4, 8	06_00	3	1, 2, 3
VH844168	4, 8	12_00	2	1, 2
VH844169	4, 8	12_01	2	1, 2
VH844170	4, 8	12_02	2	1, 2
VH844172	4, 8	12_03	2	1, 2
VH844171	4, 8	12_04	2	1, 2
VH853415	4, 8	12_05	2	1, 2
VH811176	4, 8	09_00	2	1, 2
VH811190	4, 8	09_01	2	1, 2
VH811192	4, 8	09_02	2	1, 2
VH811196	4, 8	09_03	2	1, 2
VH811200	4, 8	09_04	2	1, 2
VH811276	4, 8	11_00	2	1, 2
VH811287	4, 8	11_01	2	1, 2
VH811291	4, 8	11_02	2	1, 2
VH811302	4, 8	11_03	2	1, 2
VH811304	4, 8	11_04	2	1, 2
VH598686	4, 8	07_00	1	3
VH332887	8	04_00	1	3
VH332888	8	04_01	1	3
VH652035	8	04_02	1	3
VH260254	8	01_00	1	3

VH2	60256	8	01_01	1	3
VH3	33142	8	01_02	1	3
VH3	33074	8	05_00	1	3
VH3	33075	8	05_01	1	3
VH3	33076	8	05_02	1	3
VH3	33079	8	05_03	1	3
VH3	33078	8	05_04	1	3
VH3	33094	8	05_05	1	3
VH2	61065	8	03_00	1	3
VH2	61066	8	03_01	1	3
VH6	17043	8	03_02	1	3
VH2	61074	8	03_03	1	3
VH2	61075	8	03_04	1	3
VH2	60847	4, 8	02_00	1	3
VH2	60848	4, 8	02_01	1	3
VH2	60849	4, 8	02_02	1	3
VH2	60851	4, 8	02_03	1	3
VH2	60859	4, 8	02_04	1	3
VH2	60861	4, 8	02_05	1	3
VH6	11300	8	08_00	1	3
VH2	60863	4, 8	08_01	1	3
VH2	60857	8	08_02	1	3
VH2	60866	8	08_03	1	3
VH8	11215	4, 8	08_04	1	3
VH2	60868	8	08_05	1	3
VH8	53747	4, 8	15_00	1	3
VH8	53764	4, 8	15_01	1	3
VH8	53765	4, 8	15_02	1	3
	53766	4, 8	15_03	1	3
	53776	4, 8	15_04	1	3
	53763	4, 8	16_00	1	3
VH8	53767	4, 8	16_01	1	3
	53777	4, 8	16_02	1	3
VH8	53774	4, 8	16_03	1	3

4, 8	16_04	1	3
4, 8, 12	17_00	1	3
8	10_00	2	1, 2
8	10_01	2	1, 2
8	10_02	2	1, 2
8	10_03	2	1, 2
8	10_04	2	1, 2
8	10_05	2	1, 2
	4, 8, 12 8 8 8 8 8 8 8	4, 8, 12 17_00 8 10_00 8 10_01 8 10_02 8 10_03 8 10_04	4, 8, 12 17_00 1 8 10_00 2 8 10_01 2 8 10_02 2 8 10_03 2 8 10_04 2

Appendix K-1y: Summary of Changes Operational Grade 12 Reading

							2019 item							D/A/ R/NC+	Rationale
 For your English/langue each of the following 	iage arts class s ? Select one an	o far this year swer choice o	, how many ti n each row.	mes have you	done	VH731527	24. For your English/langue each of the following?	age arts class Select one an	so far this ye swer choice o	ar, how many on each row.	times have yo	u done	VH731927	NC	N/A
	Never	Once	2 or 3 times	4 or 5 times	6 or more times			Never	Once	2 or 3 times	4 or 5 times	6 or more times			
 Made a presentation to the class about something that you have read 	Ø	Φ	0	Ø	θ	VH711330	a. Made a presentation to the class about something that you have read	9	₿	Ø	θ	Ð	VH731556		
b. Done a project about something that you have read (for example written a play, created a website)		Ø	Ø	Φ	Ð	VHŻAISZA	b. Done a project about something that you have read (for example, written a play, created a website)	Θ	Ð	Ø	Θ	Ø	VH731529		
2018 Grade 12))						Issue: Organizatio	on of Inst	truction						
2. For your English/langu following? Select one			often do you c	lo each of the		VHISTING?	25. For your English/langu following? Select one a				do each of the	5	¥14682975	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			
a. Have a class discussion about something that the whole class has read	۹	Θ	Θ	θ	θ	VHRIDESE	 a. Have a class discussion about something that the whole class has read 	Θ	Ð	Q	θ	Φ	VH332868		
b. Work in pairs or small groups to talk about something that we have read	Ø	Ð	0	0	Ð	VH682035	b. Work in pairs or small groups to talk about something that we have read	۲	θ	0	θ	θ	V11652835		
c. Discuss different interpretations of what we have read	0	Φ	θ	0	Φ	VH642007	 c. Discuss different interpretations of what we have read 	۹	ø	Q	θ	θ	VHes2037		
2018 Grade 12 3. In your English/langu passage, how often d choice on each row.	age arts class th oes your teache Never or	r ask you to c Once in a				VHIMOSA	Issue: Organizatic 26. In your English/langua passage, how often dos choice on each row.	ge arts class t s your teache Never or	this year, whe er ask you to o Once in a				V1682582	NC	N/A
	hardly ever	while			always			hardly ever	while	somethies	onen	always			
a. Evaluate the main				1		\square	a. Evaluate the main								
evidence in a persuasive/argument passage	0	Ø	Ø	0	θ	VIIDAD254	 a. Evaluate the main evidence in a persuasive/argument passage 	0	۵	0	Ø	θ	VH260256		
evidence in a persuasive/argument		Ð	Ø	0	θ	VERSESS	evidence in a persuasive/argument	Ø	0	0	0	0 0	VH260256 VH260256		

Previous item							2019 item							D/A/ R/NC+	Rationale
 In your English/languag passage, how often doe choice on each row. 						43133674	 In your English/langua passage, how often doe choice on each row. 						VH862547	NC	N/A
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
 Summarize the passage 	0	0	0	0	Φ	V1833075	a. Summarize the	ø	Ð	0	0	Ø	VBX48074		
 Interpret the meaning of the passage 	0	Ð	0	0	Ð	VH333076	b. Interpret the meaning of the passage	۲	Ð	O	Ð	Ð	VHIRE ROTA		
 Question the motives or feelings of the characters 	Ø	¢	Ø	ø	θ	V14883079	 c. Question the motives or feelings of the characters 	Ø	Φ	Ø	Ø	Ø	VH333070		
 Identify the main ideas of the passage 	Θ	Ð	0	0	Φ	VELLOUTS	d. Identify the main ideas	Ø	Ø	0	Ð	0	VH333078		
. Identify the themes of the passage	0	Ð	Ø	۵	Ð	VEEL33094	of the passage c. Identify the themes of	0	69	0	Ð	0	¥15358094		
 Analyze two or more texts on the same topic 	0	۹	Θ	Ø	Ð	V10883077	f. Analyze two or more texts on the same	Ø	Ð	C	0	œ	VI3144077		
reading? Never Once Two or three times Four or five times More than five time	-5						reading? © Never © Once © Two or three times © Four or five times © More than five time	25							
2018 Grade 12)							Issue: Organizatio	on of Ins	truction						
 6. On a typical school day, device to do your Englis Less than 30 minuto About 30 minutes About 1 hour About 2 hours About 3 hours 4 or more hours 	sh/language a			r other digit.	il.	VHSenio	 29. On a typical school day device to do your Englis Less than 30 minute About 30 minutes About 1 hour About 2 hours About 3 hours 4 or more hours 	sh/language a			or other digi	tal	11209008	NC	N/A
2018 Grade 12)							Issue: Resources	forlear	ning and	Instructio	าท				

Previous item							2019 item							D/A/ R/NC+	Rationale
 In this school year, how magazines) from your o Never 					or	VH490301	 In this school year, how magazines) from your o Never 	v often do you classroom libr	ı borrow readir ary, school libi	ng materials rary, or medi	(such as book a center?	s or	VH460301	NC	N/A
About once or twice	e a vear						 About once or twic 								
About once or twice About once or twice							 About once of twice About once or twice 								
D About once or twic	e a week						About once or twice								
D Every day or almos	t every day						 C Every day or almost 								
(2018 Grade 12)							Issue: Resources	for Lear	ning and	Instruct	ion				
 Do you think you woul answer choice on each 		each of the fo	llowing when	n reading? Sele	ect one	VH286847	 Do you think you wou answer choice on each 		lo each of the b	ollowing wh	en reading? Se	lect one	VIQ60847	NC	N/A
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			I definitely can't	I probably can't	Maybe	I probably can	I definitely can			
					1.		a. Figure out the				-	-			
 a. Figure out the meaning of a word you don't know by using other words in the text 	0	Ø	Ø	Ø	Ð	VH280648	meaning of a word you don't know by using	Ø	Ø	Ø	θ	θ	VH260848		
meaning of a word you don't know by using other words in the text b. Explain the meaning of something you have read	9	0	Ø	Ð	Ð	VH280848 VH280848	meaning of a word you	Ð	0	0	9	0	VH260848 VH260849		
meaning of a word you don't know by using other words in the text b. Explain the meaning of something you have read c. Figure out the main idea of a text							meaning of a word you don't know by using other words in the text b. Explain the meaning of something you have								
meaning of a word you don't know by using other words in the text b. Explain the meaning of something you have read c. Figure out the main	Ø	Φ	Ø	Φ	Ð	VHDMM4V	meaning of a word you don't know by using other words in the text b. Explain the meaning of something you have read c. Figure out the main	Ø	٩	Ø	θ	θ	VH230849		

revious item							2019 item							D/A/ R/NC+	Rationale
 Do you think you would answer choice on each 		each of the fo	ollowing wher	n reading? Sele	ect one	VIII(1300	32. Do you think you wot answer choice on each		lo each of the f	ollowing who	en reading? Se	lect one	VIInt 100	NC	N/A
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			1 definitely can't	I probably can't	Maybe	I probably can	I definitely can			
 Recognize the difference between fact and opinion in a text 	۵	Ð	Θ	Φ	Φ	V11260863	 a. Recognize the difference between fact and opinion in a text 	¢	Ð	Q	Φ	θ	V71266963		
 Judge the reliability of sources (for example, how a website might be biased or inaccurate) 	۵	Ð	Ø	Ø	Φ	VH240857	 b. Judge the reliability of sources (for example, how a website might be biased or inaccurate) 	۵	θ	Ø	۵	θ	Y)(240857		
Critique an author's craft or technique	Ø	œ	0	0	Φ	VH260866	c. Critique an author's craft or technique	۲	Ð	0	٩	Φ	VH2/0956		
I. Use evidence from a text to support my answer	Ø	æ	Ø	Ð	Ð	VH616841	d. Use evidence from a text to support my	٩	⊕	0	Ø	8	V186108#1		
e. Identify the author's							answer								
perspective in a persuasive text 2018 Grade 12)		©	© s describe a po	The second secon	D Select	VH260568 VH260568	e. Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each choice on each row.	- 6 Zo 10 200	D ring statement	© 18 describe yo	D nu? Select one	æ	VICIONS VIRANG2	R	
perspective in a persuasive text 2018 Grade 12) 10. How much does each	of the follow				? Select		 Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each 	ctors					VIRANG2	R	person like
perspective in a persuasive text 2018 Grade 12) 10. How much does each one answer choice on 11. I want other students to think I am good at reading.	of the followi each row. Not at all	ng statements A little bit	s describe a pe Somewhat	erson like you Quite a bit	? Select Exactly like		 Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each choice on each row. a. I want other students to think I am good at 	ctors of the follow Not at all	ring statement A little bit	s describe yo Somewhat	u? Select one Quite a bit	answer Exactly like	VIRANG2	R	The phrase person like was remov and two su
2018 Grade 12) 10. How much does each one answer choice on 1. I want other students to think I am good at	of the followi each row. Not at all like me	ng statements A little bit like me	s describe a pe Somewhat like me	erson like you Quite a bit like me	Select		 Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts scholwork is easy for 	Ctors of the follow Not at all like me	ring statement A little bit like me	s describe yo Somewhat like me	Quite a bit like me	answer Exactly like me	VIB4802	R	person like was remov
perspective in a persuasive text 2018 Grade 12) 10. How much does each one answer choice on . I want other students to think I am good at reading. . I want to show others that my English/ language arts schoolwork is easy for	of the followi each row. Not at all like me Ø	ng statements A little bit like me D	s describe a pe Somewhat like me Ø	Cuite a bit like me D	Select Exactly like me	VIESoss	 e. Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/ language arts schoolwork is easy for mc. c. I want to look smart in comparison to the other students in my English/language arts 	of the follow Not at all like me	ning statement A little bit like me D	s describe yo Somewhat like me	Quite a bit like me	answer Exactly like me	VIBA002	R	person like was remov and two su items were
Perspective in a Persuasive text 2018 Grade 12) 10. How much does each one answer choice on 10. How much does each one answer choice on 10. How much does each one answer choice on 10. How much does each to think I am good at reading. 1 want to show others that my English/ language arts schoolwork is easy for me. 1 want to look smart in comparison to the other students in my English/language arts class.	of the followi each row. Not at all like me Ø	ng statements A little bit like me D	s describe a pe Somewhat like me Ø	Quite a bit like me ©	Select	VH250926 V11560928 V912560928	 e. Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/I language arts school work is easy for mc. c. I want to lock smart in comparison to the other students in my English/Ianguage arts class. d. I want to get better English/Ianguage arts grades than most other 	Ctors of the follow Not at all like me ©	A little bit like me D	s describe yo Somewhat like me Ø	Quite a bit like me @	answer Exactly like me ©	VIB44065	R	person like was remov and two su items were
Perspective in a persuasive text 2018 Grade 12) 10. How much does each one answer choice on 11. I want other students to think I am good at reading. 2. I want to show others that my English/ language arts schoolwork is easy for me. 3. I want to look smart in comparison to the other students in my English/language arts class. 4. I want to learn as much as possible in my English/language	of the followi each row. Not at all like me Ø Ø	ng statements A little bit like me D D D	s describe a per Somewhat like me Ø Ø	Quite a bit like me © ©	Select	VH20006 V1D60028 V1D60028 V1D60028	 e. Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each choice on each row. a. I want other students to think I am good at reading. b. I want to show others that my English/language arts schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arts class. d. I want to get better English/language arts 	Ctors of the follow Not at all like me D D D	ring statement A little bit like me D D	s describe yo Somewhat like me © ©	Quite a bit like me D D D	answer Exactly like me © ©	VID44065	R	person like was remov and two su items were

Previous item							2019 item							D/A/ R/NC+	Rationale
							 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	ul Select one	answer	¥1844681		
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			
							 a. I want to learn as much as possible in my English/language arts class. 	۵	¢	Q	Ø	9	¥18544096		
							b. I want to become a better reader this year.	Ø	Ð	0	Ð	Ø	VH844097		
							c. I want to understand as much as I can in my English/language arts class.	۵	Ð	Ø	0	θ	V16141098		
							d. I want to master a lot of new English/ language arts skills in my class.	Ø	œ	Ø	Ø	Φ	VH844100		
of the section of the section	1.1. (1)		1	1/1	10.15.	VIESNO132	Issue: Student Fa	and the second	2014 (2011)	1	101	(augusta)	V30844158	D	The shares "
11. How much does each one answer choice on		ng statements A little bit like me	s describe a pe Somewhat like me	rson like you Quite a bit like me		VIENOUSS	Issue: Student Fa 35. How much does each choice on each row.	and the second	ring statemen A little bit like me	ts describe yo Somewhat like me	u? Select one Quite a bit like me	answer Exactly like me	_	R	The phrase " person like" was removed
one answer choice on a. Reading is one of my favorite activities.	each row.	A little bit	Somewhat	Quite a bit	Exactly like	VH299/132 VH2602/1	35. How much does each choice on each row.a. Reading is one of my	of the follow	A little bit	Somewhat	Quite a bit	Exactly like	_	R	person like"
one answer choice on a. Reading is one of my	each row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VH260271	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other 	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		R	person like"
one answer choice on a. Reading is one of my favorite activities. b. I like talking about books with other	each row: Not at all like me	A little bit like me	Somewhat like me ©	Quite a bit like me Ø	Exactly like me	VH260732 VH260271 VH260273 VH260273	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is 	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VIBLEIM	R	person like"
one answer choice on a. Reading is one of my favorite activities. b. 1 like talking about books with other people. c. 1 think reading is	each row: Not at all like me ©	A little bit like me D	Somewhat like me ©	Quite a bit like me ©	Exactly like me D	VH260271 VH260272	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. 	of the follow Not at all like me	A little bit like me	Somewhat like me ©	Quite a bit like me ©	Exactly like me	VI8644170	R	person like"
a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a	each row: Not at all like me	A little bit like me © ©	Somewhat like me © ©	Quite a bit like me D D D	Exactly like D D D	VH260271 VH260272	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 	of the follow Not at all like me © ©	A little bit like me D D D	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me D D D	V19644100 V19644170 V19544172	R	person like"
 a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 2018 Grade 12) 12. Besides doing homewor @ Less than 30 minu @ About 30 minutes 	each row: Not at all like me	A little bit like me © ©	Somewhat like me © © ©	Quite a bit like me D D D D D	Exactly like me D D D D	VH260271 VH260272	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a 	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D D	V19644100 V19644170 V19544172	R	person like"
 one answer choice on my favorite activities. b. Tike ralking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 2018 Grade 12) 12. Besides doing homewor Dest Less than 30 minutes Debug About 30 minutes About 1 hour a day 	each row:	A little bit like me © ©	Somewhat like me © © ©	Quite a bit like me D D D D D	Exactly like me D D D D	VH240271 VH240272 VH240275 VH240277	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. Issue: Student Fa 37. Besides doing homewor Destruct the set of the se	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D D	V1844170 V1844172 V1844172		person like" was removed
 a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. 2018 Grade 12) 12. Besides doing homewor Destination Less than 30 minutes 	each row:	A little bit like me © ©	Somewhat like me © © ©	Quite a bit like me D D D D D	Exactly like me D D D D	VH240271 VH240272 VH240275 VH240277	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. Issue: Student Fa 37. Besides doing homewor Destruction Less than 30 minute Destruction About 30 minutes and the second	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D D	V1844170 V1844172 V1844172		person like" was removed
 one answer choice on a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. (2018 Grade 12) 12. Besides doing homewor	each row: Not at all like me	A little bit like me © ©	Somewhat like me © © ©	Quite a bit like me D D D D D	Exactly like me D D D D	VH240271 VH240272 VH240275 VH240277	 35. How much does each choice on each row. a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important. d. I enjoy going to a bookstore or a library. Issue: Student Fa 37. Besides doing homewor the bookstore of a library. About 30 minute a day the bookstore of a day the book store of a day the bookstore of a day the bookstore of a library.	of the follow Not at all like me	A little bit like me D D D	Somewhat like me © ©	Quite a bit like me © © ©	Exactly like me D D D D	V1844170 V1844172 V1844172		person like was remov

Previous item							2019 item							D/A/ R/NC+	Rationale
 How often do you rece English/language arts Never About once or twi About once or twi About once or twi Every day or almo 	outside of scho ce a year ce a month ce a week st every day			friend with		V185253	 36. How often do you receinendish/language arts or with the second sec	utside of sel e a year e a month e a week t every day	uool or after scl	100l?			VII02259	NC	N/A
 How often do you typ online)? Select one an 			ving outside o	f school (print	l or	VH261063	38. How often do you typi online)? Select one ans	ically read ea	ch of the follow	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.000000	t or	VERSIMA	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			
a. Stories or novels	۲	۵	Q	Ð	Φ	VHISTOSS	a. Stories or novels	Ð	Ø	0	Ð	Ð	V11261066		
b. Poems	۲	Ð	0	Ø	Φ	VH261067	b. Poems	Ø	0	0	0	Φ	VH2nit67		
c. Plays	0	Ð	Ø	0	θ	VH261068	c. Plays	٩	D	Q	Ø	Ð	V11261068		
d. Biographies	٩	Ð	Ø	0	Φ	VH612043	d. Biographics	Ø	0	O	Ø	Ð	VH617043		
e. Comic books	Ø	٩	0	Ð	Ð	VH261070	e. Comic books	۲	œ	Ø	0	Ø	111261070		
f. Magazines	Ø	Ø	Ø	0	D.	VH361071			-					1	1
						TIMET	f. Magazines	Ð	Ø	Ø	Ð	Ð	VH261071		
g. E-mails	Ð	Ð	Q	0	Ð	VH261074	f. Magazines g. E-mails	6	0	0 0	0 0	0 0	VH261071 VH261076		
						VH261074 VH261075		151			100		-		
g. E-mails	D D D D D D D D D D D D D D D D D D D	0 0	Ø	0	Ð	VH261074	g. E-mails h. Text messages Issue: Student Fa 39. How often do you typi one answer choice on o	© Ctors	0	Q	© © side of school	Ð	914261075 914261075 914269996	NC	N/A
 g. E-mails h. Text messages (2018 Grade 12) 15. How often do you type one answer choice or one answer choice or one answer choice or one answer choice or one of the other people with other people 	© © vically do each each row.	© © of the followi	© © ing things out About once or twice a	© © side of school	D D ? Select Every day or almost	VE0251074 VE0261075	g. E-mails h. Text messages Issue: Student Fa 39. How often do you typi one answer choice on o	© Ctors ically do eac each row.	About once or twice a	© © ing things out About once or twice a	© © side of school	D D ? Select Every day or almost	914261075 914261075 914269996	NC	N/A
g. E-mails h. Text messages (2018 Grade 12) 15. How often do you ty one answer choice or a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print or online)	© © ocally do each each row. Never © ©	D D of the followi About once or twice a year D D	© © About once or twice a month ©	D D side of school About once or twice a week D D D	© © Select Every day or almost every day © ©	V12261074 V12261073 V1226006 V1226006	g. E-mails h. Text messages Issue: Student Fa 39. How often do you typi one answer choice on o	© © Ctors ically do cac cach row. Never	D D D D	© © About once or twice a month	© © side of school About once or twice a week	© © ? Select Every day or almost every day	VH2AU74 VH2AU75 VH20000	NC	N/A
 g. E-mails h. Text messages (2018 Grade 12) 15. How often do you typ one answer choice or one answer choice or a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print or online) c. Read blogs 	© © sically do each each row. Never ©	© © of the following About once or twice a year ©	© © Mout once or twice a month ©	D D side of school About once or twice a week D	© © ? Select Every day or almost every day ©	VE0251074 VE0261075	g. E-mails h. Text messages Issue: Student Fa 39. How often do you typi one answer choice on o a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print	© © Ctors ically do cac each row. Never	D D D D D	© © About once or twice a month ©	© © side of school About once or twice a week ©	© © ? Select Every day or almost every day ©	VH24074 VH264075 VH299966	NC	N/A
g. E-mails h. Text messages (2018 Grade 12) 15. How often do you ty one answer choice or a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print or online)	© © ocally do each each row. Never © ©	D D of the followi About once or twice a year D D	© © About once or twice a month ©	D D side of school About once or twice a week D D D	© © Select Every day or almost every day © ©	V12261074 V12261073 V1226006 V1226006	g. E-mails h. Text messages Issue: Student Fa 39. How often do you typi one answer choice on o a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print or online)	© Ctors ically do cac each row. Never ©	D D	© © Moutonce or twice a month ©	© © About once or twice a week ©	© © ? Select Every day or almost every day ©	VIE24074 VHD41075 VHD41075	NC	N/A

Previous item	2019 item	D/A/ R/NC	Rationale
 Are you currently enrolled in or have you taken an Advanced Placement (APth) course in English/language arts? Select all that apply. Yes, I am enrolled in or have taken Advanced Placement (AP) English Language and Composition. Yes, I am enrolled in or have taken Advanced Placement (AP) English Literature and Composition. No. I have never taken an Advanced Placement (AP) English/language arts course. 	 40. Are you currently enrolled in or have you taken an Advanced Placement (AP[®]) course in English/language arts? Select all that apply. ③ Yes, I am enrolled in or have taken Advanced Placement (AP) English Language and Composition. ④ Yes, I am enrolled in or have taken Advanced Placement (AP) English Literature and Composition. © No. I have never taken an Advanced Placement (AP) English/language arts course. Issue: Organization of Instruction 	NC	N/A
17. Are you currently enrolled in or have you taken the International Baccalaureate [®] (IB) Language A1 course?		NC	N/A
 18. Are you currently enrolled in or have you taken any online English/language arts courses for high school or college credit? © Yes © No (2018 Grade 12)		NC	N/A

Appendix K-1z: Operational Grade 12 Reading

24. For your English/language arts class so far this year, how many times have you done each of the following? Select **one** answer choice on each row.

	Never	Once	2 or 3 times	4 or 5 times	6 or more times	
a. Made a presentation to the class about something that you have read	0	₿	O	D	Ð	VH731530
b. Done a project about something that you have read (for example, written a play, created a website)	0	₿	Ø	Ø	¢	VH731529

25. For your English/language arts class this year, how often do you do each of the following? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Have a class discussion about something that the whole class has read	æ	®	Ø	Ø	©	VH332888
b. Work in pairs or small groups to talk about something that we have read	æ	ß	Ø	Ø	¢	VH652035
c. Discuss different interpretations of what we have read	Ø	®	Ø	Ø	¢	VH652037

VH882575

26. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Select **one** answer choice on each row.

	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a. Evaluate the main evidence in a persuasive/argument passage	æ	®	O	Ø	Ē	VH260256
b. Analyze the author's organization of information in a passage	æ	®	Ø	Ø	¢	VH333142
c. Critique the author's craft or technique	Ø	®	O	D	Ē	VH333144

27. In your English/language arts class this year, when reading a story, article, or other passage, how often does your teacher ask you to do the following? Select **one** answer choice on each row.

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Summarize the passage	Ø	ß	O	Ø	Ē	VH333075
b.	Interpret the meaning of the passage	8	B	0	Ø	Ē	VH333076
c.	Question the motives or feelings of the characters	8	ß	Ø	Ø	Ē	VH333079
d.	Identify the main ideas of the passage	8	B	0	Ø	Ē	VH333078
e.	Identify the themes of the passage	8	B	0	0	Ē	VH333094
f.	Analyze two or more texts on the same topic	0	ß	Ø	Ø	Ē	VH333077

VH588774

- **28.** For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?
 - Never
 Never
 - Once
 Once
 - © Two or three times
 - Four or five times
 - © More than five times

VH598636

- **29.** On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork?
 - (D) Less than 30 minutes
 - About 30 minutes
 About 30 minutes
 - © About 1 hour
 - D About 2 hours
 - C About 3 hours
 - ④ 4 or more hours

- **30.** In this school year, how often do you borrow reading materials (such as books or magazines) from your classroom library, school library, or media center?
 - Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Figure out the meaning of a word you don't know by using other words in the text	(A)	®	Ø	Ø	¢	VH260848
b. Explain the meaning of something you have read	Ø	®	O	Ø	Ē	VH260849
c. Figure out the main idea of a text	(8)	®	O	D	Ē	VH260851
d. Find text in a reading passage to help you answer a question on a test	A	®	Ø	Ø	©	VH260859
e. Recognize when you don't understand something you are reading	Ø	®	C	Ø	Ē	VH260861

31. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Recognize the difference between fact and opinion in a text	Ø	6	O	Ø	¢	VH260863
b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	Ø	®	Ø	Ø	¢	VH260857
c. Critique an author's craft or technique	8	®	O	D	Ē	VH260866
d. Use evidence from a text to support my answer	Ø	®	Ø	Ø	Ē	VH616841
e. Identify the author's perspective in a persuasive text	A	®	O	D	Ē	VH260868

32. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.

33. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
I want other students to think I am good at reading.	Ø	ß	Ø	Ø	¢	VH844065
I want to show others that my English/ language arts schoolwork is easy for me.	0	ഀ	Ø	Ø	¢	VH844066
I want to look smart in comparison to the other students in my English/language arts class.	0	ഀ	0	Ø	¢	VH844068
I want to get better English/language arts grades than most other students in my class.	Ø	₿	©	Ø	¢	VH844070

VH844052

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible in my English/language arts class.	Ø	ß	Ø	Ø	C	VH844096
b. I want to become a better reader this year.	A	B	0	Ø	Ē	VH844097
c. I want to understand as much as I can in my English/language arts class.	Ø	®	Q	Ø	¢	VH844098
d. I want to master a lot of new English/ language arts skills in my class.	۵	ß	Q	Ø	Ē	VH844100

34. How much does each of the following statements describe you? Select **one** answer choice on each row.

35. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. Reading is one of my favorite activities.	Ø	B	O	D	Ē	VH844169
b. I like talking about books with other people.	æ	®	O	Ø	©	VH844170
c. I think reading is important.	Ø	B	O	D	Ē	VH844172
d. I enjoy going to a bookstore or a library.	Ø	®	O	D	Ē	VH844171

VH332820

VH844168

- **36.** How often do you receive help from a tutor, family member, or friend with English/language arts **outside of school or after school**?
 - Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- 37. Besides doing homework, how much time do you spend reading outside of school?
 - (D) Less than 30 minutes a day
 - About 30 minutes a day
 - © About 1 hour a day
 - About 2 hours a day
 - © About 3 hours a day
 - © 4 or more hours a day

38. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Stories or novels	A	®	Ô	O	Ē	VH261066
b. Poems	A	®	Ô	O	Ē	VH261067
c. Plays	A	®	Ô	O	Ē	VH261068
d. Biographies	A	®	Ô	O	Ē	VH617043
e. Comic books	A	®	Ô	O	Ē	VH261070
f. Magazines	A	®	Ô	O	Ē	VH261071
g. E-mails	A	®	Ô	O	Ē	VH261074
h. Text messages	A	B	©	D	Ē	VH261075

VH260906

39. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row.

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
а.	Talk about books (print or online) with other people	Ø	₿	O	Ø	©	VH260907
b.	Go to my local library to borrow books (print or online)	(9)	B	Ø	Ø	©	VH260911
c.	Read blogs	A	®	Ô	O	Ē	VH260913
d.	Use social media (for example, Facebook, Twitter, Instagram)	(2)	B	O	Ø	C	VH333261
e.	Help friends with reading homework	Ø	B	O	Ø	Ē	VH260917

- **40.** Are you currently enrolled in or have you taken an Advanced Placement (AP[®]) course in English/language arts? Select **all** that apply.
 - Set Yes, I am enrolled in or have taken Advanced Placement (AP) English Language and Composition.
 - (B) Yes, I am enrolled in or have taken Advanced Placement (AP) English Literature and Composition.
 - © No, I have never taken an Advanced Placement (AP) English/language arts course.

VH240006

- **41.** Are you currently enrolled in or have you taken the International Baccalaureate[®] (IB) Language A1 course?
 - (D) Yes
 - B No
 No

- **42.** Are you currently enrolled in or have you taken any online English/language arts courses for high school or college credit?
 - (A) Yes
 - B No

Appendix K-1aa: Summary of Changes Operational Grade 4 Mathematics

2019 Operational Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VIEX 1. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?	 115 VIESOLS 117. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math? 	NC	N/A
Never	S Never		
(D) Once	() Once		
© Two or three times	© Two or three times		
© Four or five times	© Four or five times		
© More than five times	© More than five times		
(2017 Grade 4)	Issue: Organization of Instruction		
VIBSO		D	This item was
For school this year, how often do you work in pairs or small groups to talk about something that you have done in math?			dropped
③ Never			based on the
③ About once or twice a year			ADC's
© About once or twice a month			
			recommendat
D Every day or almost every day			ion.
(2017 Grade 4)			
VH265754	N/A	D	This item was
3. How often do you use a computer or other digital device (excluding handheld calculators) for math at school?	N/A	D	dropped
③ Never			based on
About once or twice a year			NCES's review
© About once or twice a month			
About once or twice a week About once or twice a week			of
D Every day or almost every day			technology-
(2017 Grade 4)			use items.
VHS918	⁶ N/A	D	This item was
4. How often do you use a computer or other digital device (excluding handheld calculators) for math homework?			dropped
(b) Never			based on
About once or twice a year			NCES's review
© About once or twice a month			
About once or twice a week			of
© Every day or almost every day			technology-
(2017 Grade 4)			use items.

2019 Operational Grade 4 Mathematics Student **Previous item** 2019 item D/A/ Rationale R/NC+ D N/A This item was 5. How often do you use the Internet to learn things about math? dropped (Never based on About once or twice a year C About once or twice a month NCES's review About once or twice a week of D Every day or almost every day technologyuse items. (2017 Grade 4) VH336231 VH33623 NC N/A 19. How often do you use a calculator? 6. How often do you use a calculator? Never Never Never Never About once or twice a year About once or twice a year C About once or twice a month C About once or twice a month About once or twice a week About once or twice a week D Every day or almost every day D Every day or almost every day Issue: Resources for Learning and Instruction (2017 Grade 4) N/A NC 7. How often do you receive help or tutoring with math outside of school or after 22. How often do you receive help or tutoring with math outside of school or after school? school? Never Never Never Never About once or twice a year About once or twice a year C About once or twice a month C About once or twice a month About once or twice a week About once or twice a week D Every day or almost every day Every day or almost every day (2017 Grade 4) Issue: Resources for Learning and Instruction VH267415 NC N/A 8. This school year, how often did the following things happen in your math class? Select 18. This school year, how often did the following things happen in your math class? Select one answer choice on each row one answer choice on each row. Less than More than All or Less than More than All or About half Never or Never or About half half of the half of the almost all of half of the half of the almost all of hardly eve of the time hardly even of the time time time the time time the time time a. My teacher used My teacher used computers or other computers or other digital devices when 0 (1) 0 0 Ð digital devices when 0 1 0 0 D teaching math to my teaching math to my class. class. b. My teacher required us My teacher required us to use computers or to use computers or other digital devices to 0 ٢ 0 0 1 other digital devices to 0 1 0 0 Ð complete math complete math assignments assignments. (2017 Grade 4)

Issue: Resources for Learning and Instruction

					2019 (Opera	tional Grade 4 N	Mathe	ematic	s Stud	ent				
Previous item							2019 item							D/A/ R/NC+	Rationale
 9. How often do you use math in everyday life outside of school? O Never O About once or twice a year O About once or twice a month O About once or twice a week O Every day or almost every day (2017 Grade 4)							20. How often do you use math in everyday life outside of school?							NC	N/A
10. How often do you par school? Select one an			ving activities	outside of		ViEsens	21. How often do you part: school? Select one answ			ving activities	outside of		VH268945	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day o almost every day	r		
 a. Talk about math problems with your friends 	8	Ð	a	Ø	Ð	VIIIX38944	a. Talk about math problems with your friends	۵	٩	Ø	Ø	Ð	VH268946		
 b. Play an instrument and read music c. Go to websites for 	Ø	Ð	Ø	0	Ð	VH268901	b. Play an instrument and read music	۲	٩	©	۵	©	VH268961		
help with your math homework	۵	Φ	Ø	Ð	Φ	VHL68062	c. Go to websites for help with your math homework	۵	®	Ø	۵	©	VH268962		
(2017 Grade 4)							Issue: Resources f	for Leai	rning and	d Instruc	tion				
11. Have you ever helped your friends with their math homework? with their math homework? ③ Yes ⑤ No						24. Have you ever helped your friends with their math homework? ② Yes ③ No						NC	N/A		
(2017 Grade 4)							Issue: Resources	for Leai	rning and	d Instruc	tion				
12. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.						25. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.						NC	N/A		
(2017 Grade 4)							Issue: Resources	for Leai	rning and	d Instruc	tion				

2019 Operational Grade 4 Mathematics Student

26. Thinking about math, do you think that you would be able to do each of the

2019 item

math class.

Issue: Student Factors

	item

13. Thinking	about math, do you think that you would be able to do each of the	
following	Do not actually solve the problems. Select one answer choice on each row.	

	I definitely can't	l probably can't	Maybe	1 probably can	1 definitely can	-
 a. Estimate the weight of 5 apples using pounds (lbs.) 	Θ	Φ	Ø	Ø	Φ	VH267674
b. Divide 42 stickers among 6 students	8	œ	Ð	Ø	æ	VHIST.CO.
c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	ଷ	Φ	Ø	Θ	Φ	VH267683
d. Know when to take a turkey out of the oven if it goes in at 10:00 A.M. and it takes 3 hours and 45 minutes to cook	Θ	Φ	Θ	Φ	Φ	VH2s7osJ

following? Do not actu	ally solve the	problems. Se	lect one answe	er choice on ea	ach row.		inc.	
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	\Box		
 a. Estimate the weight of 5 apples using pounds (lbs.) 	٩	®	Ø	Ø	©	VH267674		
b. Divide 42 stickers among 6 students	@	©	0	0	Ð	VH617317		
c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	۵	©	0	Ø	Φ	VH267682		
d. Know when to take a turkey out of the oven if it goes in at 10:00 A.M. and it takes 3 hours and 45 minutes to cook	0	٦	Θ	Ø	θ	VH267683		
27. How much does each choice on each row.		ving statemen A little bit	ts describe yo Somewhat	ou? Select one Quite a bit		VH844870	R	The previor matrix was
2	like me	like me	like me	like me	me			separated
a. I want other students to think I am good at math.	0	Ð	0	Θ	©	VH844871		into two
b. I want to show others that my math schoolwork is easy for me.	0	Ø	Ø	Ø	Ð	VH844872		matrices of achievemer
c. I want to look smart in comparison to the other students in my math class.	8	⊕	0	Θ	Ð	VH844873		goals items (performan
d. I want to get better grades than most other students in my math class.	(8)	®	0	Ø	©	VH844882		and master In order to
grades than most other students in my math						VH844882		
a. I want to learn as	and me	and me	go		goals based			
much as possible in my math class.b. I want to master a lot of new skills in my math class.	@	ـ	O	Ø	D	VH845117		on a total o
	۵	®	Ø	Ø	Ð	VH845114		at least 4
c. I want to become better in math this year.	٨	®	Ø	Ø	Ð	VH845115		items, VH844882
d. I want to understand as much as I can in my math class	۵	®	Ø	Ø	Ð	VH845118		and

D/A/

NC

VH267672

R/NC+

Rationale

N/A

(2017 Grade 4)

How much does each of the following statements describe a person like you? S	select
one answer choice on each row.	

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want other students to think I am good at math.	۵	ـ	Q	Ø	Œ	VH269049
b.	I want to show others that my math schoolwork is easy for me.	۹	®	0	Ø	Œ	VH269050
c.	I want to look smart in comparison to the other students in my math class.	۵	®	Q	Ø	¢	VH269053
d.	I want to learn as much as possible in my math class.	0	®	0	Φ	Ð	VH269059
c.	I want to become better in math this year.	۲	®	Ø	۵	Œ	VH269056
f.	I want to understand as much as I can in my math class.	۵	®	0	Φ	Ð	VH269060

(2017	Grade 4)
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2019 Operational Grade 4 Mathematics Student						
Previous item	2019 item	D/A/ R/NC+	Rationale			
			were added			
			from the			
			2016 pilot			
			assessment			
			The stem wa			
			revised fron			
			"describe a			
			person like			
			you" to			
			"describe			
			you".			

Grade 4 Mathematics Student

Previous item				2019 item				D/A/ R/NC+	Rationale						
 How much does each of the following statements describe a person like you? Select one answer choice on each row. 				29. How much does each choice on each row.	29. How much does each of the following statements describe you? Select one answer choice on each row.					R	The stem was revised from				
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			"describe a
a. 1 enjoy doing math.	٩	٩	Q	Φ	Φ	VH167479	a. I enjoy doing math.	0	Ð	©	Ø	O	VH844770		
 b. I look forward to my math class. 	9	œ	0	ø	Ð	91123-2001	b. I look forward to my math class.	0	Ð	Ø	Ø	Ð	VH844771		person like you" to
c. I am interested in the things I learn in math.	٩	æ	ø	Ð	θ	V13617324	c. I am interested in the things I learn in math.	8	Ð	0	Ø	Ð	VH844775		"describe
 I think making an effort in math is worthwhile. 	0	Ð	Ð	Ø	θ	VH267485	d. I think making an effort in math is worthwhile.	8	®	©	۵	©	VH844772		you".
e. I think math will help me even when I am not in school.	Ø	œ	0	Ø	œ	VI1267486	e. I think math will help me even when I am not in school.	0	Ð	0	Ø	Θ	VH844777		
f. I think it is important to do well in math.	Ø	Ð	Ø	Φ	Φ	VH167487	f. I think it is important to do well in math.	(3)	®	0	Ð	Ð	VH844774		
(2017 Grade 4) 16. How often do you play games) outside of schoo			apps, video ga	ames, or comj	puter	VH460329	Issue: Student Fa	ligital games		apps, video ga	imes, or comp	outer	VII460329	NC	N/A
Never							O Never O								
About once or twice About once or twice	a year						About once or twice	a year							
 About once or twice a month About once or twice a week 					C About once or twice	a month									
						a week									
D Every day or almost	every day						© Every day or almost	every day							
(2017 Grade 4)							Issue: Resources	for Lea	rning an	d Instru	ction				

Appendix K-1ab: Operational Grade 4 Mathematics

- 17. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?
 - Never
 - Once
 Once
 - © Two or three times
 - D Four or five times
 - © More than five times
- **18.** This school year, how often did the following things happen in your math class? Select **one** answer choice on each row.

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a.	My teacher used computers or other digital devices when teaching math to my class.	Ø	®	Ø	Ø	¢	VH588077
b.	My teacher required us to use computers or other digital devices to complete math assignments.	0	ഀ	0	Ø	¢	VH267419

- **19.** How often do you **use a calculator**?
 - Never
 Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

VH268936

- **20.** How often do you use math in everyday life **outside of school**?
 - (A) Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

VH268945

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Talk about math problems with your friends	Ø	ß	Ø	Θ	C	VH268946
b. Play an instrument and read music	۵	B	0	Ø	Ē	VH268961
c. Go to websites for help with your math homework	۵	₿	Q	Ø	Ē	VH268962

21. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row.

22. How often do you receive help or tutoring with math **outside of school or after school**?

- Never
- [®] About once or twice a year
- © About once or twice a month
- About once or twice a week
- © Every day or almost every day

VH336233

- **23.** How often do you play digital games (for example, apps, video games, or computer games) **outside of school** that involve math?
 - Never
 Never
 - About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- 24. Have you ever helped your friends with their math homework?
 - (A) Yes
 - B No
 No

VH269037

25. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.

26. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Estimate the weight of 5 apples using pounds (lbs.)	Ø	ß	Ø	Ø	Ē	VH267674
b.	Divide 42 stickers among 6 students	A	ß	0	Ø	Ē	VH617317
c.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ø	ഀ	Ø	Ø	¢	VH267682
d.	Know when to take a turkey out of the oven if it goes in at 10:00 A.M. and it takes 3 hours and 45 minutes to cook	Ø	®	Ø	Ø	¢	VH267683

27. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want other students to think I am good at math.	Ø	®	O	Ø	C	VH844871
b. I want to show others that my math schoolwork is easy for me.	æ	®	0	0	©	VH844872
c. I want to look smart in comparison to the other students in my math class.	۵	ß	0	0	Ē	VH844873
d. I want to get better grades than most other students in my math class.	æ	®	Ø	Ø	©	VH844882

VH267672

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
а.	I want to learn as much as possible in my math class.	Ø	ß	O	Ø	¢	VH845117
b.	I want to master a lot of new skills in my math class.	(9)	B	Ø	Ø	Ē	VH845114
c.	I want to become better in math this year.	0	B	0	Ø	Ē	VH845115
d.	I want to understand as much as I can in my math class.	Ø	B	Ö	Ø	Ē	VH845118

28. How much does each of the following statements describe you? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy doing math.	A	®	Ô	O	Ē	VH844770
b. I look forward to my math class.	Ø	®	O	Ø	Ē	VH844771
c. I am interested in the things I learn in math.	A	®	0	Ø	Ē	VH844775
d. I think making an effort in math is worthwhile.	æ	®	Ø	Ø	¢	VH844772
e. I think math will help me even when I am not in school.	æ	®	Ø	Ø	¢	VH844777
f. I think it is important to do well in math.	Ø	®	O	D	Ē	VH844774

29. How much does each of the following statements describe you? Select **one** answer choice on each row.

Appendix K-1ac: Summary of Changes Pilot Grade 4 Mathematics

2019 Pilot Grade 4 Mathematics Student

Previous item	2019 item		D/A/ R/NC+	Rationale
21. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?		viissous en have you been asked to write long answers (several uestions on tests or assignments that involved math?	NC	N/A
(D) Never	(D) Never			
D Once	D Once			
© Two or three times	Two or three times			
Four or five times	(D) Four or five times			
Φ More than five times	© More than five times			
(2017 Grade 4)	Issue: Organization	of Instruction		
YII YII	N/A		D	This item was
22. For school this year, how often do you work in pairs or small groups to talk about something that you have done in math?				dropped
Never				based on the
About once or twice a year				ADC's
C About once or twice a month				
About once or twice a week About once or twice a week				recommenda
© Every day or almost every day				ion.
(2017 Grade 4)				
	N/A		D	This item was
23. How often do you use a computer or other digital device (excluding handheld calculators) for math at school?				dropped
(2) Never				based on
D About once or twice a year				NCES's review
				of
				-
D Every day or almost every day				technology- use items.
(2017 Grade 4)				use items.
N .	N/A		D	This item was
24. How often do you use a computer or other digital device (excluding handheld calculators) for math homework?				dropped
Never				based on
About once or twice a year				NCES's review
© About once or twice a month				of
D About once or twice a week				-
D Every day or almost every day				technology- use items.
(2017 Grade 4)				

2019 Pilo	ot Grade 4 Mathematics Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
25. How often do you use the Internet to learn things about math? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day (2017 Grade 4)	N/A	D	This item was dropped based on NCES's review of technology- use items.
26. How often do you use a calculator? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day (2017 Grade 4)	 4. How often do you use a calculator? D Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day Issue: Resources for Learning and Instruction	NC	N/A
 27. How often do you receive help or tutoring with math outside of school or after school? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day (2017 Grade 4)	N/A	D	This item was dropped in place of keeping VH853724, as per similar recommendat ions made for Reading based on pretesting and to ensure consistency across subjects.

2019 Pilot Grade 4 Mathematics Student

Previous item							2019 item							D/A/ R/NC+	Rationale
28. This school year, how one answer choice on		ollowing thing	as happen in yo	our math class	l Select	VIDITALS	12. This school year, how one answer choice on		ollowing thing	gs happen in ye	our math class	? Select	VHX2194	R	The wording for both sub-
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			items was
 My teacher used computers or other digital devices when teaching math to my class. 	Ø	٩	0	Φ	Ð	VH568077.	 a. My teacher used computers or other digital devices to go on websites or use apps when teaching math 	9	8	Θ	9	θ	VHB10478		revised to focus more on assessing
b. My teacher required us to use computers or other digital devices to complete math assignments.	0	œ	0	Ø	Φ	V34267419	 b. My teacher required us to use computers or other digital devices to go on websites or use 	Ø	8	Ø	0	Θ	VH810877		what the students are utilizing the
2017 Grade 4)							Issue: Resources	for Learn	ning and	Instructi					technology for.
 Never About once or twi About once or twi About once or twi Every day or almost 	ce a month ce a week						 Never About once or twice About once or twice About once or twice Every day or almost Issue: Resources	a month a week every day	ning and	Instructi	on				
30. How often do you par school? Select one an			ving activities	outside of		VIENNA	1. How often do you part school? Select one ans	icipate in eac	h of the follow				VIEGRAG	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			
 Talk about math problems with your friends 	۲	Ø	Ø	Ø	Ø	V11268946	 a. Talk about math problems with your friends 	Ø	θ	0	0	Φ	VH268946		
	٢	٩	Ø	۵	Ð	V11268961	b. Play an instrument and read music	0	œ	Ø	Ø	Φ	VEDARMO		
 b. Play an instrument and read music Co to unbeites for 					Ø	vicionid	c. Go to websites for help with your math	G	θ	Ø	0	Ð	V11268962		
 b. Play an instrument and read music c. Go to websites for help with your math homework 	3	٩	Φ	۵	e	THURSDAY.	homework	ŵ							
and read music c. Go to websites for help with your math homework	Φ	\$	Ø	Φ		There are a second			ning and	Instructi	on				
and read music c. Go to websites for help with your math homework 2017 Grade 4)				٩		VID36065	homework	for Learr	Re La L	1	on		VHUMERS	NC	N/A
and read music c. Go to websites for help with your math homework (2017 Grade 4) 31. Have you ever helped				٩			Issue: Resources 3. Have you ever helped yo	for Learr	Re La L	1	on		VHDsizes	NC	N/A

2019 Pilot Grade 4 Mathematics Student

Previous item							2019 item							D/A/ R/NC+	Rationale
 32. Over the past seven da math homework? Ente (2017 Grade 4) 			u helped your	friends with	their	. yH256017	Over the past seven day math homework? Enter Issue: Resources	the number of	of days,			their	VIEWAN)	NC	N/A
33. Thinking about math, following? Do not act.					ich row,	Vii267672	 Thinking about math, following? Do not actu 					ach row.	V18082502	R	Sub-item "a" was revised
	I definitely can't	l probably can't	Maybe	1 probably can	I definitely can			I definitely can't	I probably can't	Maybe	I probably can	I definitely can			from "lbs" to
 a. Estimate the weight of 5 apples using pounds (lbs.) 	Ø	Ð	0	Ø	Φ	VH267674	 a. Estimate the weight of 5 apples using pounds (lb) 	Ø	Ð	0	0	Ð	VH85(27)		"lb"; sub-item "b" was
 b. Divide 42 stickers among 6 students c. Find the amount of 	Ð	٩	Ø	۵	Φ	VH617317	 b. Share 42 stickers equally among 6 students 	۵	٩	O	Θ	Ð	VHRIDSSI		revised;
carpet needed to cover a rectangular floor if you know its length and width d. Know when to take a	Ø	©.	Ø	Ð	θ	VH267882	c. Find the amount of carpet needed to cover a rectangular floor if you know its length	۹	Ø	Ø	Ø	θ	VH267682		previous sub- item "d" was replaced with
turkey out of the oven if it goes in at 10:00 A.M. and it takes 3 hours and 45 minutes to cook	٩	©	ø	ø	Φ	VH267683	and width d. Calculate what time the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes.	Ø	œ	Ø	œ	Ð	V100865		an alternate version.
(2017 Grade 4) 34. How much does each one answer choice on	each row.					VEIZ00048	Issue: Student Fa 9. How much does each choice on each row.			ts describe ye			VHICTORE	R	The previous matrix was
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	1		separated
a. I want other students to think I am good at math.	۲	Ø	ø	0	0	VEDISION	 I want to learn as much as possible about math in my 	θ	Ð	θ	Ð	θ	V10553957		into two matrices of
b. I want to show others that my math schoolwork is easy for me.	٩	۵	Ø	۵	θ	VH269050	class. b. I want to master a lot of new math skills in	٩	¢	¢	Ð	Φ	YI1833861		achievement
c. I want to look smart in comparison to the other students in my math class.	0	Ð	Ø	Ð	Φ	V11269053	my class. c. I want to become a better math student this year.	Ø	Ð	Ø	Ø	θ	VERSIDAD		goals items (performance
d. I want to learn as much as possible in my math class.	Ø	Ð	0	Θ	θ	V18269059	d. I want to understand as much as I can in my math class.	Ø	Ð	Ø	۵	Ð	VMI653952		and mastery) In order to
 e. I want to become better in math this year. 	۵	۵	Ø	ø	θ	VIELENDER									create indices
f. I want to understand	۲	Ð	o	0	۵	Y11269960									performance
as much as I can in my math class.		A		1.1	14										and mastery

Previous item							2019 item							D/A/ R/NC+	Rationale
							11. How much does each choice on each row.	of the follow	ring statemen	ts describe yo	u? Select one	answer	VIRSHI		on a total of at least 4
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			items,
							 a. I want other students to think I am a good math student. 	9	Ð	0	Φ	θ	VH854117		VH844882 VH853961
							b. I want to show others that my math schoolwork is easy for me.	θ	Ø	Θ	Φ	Ð	VH854118		and VH8451314
							c. I want to look smart in comparison to the other students in my math class.	0	¢	0	۵	Ð	VH854110		were added
							d. I want to get better math grades than most other students in my class.	0	œ	0	Ø	θ	VH854134		2016 pilot assessment
							Issue: Student Fac	ctors							revised from "describe a person like you" to "describe
 How much does each one answer choice on 		ng statements	describe a per	rson like you?	} Select	XHEN347N	Issue: Student Factors 10. How much does each choice on each row.		ving statemen	ts describe yo	uš Select one	answer	Y1654020	R	revised from "describe a person like you" to "describe you". The stem w
		ing statements A little bit like me	s describe a per Somewhat like me		? Select Exactly like me	VH251478	10. How much does each		ving statemen A little bit like me	ts describe yo Somewhat like me	u? Select one Quite a bit like me	answer Exactly like me		R	person like you" to "describe
one answer choice on a. I enjoy doing math.	each row. Not at all	A little bit	Somewhat	Quite a bit	Exactly like	VICUTOR VICUTOR	 10. How much does each choice on each row. a. I enjoy doing math. 	of the follow Not at all	A little bit	Somewhat	Quite a bit	Exactly like		R	revised from "describe a person like you" to "describe you". The stem wa revised from "describe a
one answer choice on	each row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		 10. How much does each choice on each row. a. I enjoy doing math. b. 1 look forward to my 	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		R	revised from "describe a person like you" to "describe you". The stem wa revised from "describe a person like
one answer choice on a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math.	each row. Not at all like me Ø	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH107479	 10. How much does each choice on each row. a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math. 	of the follow Not at all like me	A little bit like me D	Somewhat like me ©	Quite a bit like me ©	Exactly like me ©	4100-4024 1	R	revised fron "describe a person like you" to "describe you". The stem wa revised fron "describe a
one answer choice on a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math. d. I think making an effort in math is worthwhile.	each row. Not at all like me ©	A little bit like me D	Somewhat like me ©	Quite a bit like me ©	Exactly like me ©	VH167479 VH267481	 10. How much does each choice on each row. a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the 	of the follow Not at all like me Ø	A little bit like me D	Somewhat like me ©	Quite a bit like me ©	Exactly like me ©	4100-4024 1	R	revised from "describe a person like you" to "describe you". The stem wa revised from "describe a person like you" to
 one answer choice on a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math. d. I think making an effort in math is 	each row. Not at all like me Ø	A little bit like me D D	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me © ©	V91267479 V91267481 V21617324	 10. How much does each choice on each row. a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math. d. I think making an effort in math is 	of the follow Not at all like me © ©	A little bit like me D D D	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me © ©	V1854029 VH854030 VH856034	R	revised from "describe a person like you" to "describe you". The stem w revised from "describe a person like you" to "describe

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

2019 Pilot Grade 4 Mathematics Student

Previous item	2019 item							D/A/ R/NC+	Rationale
 16. How often do you play digital games (for example, apps, video games, or computer games) outside of school that involve math? ② Never ③ About once or twice a year ③ About once or twice a month ④ About once or twice a week ④ Every day or almost every day 	 6. How often do you play digital games (for example, apps, video games, or computer games) outside of school that involve math? (a) Never (b) About once or twice a year (c) About once or twice a month (c) About once or twice a week (c) Every day or almost every day 							NC	N/A
(2017 Grade 4)	Issue: Resources fo	or Learning	g and Ir	nstructi	on				
N/A	7. How often do you receiv of school or after school	e the following t Select one answ	ypes of hel ver choice o	p with math on each row.	n schoolwork	outside	VH853724	А	This item was added in
		Never or t		About once or twice a month	About once or twice a week	Every day or almost every day			place of VH336233.
	a. Help from a teacher	Ø	Ø	Ø	Φ	Ø	VH653725		
	b. Help from a tutor c. Help from a family	Ð	Ø	0 0	æ	Ð	VH853726 VH853728		This item was
	member or friend d. Help from online	Ø	Ø	0	Ð	θ	VH85372#		pretested and
	resources (for example, websites or apps)	۵	Ø	Ø	Ø	Ø	VHI853726		kept in Reading, and
	Issue: Resources fo	or Learning	g and Ir	nstructi	on				to ensure consistency, the same decision was made for math.
N/A	 How useful do you find schoolwork? Select one 	each of the follow answer choice on	ving types of each row.	of help to ur	nderstand you	ur math	VIB0752	А	This item was added in
		Not useful at all	Somev usef		ery useful	I don't receive that type of help.			place of VH336233.
	a. Help from a teacher	٩	٩		©	Ø	VH853733		
	 b. Help from a tutor c. Help from a family 	0	0		0	0	VH853734		This item was
	member or friend d. Help from online resource (for example, websites or	_	0		0	9	VH853737		pretested and kept in
	apps)				1				Reading, and to ensure consistency, the same
	Issue: Resources fo	or Learning	g and Ir	nstructi	on				

2019 Pilot Grade 4 Mathematics Studen	t	
2019 item	D/A/ Rationale R/NC+	;
	made for	
		R/NC+

⁺ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Appendix K-1ad: Pilot Grade 4 Mathematics

1. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Talk about math problems with your friends	۵	ß	O	Ø	©	VH268946
b. Play an instrument and read music	æ	ß	0	Ø	Ē	VH268961
c. Go to websites for help with your math homework	Ø	®	O	Ø	¢	VH268962

2. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.

- 3. Have you ever helped your friends with their math homework?
 - (D) Yes
 - B No
 No

209

VH268945

VH269037

VH336231

- 4. How often do you use a calculator?
 - Never
 Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

VH350115

- **5.** For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?
 - Never
 Never
 - Once
 Once
 - © Two or three times
 - D Four or five times
 - © More than five times

- **6.** How often do you play digital games (for example, apps, video games, or computer games) **outside of school** that involve math?
 - Never
 Never
 - About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

7. How often do you receive the following types of help with math schoolwork **outside of school or after school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Help from a teacher	A	®	©	0	Ē	VH853725
b. Help from a tutor	A	®	Ô	0	Ē	VH853726
c. Help from a family member or friend	A	®	O	Ø	Ē	VH853728
d. Help from online resources (for example, websites or apps)	Ø	®	O	Ø	C	VH853729

8. How useful do you find each of the following types of help to understand your math schoolwork? Select **one** answer choice on each row.

	Not useful at all	Somewhat useful	Very useful	I don't receive that type of help.	
a. Help from a teacher	A	®	Ô	D	VH853733
b. Help from a tutor	A	®	O	D	VH853734
c. Help from a family member or friend	A	B	O	Ø	VH853736
d. Help from online resources (for example, websites or apps)	8	₿	O	Ø	VH853737

VH853724

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible about math in my class.	æ	®	Ø	Ø	C	VH853957
b. I want to master a lot of new math skills in my class.	æ	ß	0	0	Ē	VH853961
c. I want to become a better math student this year.	Ø	®	Ø	Ø	Ē	VH853949
d. I want to understand as much as I can in my math class.	Ø	ß	Ö	Ø	Ē	VH853952

9. How much does each of the following statements describe you? Select **one** answer choice on each row.

212

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy doing math.	A	®	O	O	Ē	VH854029
b. I look forward to my math class.	Ø	®	O	D	Ē	VH854030
c. I am interested in the things I learn in math.	Ø	®	O	Ø	Ē	VH854034
d. I think making an effort in math is worthwhile.	æ	®	O	Ø	¢	VH854031
e. I think math will help me even when I am not in school.	æ	®	O	Ø	Ē	VH854036
f. I think it is important to do well in math.	Ø	®	©	D	Ē	VH854033

10. How much does each of the following statements describe you? Select **one** answer choice on each row.

11. How much does each of the following statements describe you? Select **one** answer choice on each row.

A little bit Not at all Somewhat Quite a bit Exactly like like me like me like me like me me a. I want other students to think I am a good VH854117 A B O D Ð math student. b. I want to show others that my math VH854118 A O Ð B \bigcirc schoolwork is easy for me. c. I want to look smart in comparison to the A © Ð VH854119 B \odot other students in my math class. d. I want to get better math grades than most VH854134 A B \odot \bigcirc Ð other students in my class.

VH854028

12. This school year, how often did the following things happen in your math class? Select **one** answer choice on each row.

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. My teacher used computers or other digital devices to go on websites or use apps when teaching math to my class.	0	₿	Q	Φ	©	VH810476
b. My teacher required us to use computers or other digital devices to go on websites or use apps to complete math assignments.	Ø	₿	Q	Ø	¢	VH810477

13. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Estimate the weight of 5 apples using pounds (lb)	Ø	B	O	Ø	Ē	VH858273
b.	Share 42 stickers equally among 6 students	Ø	B	Ø	Ø	Ē	VH810864
c.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ø	ഀ	Ø	Ø	¢	VH267682
d.	Calculate what time the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes.	Ø	ഀ	Ø	Ø	¢	VH810865

VH882494

VH882502

214

- 14. How often do you use math in everyday life **outside of school**?
 - Never
 Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

Appendix K-1ae: Spiral Map Grade 4 Mathematics

Accnum	Grade	Grade 4 OMB PDF Sequence Number	Number of Grade 4 booklets item appears in	Grade 4 booklets item appears in
VH350115	4, 8	05_00	1	3
VH336231	4	04_00	1	3
VH268936	4, 8	14_00	3	1, 2, 3
VH460329	4, 8	06_00	3	1, 2, 3
VH854116	4, 8	11_00	1	3
VH854117	4, 8	11_01	1	3
VH854118	4, 8	11_02	1	3
VH854119	4, 8	11_03	1	3
VH854134	4, 8	11_04	1	3
VH853944	4, 8	09_00	1	3
VH853957	4, 8	09_01	1	3
VH853961	4, 8	09_02	1	3
VH853949	4, 8	09_03	1	3
VH853952	4, 8	09_04	1	3
VH854028	4, 8	10_00	1	3
VH854029	4, 8	10_01	1	3
VH854030	4, 8	10_02	1	3
VH854034	4, 8	10_03	1	3
VH854031	4, 8	10_04	1	3
VH854036	4, 8	10_05	1	3
VH854033	4, 8	10_06	1	3
VH336085	4, 8	03_00	3	1, 2, 3
VH269037	4, 8	02_00	3	1, 2, 3
VH853724	4, 8	07_00	2	1, 2
VH853725	4, 8	07_01	2	1, 2
VH853726	4, 8	07_02	2	1, 2
VH853728	4, 8	07_03	2	1, 2
VH853729	4, 8	07_04	2	1, 2

Accnum	Grade	Grade 4 OMB PDF Sequence Number	Number of Grade 4 booklets item appears in	Grade 4 booklets item appears in
VH853732	4,8	08_00	2	1, 2
VH853733	4, 8	08_01	2	1, 2
VH853734	4, 8	08_02	2	1, 2
VH853736	4, 8	08_03	2	1, 2
VH853737	4, 8	08_04	2	1, 2
VH882494	4, 8	12_00	2	1, 2
VH810476	4, 8	12_01	2	1, 2
VH810477	4, 8	12_02	2	1, 2
VH882502	4	13_00	2	1, 2
VH858273	4	13_01	2	1, 2
VH810864	4	13_02	2	1, 2
VH267682	4, 8	13_03	2	1, 2
VH810865	4	13_04	2	1, 2
VH268945	4, 8	01_00	1	3
VH268946	4, 8	01_01	1	3
VH268961	4, 8	01_02	1	3
VH268962	4, 8	01_03	1	3

Appendix K-1af: Summary of Changes Operational Grade 8 Mathematics

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
 What math class are you taking this year? Select one or more answer choices. 	VIES	NC	N/A
 Final matrix cases are your taking this years select one of anote answer choices. Eighth-grade math 	22. What math class are you taking this year? Select one or more answer choices.	0	
D Ceneral eighth-grade math	© Eighth-grade math		
© Algebra I course	General eighth-grade math General eighth-grade math		
 D First year of a two-year algebra course 	© Algebra I course		
D Second year of a two-year algebra course	First year of a two-year algebra course		
 D Algebra I (one-year course) 	Second year of a two-year algebra course		
© Algebra II			
Geometry	© Algebra II		
© Other	Geometry Geometry		
	(D) Other		
(2017 Grade 8)	Issue: Organization of Instruction		
2. What math class do you expect to take next year?	23. What math class do you expect to take next year?	40046 NC	N/A
 Geometry Algebra II 			
	① Algebra II		
© Algebra I (one-year course)	© Algebra I (one-year course)		
 First year of a two-year Algebra I course 	First year of a two-year Algebra I course		
 Second year of a two-year Algebra I course Landaria ta algebra i course da landaria 	© Second year of a two-year Algebra I course		
Introduction to algebra or pre-algebra Review recommendations	© Introduction to algebra or pre-algebra		
© Basic or general math ⊕ Business or consumer math	© Basic or general math		
© Other math class	Business or consumer math		
 Other math class Ø I don't know. 			
Ψ I don t know.	O I don't know.		
(2017 Grade 8)	Issue: Organization of Instruction		
Missor			N1/A
3. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?	24. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?	NC	N/A
© Never	(3) Never		
D Once	[®] Once		
© Two or three times	© Two or three times		
Tour or five times	© Four or five times		
D More than five times	 More than five times 		
(2017 Grade 8)	Issue: Organization of Instruction		

Previous item	ational Grade 8 Mathematics Student 2019 item		Rationale
Previous item	2019 item	D/A/ R/NC+	Rationale
 4. For school this year, how often do you work in pairs or small groups to talk about something that you have done in math? ② Never ③ About once or twice a year ③ About once or twice a month ③ About once or twice a week ④ Every day or almost every day 	N/A	D	This item was dropped based on the ADC's recommendat ion.
(2017 Grade 8) 5. How often do you use a computer or other digital device (excluding handheld calculators) for math at school? © Never © About once or twice a year © About once or twice a weak © Every day or almost every day (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology- use items.
 (2017 Grade 8) How often do you receive help or tutoring with math outside of school or after school? Never About once or twice a year About once or twice a month About once or twice a week Every day or almost every day (2017 Grade 8)	30. How often do you receive help or tutoring with math outside of school or after school?	NC	N/A
7. In your math class this year, how often have you used the following types of calculators? Select one answer choice on each row. VUSAGE 1 Never or hardly ever half of the time half	25. In your math class this year, how often have you used the following types of calculators? Select one answer choice on each row. Never or hardly ever Less than half of the ime More than half of the almost all of the time All or almost all of the time a. Basic calculator © © © © VILL0000 b. Graphing calculator © © © © VILL0000 Issue: Resources for Learning and Instruction Instruction Instruction Instruction	NC	N/A

Previous item							2019 item							D/A/ R/NC+	Rationale
8. This school year, how one answer choice on	often did the fo	ollowing thing	gs happen in y	our math class	? Select	Alicative	26. This school year, how often did the following things happen in your math class? Select one answer choice on each row.							NC	N/A
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all o the time	f		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			
 My teacher used computers or other digital devices to show us how to work through math problems. 	Ø	Ø	Ø	Ø	Φ	VH16741é	 a. My teacher used computers or other digital devices to show us how to work through math problems. 	۹	۵	Q	۵	©	VH267416		
b. 1 used the Internet for my math work.	0	8	0	θ	θ	998267437	b. I used the Internet for my math work.	0	⊕	©	Ø	Ð	VH267417		
My teacher used computers or other digital devices when teaching math to my class.	Ø	Ø	Ø	Ø	Φ	VH588077	 my math work. My teacher used computers or other digital devices when teaching math to my class. 	Ø	۲	Q	Ø	©	VH588077		
My teacher required us to use computers or other digital devices to complete math assignments.	٩	۵	Ø	Ð	Φ	VH267419	 d. My teacher required us to use computers or other digital devices to complete math assignments. 	0	۲	Ø	۵	Φ	VH267419		
 2017 Grade 8) 2017 Grade 8)	culators) to co e a year e a month				ie -	VII336036	Issue: Resources	s for Lea	rning an	id Instru	ction			D	This item wa dropped based on NCES's revie of
© Every day or almost	every day														technology- use items.
(2017 Grade 8)				and and a		VH336037			alara da Dira	anna an atha	r digital davio		VH336037	NC	N/A
							27. In this school year, ho (excluding handheld of math assignments?								
 10. In this school year, hov (excluding handheld ca math assignments? O Never 	alculators) to l						(excluding handheld of math assignments? (2) Never	alculators) to							
 10. In this school year, hov (excluding handheld ca math assignments? ③ Never ④ About once or twice 	alculators) to l						(excluding handheld of math assignments?	alculators) to ce a year							
 10. In this school year, hov (excluding handheld ca math assignments? ③ Never ④ About once or twic © About once or twice 	alculators) to l ce a year ce a month						(excluding handheld of math assignments? Never About once or twi About once or twi	alculators) to ce a year ce a month							
 10. In this school year, hov (excluding handheld ca math assignments? ③ Never ④ About once or twice 	alculators) to l ce a year ce a month ce a week						(excluding handheld of math assignments?	alculators) to ce a year ce a month ce a week							

11. In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to take an online practice test? drop base Image: Device of the second	ionale
Normal Normal 12. How often do you use math in everyday life outside of school? NC Never About once or twice a year About once or twice a work About once or twice a work Every day or almost every day About once or twice a work I. How often do you use math in everyday life outside of school? NC N/A Model once or twice a work Every day or almost every day (2017 Grade 8) I3. How often do you participate in each of the following activities outside of school? Never at table do un math program computers Never at table do un math Never About once or twice a work Devery day or almost every day Ia. How often do you participate in each of the following activities outside of school? Ia. How often do you participate in each of the following activities outside of school? Ia. Hak about math program computers Never at table about math Never at table about math Never Ia. How often do you participate in each of the following activities outside of school? Never at table about math problems with your Ia. Talk about math Ib. Program computers Ib. Program comp	s item was pped ed on ES's reviev hnology- items.
13. How often do you participate in each of the following activities outside of school? Select one answer choice on each row. 29. How often do you participate in each of the following activities outside of school? Select one answer choice on each row. Never About once or twice a or twice a or twice a month Never About once or each row. Never About once or each row. Never About once or each row. Never About once or twice a or tw	
a. Talk about math problems with your lriends math about math problems with your lriends b. Program computers c. Play an instrument and read music d. Go to websites for help with your math homework math about math problems with your friends math about math problems with your friends math cad music math cad musi	A
Iriends	
c. Play an instrument and read music Image: Construction of the construction of	
and read music Image: Constraint of the constraint of	
help with your math D D D D D VIDSB83 homework D D D D D VIDSB83	
(2017 Grade 8) Issue: Resources for Learning and Instruction	
VILUAGE VILUAGE 14. Have you ever helped your friends with their math homework? 31. Have you ever helped your friends with their math homework? © Yes © Yes © No © No	A

					2019 (Opera	tional Grade 8 N	Лathe	ematics	s Stud	ent				
Previous item							2019 item							D/A/ R/NC+	Rationale
 15. Over the past seven day math homework? Enter ☐ (2017 Grade 8) 			helped your	friends with t	heir	VH266037	32. Over the past seven days, math homework? Enter th	ne number o	of days.			heir	VH269037	NC	N/A
16. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select one answer choice on each row.						le to do each of the 36. Thinking about math, do you think that you would be able to do each of the							R	Items	
	I definitely can't	1 probably can't	Maybe	I probably can	I definitely can		I	definitely can't	I probably can't	Maybe	I probably can	I definitely can			VH267674, VH617317,
a. Estimate the weight of 5 apples using pounds (lbs.)	¢9	Ð	9	Ø	Ø	VIDAWA	a. List all of the different possible outcomes when a coin is flipped three times	۲	Ð	Ø	۵	Ð	VH460382		VH267681, VH267683,
 b. Divide 42 stickers among 6 students c. Determine a 20 percent tip of a 67-dollar restaurant dinner bill 	Ø	0	ê 9	Ø	0 9	VHAU7317 VH247679	b. Create an expression that represents the average number of miles you run in a week if you run 100	۵	Φ	Ø	Φ	¢	VH460383		VH460348, VH460355,
 Describe the properties shared by every isosceles right triangle 	Ø	Φ	θ	Φ	Φ	VH2676R1	miles in w weeks c. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	٩	®	Ø	Φ	Ð	VH267679		VH460381, VH460386,
c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	@	œ	Ð	Ð	θ	W112676812	dinner bill d. Find the amount of carpet needed to cover a rectangular floor if you know its length	0	Ø	Θ	Ø	©	VH267682		VH460389, VH460391,
f. Know when to take a turkey out of the oven if it goes in at 10:00 A.M. and it takes 3 hours and 45 minutes	Ø	θ	9	Φ	θ	VHD67683	and width e. Give an example to show that a math statement is false	Ø	D	Ø	Ø	¢	VH460399		VH460398, VH460900, and
to cook 23. Thinking about math following? Do not act	. do you think ually solve the 1 definitely can't	that you wou problems. Sel I probably can't	ld be able to ect one answ Maybe	do each of the cer choice on ea I probably can	ach row. I definitely can	Ankrish	 f. Explain to your classmate how you solved a math problem g. Use correct mathematical words and symbols when showing your work 	0	Ð	Ø	© ©	Φ	VH460910 VH460902		VH460912 were dropped based on
 Create a bar graph to represent the number of desks, chairs, and tables in your classroom 	Ø	ap	Ø	Ø	Ø	¥H460348						ł			NCES's review of self-
 b. Use a box plot to represent the height, in inches, of all of the students in your class 	Ø	θ	0	Ð	θ	VH460353									efficacy items for grade 8.
c. Determine the probability of picking a blue marble without looking if you know the number of marbles of each color in a bag	0	æ	0	Ø	θ	379460383									
d. List all of the different	Ø	æ	0	Ø	CD	del tastante									

Previous item							2019 item	D/A/ Rational R/NC+
24. Thinking about math, following? Do not actu	do you think tally solve the	that you woul problems. Sel	ld be able to o ect one answ	do each of the er choice on ea	ich row.	VH613511		
	l definitely can't	I probably can't	Maybe	I probably can	I definitely can			
 a. Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks 	Θ	Φ	Φ	Ð	Θ	VH46G383		
b. Create an expression to show how old you will be in n years if you are 8 years old today	Ø	8	0	θ	θ	(H460386-		
c. Create an expression that shows the number of wheels on n	0	θ	Ð	ø	Ð	VHIGHES		
wagons if each wagon has 4 wheels	1							
	0	Ø	0	8	Ð	YH460391		
has 4 wheels d. Explain how you know the number of books you can buy if you know the price of each book and you have \$35	do you think	that you woul				VH613523		
has 4 wheels d. Explain how you know the number of books you can bay if you know the price of cach book and you have \$35 25. Thinking about math, following? Select one a	do you think inswer choice I definitely	that you woul on each row. I probably	d be able to	do each of the	I definitely	VH613523		
has 4 wheels d. Explain how you know the number of books you can buy if you know the price of each book and you have \$35 25. Thinking about math, following? Select one a a. Decide if your classmate's math work	do you think answer choice I definitely can't	that you woul on each row. I probably can't	d be able to Maybe	do each of the I probably can	I definitely can	VH613523		
has 4 wheels d. Explain how you know the number of books you can buy if you know the price of each book and you have \$35 25. Thinking about math, following? Select one a a. Decide if your classmate's math work is correct b. Give an example to show that a math	do you think answer choice I definitely can't	that you woul on each row. I probably can't	d be able to Maybe ©	do each of the I probably can ©	I definitely can	V1613523		
has 4 wheels d. Explain how you know the number of books you can buy if you know the price of each book and you have \$35 25. Thinking about math, following? Select one a a. Decide if your classmate's math work is correct b. Give an example to show that a math statement is false c. Explain to your classmate how you	do you think answer choice I definitely can't \$	that you wou on each row. I probably can't D	d be able to o Maybe ©	do each of the I probably can © ©	I definitely can ©	VH613523 VH460398 VH460399		
has 4 wheels d. Explain how you know the number of books you can buy if you know the price of cach book and you have \$35 25. Thinking about math, following? Select one a a. Decide if your classmate's math work is correct b. Give an example to show that a math statement is false c. Explain to your classmate how you solved a math problem d. Use correct mathematical words and symbols to communicate ideas	do you think answer choice I definitely can't © ©	that you woul on each row. I probably can't © © ©	d be able to o Maybe © ©	do each of the I probably can	I definitely can © ©	V1613523 V16463398 V16463399 V16469390		

revious item							2019 item							D/A/ R/NC+	Rationale
 How much does each one answer choice on 	of the followi each row.	ng statements	describe a per	rson like you	Select	VECSEDUS	37. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? Select one	answer	VH844870	R	The previou
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like			matrix was separated
I want other students to think I am good at math.	۹	Φ	0	Ð	Φ	¥H269049	a. I want other students to think I am good at math.	۵	®	0	Θ	Θ	VH844871		into two
I want to show others that my math schoolwork is easy for me.	Θ	θ	θ	Φ	Θ	VHDieR60	b. I want to show others that my math schoolwork is easy for	۵	٦	0	Ø	Θ	VH844872		matrices of achievemer
I want to look smart in comparison to the other students in my math class.	Ø	œ	Ø	Ø	æ	VIENNES	mc. c. I want to look smart in comparison to the other students in my	0	®	0	Θ	θ	VH844873		goals items (performan
I want to learn as much as possible in my math class.	Θ	9	0	Φ	θ	VH268054	math class. d. I want to get better grades than most other	۵	8	0	Θ	©	VH844882		and master In order to
l want to become better in math this year.	8	6	8	Ø	Ð	VIDWESI	students in my math class.				44				create indic
I want to understand as much as I can in my math class.	Ð	Θ	9	٩	Φ	VH20000	 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	u? Select one	answer	VH845110		for both performance
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like	2		and master
							 a. I want to learn as much as possible in my math class. 	۵	®	Ø	۵	©	VH845117		goals based on a total o
							b. I want to master a lot of new skills in my math class.	8	(6)	Ø	Ø	Ð	VH845114		at least 4
							c. I want to become better in math this			0	1.557				1
								0	ـ	e e	0	Ð	VH845115		items, VH844882
							d. I want to understand as much as I can in my math class.	0	®	0	Ø	Ð	VH845115 VH845118		VH844882 and
017 Grade 8)							year. d. I want to understand as much as I can in my	Ø							VH844882 and VH845114 were addec from the 2016 pilot
	each row.					VILLOUTS	ycar. d. I want to understand as much as I can in my math class.	© ctors	Ū	©	Ø	D	VH845118 VH845109	R	VH844882 and VH845114 were added from the
 How much does each one answer choice on 	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like		ycar. d. Iwant to understand as much as I can in my math class. Issue: Student fa 39. How much does each	© ctors	Ū	©	Ø	Ū	VH845118 VH845109	R	VH844882 and VH845114 were added from the 2016 pilot assessment The stem w
 How much does each one answer choice on I enjoy doing math. I look forward to my 	Not at all	A little bit	Somewhat	Quite a bit	Exactly like	VHEATEN VHEATEN VHEATEN VHEATEN	ycar. d. Iwant to understand as much as I can in my math class. Issue: Student fa 39. How much does each	© Ctors of the follow Not at all like me ©	© ring statemen A little bit like me ©	© ts describe yo Somewhat like me ©	© u? Select one Quite a bit like me ©	© answer Exactly lik me ©	V1845118 V1844760 e	R	VH844882 and VH845114 were added from the 2016 pilot assessment The stem w revised from
 How much does each one answer choice on I enjoy doing math. I look forward to my math class. I am interested in the 	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		year. d. Iwant to understand as much as I can in my math class. Issue: Student fa 39. How much does each choice on each row. a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the	© Ctors of the follow Not at all like me ©	© ving statemen A little bit like me ©	© ts describe yo Somewhat like me © ©	© u? Select one Quite a bit like me © ©	© answer Exactly lik me ©	VH845118 VH845118 VH841760 VH844770 VH844771 VH844771	R	VH844882 and VH845114 were added from the 2016 pilot assessment The stem w revised fror "describe a person like you" to
 How much does each one answer choice on I enjoy doing math. I look forward to my math class. I am interested in the things I learn in math. I think making an effort in math is 	Not at all like me	A little bit like me	Somewhat like me ©	Quite a bit like me ©	Exactly like me	VH267479 VH267811	ycar. d. Iwant to understand as much as I can in my math class. Issue: Student fa 39. How much does each choice on each row. a. I enjoy doing math. b. Ilook forward to my math class.	© Ctors of the follow Not at all like me ©	© ring statemen A little bit like me ©	© ts describe yo Somewhat like me ©	© u? Select one Quite a bit like me ©	© answer Exactly lik me ©	V1845118 V1844760 e	R	VH844882 and VH845114 were added from the 2016 pilot assessment The stem w revised from "describe a person like you" to "describe
 I enjoy doing math. I look forward to my math class. I am interested in the things I learn in math. I think making an 	Not at all like me	A little bit like me	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me © ©	VFI267270 V512673117 V512673117	year. d. I want to understand as much as I can in my math class. Issue: Student fa 39. How much does each choice on each row. a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math. d. I think making an	© Ctors of the follow Not at all like me © © ©	© ving statemen A little bit like me © ©	© ts describe yo Somewhat like me © ©	© u? Select one Quite a bit like me © ©	© answer Exactly lik me © ©	V1844760	R	VH844882 and VH845114 were added from the 2016 pilot assessment The stem w revised from "describe a person like you" to

Issue: Student Factors

(2017 Grade 8)

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	2.1
3.	I want other students to think I am good at math.	٩	Φ	0	Φ	Φ	YH269049
b.	I want to show others that my math schoolwork is easy for me.	Ø	Ð	Φ	Φ	Ð	VHSHRGGO
c.	I want to look smart in comparison to the other students in my math class.	Ø	â	0	Ø	œ	VIIIANS
d.	I want to learn as much as possible in my math class.	9	Ð	0	Φ	Ð	VH266050
с.	l want to become better in math this year.	8	œ	9	Ø	Ð	VIDMEN
f.	I want to understand as much as I can in my math class.	٩	Ð	0	Φ	Φ	VHIMMU

Previous item							2019 item							D/A/ R/NC+	Rationale
19. How much do you enj one answer choice on	oy solving eacl each row.	n of the follow	ving types of n	nath problems	Select	VH267498	40. How much do you er answer choice on eac	njoy each of th h row.	e following t	ypes of math	activities? Sel	ect one	VH844743	R	The stem
	Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			wording was revised to
a. Addition, subtraction, multiplication, and division	θ	®	0	۵	¢	VH267499	a. Addition, subtraction, multiplication, and division	۵	®	©	۵	©	VH844744		remove the
 Finding areas of shapes and figures 	0	Ð	©	Ø	Φ	VH267501	 b. Finding areas of shapes and figures 	۵	₪	Ø	Ø	©	VH844745		word
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	0	٩	Ø	۵	¢	VH267502	c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	۵	Ø	Ø	Φ	Θ	VH844746		"solving" as per ADC feedback that
d. Solving equations or simplifying expressions	۲	₿	O	Ø	Ð	VH267503	d. Solving equations or simplifying expressions	۲	٩	0	Ø	©	VH844750		the stem did
e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	۵	۵	Ø	۵	©	VH267504	e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	۵	₿	©	٩	Ð	VH844748		not match rows E and F in the
f. Working with geometric figures like rectangles and squares	۵	®	Q	۵	٢	VH267505	f. Working with geometric figures like rectangles and squares	۵	Ð	ø	Ø	Ð	VH844749		previous phrasing.
															Additionally, "problems" was replaced with "activities" to better match the sub-item content. This revision was made based on coglab data gathered on this item for the 2021
(2017 Grade 8)															administratio

	rational Grade 8 Mathematics Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
VH460329	VI	1460329 NC	N/A
20. How often do you play digital games (for example, apps, video games, or computer games) outside of school that involve math?	35. How often do you play digital games (for example, apps, video games, or computer games) outside of school that involve math?	NC	N/A
© Never			
About once or twice a year	About once or twice a year About once or twice a year		
© About once or twice a month	© About once or twice a month		
	About once or twice a week		
© Every day or almost every day	© Every day or almost every day		
(2017 Grade 8)			
	Issue: Resources for Learning and Instruction		
VH460337	N/A	D	This item was
21. How often do you use a computer, tablet, smartphone, or gaming console outside of school to play educational games that involve math?			dropped
© Never			based on
About once or twice a year			NCES's review
© About once or twice a month			INCES S review
			of
Every day or almost every day			technology-
			•••
(2017 Grade 8)			use items.
			-1
22. How often do you use a computer, tablet, smartphone, or gaming console outside	N/A	D	This item was
of school to play popular games that involve math?			dropped
(3) Never			based on
About once or twice a year			
© About once or twice a month			NCES's review
About once or twice a week			of
Every day or almost every day			technology-
(2017 Grade 8)			use items.
26. Have you ever participated in a math study group outside of school?	33. Have you ever participated in a math study group outside of school?	460923 NC	N/A
© Yes	(1) Yes		
The second se	© No		
(2017 Grade 8)	Issue: Student factors		
VH46625		160925	
27. Over the past seven days, how many days have you participated in a math study	34. Over the past seven days, how many days have you participated in a math study	NC	N/A
group outside of school? Enter the number of days.	group outside of school? Enter the number of days.		
	Issue: Student factors		

2019 Ope	rational Grade 8 Mathematics Stu	udent	
Previous item	2019 item	D/A/ R/NC+	Rationale
 28. Have you ever participated in a math study group at school? © Yes © No (2017 Grade 8) 	N/A	D	This item was dropped based on the ADC's recommendat ion.
29. Over the past seven days, how many days have you participated in a math study group at school? Enter the number of days.	N/A	D	This item was dropped based on the ADC's recommendat ion.

Appendix K-1ag: Operational Grade 8 Mathematics

- 22. What math class are you taking this year? Select one or more answer choices.
 - Eighth-grade math
 - [®] General eighth-grade math
 - © Algebra I course
 - First year of a two-year algebra course
 - © Second year of a two-year algebra course
 - D Algebra I (one-year course)
 - © Algebra II
 - Geometry
 - O Other

- 23. What math class do you expect to take next year?
 - Geometry
 - Algebra II
 Algebra
 Algebra II
 Algebra
 Algebra
 - © Algebra I (one-year course)
 - ◎ First year of a two-year Algebra I course
 - © Second year of a two-year Algebra I course
 - © Introduction to algebra or pre-algebra
 - © Basic or general math
 - Business or consumer math
 - \bigcirc Other math class

- 24. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?
 - Never
 Never
 - Once
 Once
 - © Two or three times
 - Four or five times
 - © More than five times

25. In your math class this year, how often have you used the following types of calculators? Select **one** answer choice on each row.

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. Basic calculator	A	B	Ő	Ø	Ē	VH266809
b. Graphing calculator	$\textcircled{\begin{tabular}{c} \hline \\ \hline $	ß	O	0	Ē	VH266810

26. This school year, how often did the following things happen in your math class? Select **one** answer choice on each row.

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a.	My teacher used computers or other digital devices to show us how to work through math problems.	0	₿	0	Φ	¢	VH267416
b.	I used the Internet for my math work.	Ø	B	0	Ø	©	VH267417
c.	My teacher used computers or other digital devices when teaching math to my class.	0	₿	Ø	Ø	¢	VH588077
d.	My teacher required us to use computers or other digital devices to complete math assignments.	Ø	ß	Ø	Ø	Ē	VH267419

VH589166

VH266808

232

- **27.** In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to look online for resources for help with your math assignments?
 - Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- 28. How often do you use math in everyday life outside of school?
 - (A) Never
 - About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

29. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Talk about math problems with your friends	Ø	®	Ø	Θ	Ð	VH268946
b. Program computers	A	®	Ô	O	Ē	VH268949
c. Play an instrument and read music	Ø	®	O	Ø	Ē	VH268961
d. Go to websites for help with your math homework	Ø	ß	O	Ø	¢	VH268962

VH336233

30. How often do you receive help or tutoring with math **outside of school or after school**?

- Never
 Never
- (B) About once or twice a year
- © About once or twice a month
- About once or twice a week
- © Every day or almost every day

VH336085

- 31. Have you ever helped your friends with their math homework?
 - (A) Yes
 - B No
 No

VH269037

32. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.

234

235

VH460923

VH460925

- **33.** Have you ever participated in a math study group **outside of school**?
 - Tes Yes
 - B No
 No
- **34.** Over the past seven days, how many days have you participated in a math study group **outside of school**? Enter the number of days.

- **35.** How often do you play digital games (for example, apps, video games, or computer games) **outside of school** that involve math?
 - Never
 Never
 - B About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

36. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	List all of the different possible outcomes when a coin is flipped three times	0	®	Ø	Ø	¢	VH460382
b.	Create an expression that represents the average number of miles you run in a week if you run 100 miles in <i>w</i> weeks	0	9	0	Ø	¢	VH460383
c.	Determine a 20 percent tip of a 67-dollar restaurant dinner bill	(9)	ß	0	Ø	¢	VH267679
d.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	0	ഀ	Ø	Ø	¢	VH267682
e.	Give an example to show that a math statement is false	Ø	B	Ø	Ø	Ē	VH460399
f.	Explain to your classmate how you solved a math problem	(9	ß	O	Ø	Ē	VH460910
g.	Use correct mathematical words and symbols when showing your work	0	₿	Ø	Ø	¢	VH460902

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want other students to think I am good at math.	(2)	B	O	Ø	Ē	VH844871
b.	I want to show others that my math schoolwork is easy for me.	0	ഀ	0	Ø	©	VH844872
c.	I want to look smart in comparison to the other students in my math class.	0	Θ	0	Θ	Θ	VH844873
d.	I want to get better grades than most other students in my math class.	0	₿	Ø	Ø	Ē	VH844882

37. How much does each of the following statements describe you? Select **one** answer choice on each row.

38. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want to learn as much as possible in my math class.	Ø	ß	Ø	Ø	¢	VH845117
b.	I want to master a lot of new skills in my math class.	(9)	B	0	Ø	¢	VH845114
c.	I want to become better in math this year.	0	B	0	Ø	D D	
d.	I want to understand as much as I can in my math class.	0	B	O	Ø	Ē	VH845118

VH845110

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy doing math.	۸	®	Ô	D	Ē	VH844770
b. I look forward to my math class.	A	®	O	D	Ē	VH844771
c. I am interested in the things I learn in math.	A	B	O	Ø	Ē	VH844775
d. I think making an effort in math is worthwhile.	Ø	ß	Ø	Ø	¢	VH844772
e. I think math will help me even when I am not in school.	æ	®	O	Ø	¢	VH844777
f. I think it is important to do well in math.	A	B	©	D	Ē	VH844774

39. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot	
a.	Addition, subtraction, multiplication, and division	Ø	ß	O	Ø	Ē	VH844744
b.	Finding areas of shapes and figures	Ø	B	O	D	Ē	VH844745
c.	Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	Ø	®	Ø	Ø	©	VH844746
d.	Solving equations or simplifying expressions	Ø	ß	Ø	Ø	Ē	VH844750
e.	Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	Ø	®	O	Ø	Θ	VH844748
f.	Working with geometric figures like rectangles and squares	۵	B	O	Ø	Ē	VH844749

40. How much do you enjoy each of the following types of math activities? Select **one** answer choice on each row.

Appendix K-1ah: Summary of Changes Pilot Grade 8 Mathematics

Previous item	2019 item	D/A/ R/NC+	Rationale
 25. What math class are you taking this year? Select one or more answer choices. © Eighth-grade math © General eighth-grade math © Algebra I course © Second year of a two-year algebra course © Algebra I (one-year course) © Algebra II © Geometry © Other 	 8. What math class are you taking this year? Select one or more answer choices. © Eighth-grade math © Introduction to algebra or pre-algebra © Algebra I © Geometry © Algebra II © Other math class. Please specify: 	R	This item's response options were revised based on cognitive interviews and as recommende d by NCES.
(2017 Grade 8)	Issue: Organization of Instruction		
 26. What math class do you expect to take next year? Ceometry Algebra II Algebra I (one-year course) First year of a two-year Algebra I course Second year of a two-year Algebra I course Introduction to algebra or pre-algebra Basic or general math Business or consumer math Other math class I don't know. 	 9. What math class do you expect to take next year? Basic or general math Introduction to algebra or pre-algebra Algebra I Geometry Algebra II Other math class. Please specify:	R	This item's response options were revised based on cognitive interviews and as recommende d by NCES.
(2017 Grade 8)	Issue: Organization of Instruction		
	 4. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math? Never Once Two or three times Four or five times More than five times 	NC	N/A
(2017 Grade 8)	Issue: Organization of Instruction		

2019 Pil	ot Grade 8 Mathematics Studer	nt	
Previous item	2019 item	D/A/ R/NC+	Rationale
28. For school this year, how often do you work in pairs or small groups to talk about something that you have done in math?	N/A	D	This item was dropped based on the ADC's recommendat ion.
 29. How often do you use a computer or other digital device (excluding handheld calculators) for math at school? ② Never ③ About once or twice a year ③ About once or twice a month ④ About once or twice a week ④ Every day or almost every day (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology- use items.
30. How often do you receive help or tutoring with math outside of school or after school?	N/A	D	This item was dropped in place of keeping VH853724, as per similar recommendat ions made for Reading based on pretesting and to ensure consistency across
(2017 Grade 8)			subjects.

Previous item							2019 item							D/A/ R/NC+	Rationale
31. In your math class thi calculators? Select one	s year, how of e answer choic	ten have you t se on each row	used the follov v.	ving types of		VH20308	19. In your math class this calculators? Select one	s year, how of answer choic	ten have you e on each roy	used the follow v.	wing types of		V1882450	R	Sub-item "a" was revised
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			to give
a. Basic calculator b. Graphing calculator	6 6	9 9	0 0	0 0	0 0	VH266810	 Basic calculator (for example, four function or scientific) 	θ	Ø	Θ	۵	Φ	VH853523		examples of what is mean
2017 Grade 8)							b. Graphing calculator	@ for Lear	o and	©	on	Θ	VH266816		by a basic calculator.
32. This school year, how one answer choice on		ollowing thing	gs happen in yo	ur math class	? Select	VIIISVIIGE	20. This school year, how one answer choice on the school year.	often did the fo				s? Select	VI882471	R	Previous sub- items "a" and
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			"c" were
 My teacher used computers or other digital devices to show us how to work through math problems. 	θ	θ	0	θ	θ	VIQ62416	 a. My teacher used computers or other digital devices to show us how to work through math problems. 	Ø	\$	Ø	Φ	Φ	V34267410		focus more on assessing what the
b. 1 used the Internet for my math work.	Θ	٩	Φ	θ	Φ	VH267417	b. I used the Internet for my math work.	Ð	٩	Ø	Ø	Ð	VH267417		
My teacher used computers or other digital devices when teaching math to my class.	θ	Φ	Θ	8	θ	VH588077	 c. My teacher used computers of other digital devices to go on websites or use apps when teaching math 	۹	٩	Ð	Ð	θ	VH810476		students are utilizing the technology
d. My teacher required us to use computers or other digital devices to complete math assignments.	Φ	٩	Ø	Ð	Φ	V1267419	to my class. d. My teacher required us to use computers or other digital devices to go on websites or use	0	Ð	Ø	Ø	θ	VHS104??		for. These ar current sub- items "c" an
2017 Grade 8)						V1[336038	Issue: Resources	for Learr	ning and	Instructi	on			D	"d".
3. In this school year, how (excluding handheld ca					e										dropped
 Never About once or twice 	e a vear														based on
 About once or twice About once or twice 															NCES's revie
About once or twice About once or twice															of
D Every day or almost															technology- use items.
2017 Grade 8)															

Previous item							2019 item							D/A/ R/NC+	Rationale
 34. In this school year, how (excluding handheld cale math assignments?) Never About once or twice a Every day or almost e 	ulators) to 1 year 1 month 1 week					VillSe037	 10. In this school year, how your math assignments Never About once or twice About once or twice About once or twice Every day or almost 	s? ee a year ee a month ee a week t every day				ith	vanus12	R	The item stem was revised.
(2017 Grade 8)							Issue: Resources	for lear	ning and	instructi	on				
 35. In this school year, how (excluding handheld cale) Never Once Two or three times Four or five times More than five times (2017 Grade 8)					эс -	V1867207	N/A							D	This item was dropped based on NCES's review of technology- use items.
36. How often do you use ma	ith in every	day life outsic	le of school?			VHDs3936	1. How often do you use m	nath in every	day life outsid	e of school?			VH268936	NC	N/A
Mever							Never								
About once or twice A							About once or twice About once or twice	e a year							
								a month							
 About once or twice a Every day or almost e 							D About once or twice	e a week							
(2017 Grade 8)	very day						© Every day or almost Issue: Resources	C 10/12 ** 2/4 *****	ning and	Instruct	ion				
 How often do you partic school? Select one answe 			ving activities	outside of	<i></i> '	VH589264	18. How often do you part school? Select one ans	ticipate in ea	ch of the follow				viim2462	R	Sub-item "b"
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day o almost every day	a		was revised.
a. Talk about math problems with your friends	0	٩	Ø	Ø	Θ	VH266946	a. Talk about math problems with your friends	Ø	Ø	Ø	Ø	Ð	VH268946		
b. Program computers	۹	٢	O	۵	Φ	\$11268949	b. Write a computer	Ø	0	0	Ø	0	VH858.17]		
c. Play an instrument and read music	Θ	8	9	۵	θ	¥H268961	c. Play an instrument		-				Vinenial		
d. Go to websites for help with your math	Ø	ø	0	Ð	Ð	¥11269702	and read music d. Go to websites for	Ø	θ	0	Ð	θ	*Trackwoll		

2019 Pilot Grade 8 Mathematics Student										
2019 item		D/A/ R/NC+	Rationale							
 3. Have you ever helped your friends with their math homework? © Yes © No 	VH336885	NC	N/A							
Issue: Resources for Learning and Instruction										
 2. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. 	VIDIO80)	NC	N/A							
	2019 item 3. Have you ever helped your friends with their math homework?	2019 item Subset 3. Have you ever helped your friends with their math homework? © Yes © © No Issue: Resources for Learning and Instruction VHEMORY 2. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. []	2019 item D/A/ R/NC+ 3. Have you ever helped your friends with their math homework? viscous © Yes NC © No Issue: Resources for Learning and Instruction 2. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. NC							

Previous item 40. Thinking about math.	do you think	that you would	d he able to c	lo each of the		Vittaniat	2019 item	D/A/ R/NC+	Rationale						
following? Do not actu	ually solve the	problems. Sel	ect one answ	er choice on ea	ich row.		12. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select one answer choice on each row.								item "b" was
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	1.1		I definitely can't	I probably can't	Maybe	I probably can	I definitely			revised.
 Estimate the weight of 5 apples using pounds (lbs.) 	Ø	ø	θ	Ø	θ	V11262674	a. Find the amount of carpet needed to cover								Current sub
 Divide 42 stickers among 6 students 	۵	Ø	Ø	Ø	Φ	VH617317	a rectangular floor if you know its length and width	8	B	0	0	Ð	VH267682		items "d", " "g", and "h"
c. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	۵	®	Q	Φ	Ð	VH267679	b. Determine a 20% tip of a \$55 restaurant dinner bill	۲	®	0	۵	Ð	VH853690		were
 Describe the properties shared by every isosceles right triangle 	ø	0	θ	Θ	Ð	VH267681	c. List all of the different possible outcomes when a coin is flipped three times	®	®	©	۵	©	VI4853692		administere in coglabs
e. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	0	œ.	Ø	Ð	Ð	VH267682	d. Determine the likely number of red faces a cube has if the red face lands up 130 out of 400 times the cube is rolled. The 6 faces of	0	®	0	Ø	Ø	VH853683		and retained for pilot.
Know when to take a turkey out of the oven if it goes in at 10:00 A.M. and it takes 3	٩	Ð	0	Θ	Φ	VH267683	rolled. The 6 faces of the cube are painted red, yellow, or blue. e. Create an expression								
hours and 45 minutes to cook						viiei 1501	that represents the average number of miles you run in a week if you run 100 miles in w weeks	Ø	Θ	Ø	Φ	Φ	VH853693		
23. Thinking about math, following? Do not actu	ally solve the	e problems. Sel		er choice on e	ach row.		f. Calculate how many cats a pet store has if the ratio of cats to dogs is 5 to 4, and the	۲	9	0	Φ	θ	VH853685		
. Create a bar graph to	cən't	can't		can	can	-	total number of cats and dogs the store has is 27					$ \leq 1$			
represent the number of desks, chairs, and tables in your classroom	۵	¢	Θ	θ	Ð	WINNELSON	g. Write an equation with a variable to solve a problem (for					1			
 Use a box plot to represent the height, in inches, of all of the students in your class 	٨	Ð	Ø	٩	Ð	VHMMMSS	example, if pizza costs \$2 per slice, then x number of slices can be bought for \$16)	Ø	(6)	0	Φ	Ð	VH853713		
Determine the probability of picking a blue marble without looking if you know the number of marbles of each color in a bag	Ø	٩	Ø	Θ	θ	VH6800AT	 Find the total sum of the interior angles of a pentagon with 5 equal sides 	۲	Ø	Ø	Φ	©	VH853714		
 List all of the different possible outcomes when a coin is flipped 	Ø	¢	0	Ð	θ	¥11680.192	Issue: Student fac	tors							

2019 Pilot Grade 8 Mathematics Student **Previous item** 2019 item D/A/ Rationale R/NC+ 24. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select one answer choice on each row. I definitely I probably I probably I definitely Maybe can't can'r can can Create an expression that represents the average number of 0 Ð 1 Φ Ð miles you run in a week if you run 100 miles in w weeks Create an expression to show how old you will be in n years if 00 0 0 0 Ð you are 8 years old today Create an expression that shows the number of wheels on n 1 Ð O 0 Ð wagons if each wagon has 4 wheels d. Explain how you know the number of books you can buy if you Ð Ð 0 0 Ð know the price of each book and you have \$35 (2017 Grade 8) VIRSTUA 41. How much does each of the following statements describe a person like you? Select R The previous 15. How much does each of the following statements describe you? Select one answer one answer choice on each row. choice on each row. matrix was Not at all like me A little bit like me Somewhat like me Quite a bit like me Exactly like A little bit Quite a bit Not at all like me Somewhat Exactly like separated me like me like me like me me . I want other students I want to learn as into two to think I am good at 0 0 0 0 Ð much as possible 1 0 0 math. Ø 0 about math in my matrices of I want to show others class. that my math achievement I want to master a lot æ Ð 0 0 O schoolwork is easy for of new math skills in 0 Ð 0 0 Ð me. my class. goals items I want to look smart in I want to become a comparison to the (performance 0 Ð 0 0 Ð better math student 0 1 0 0 0 other students in my this year. math class. and mastery). d. I want to understand d. I want to learn as as much as I can in my 0 much as possible in 0 0 Ø 0 Φ 0 0 0 Θ In order to math class. my math class. . I want to become create indices better in math this 0 0 0 0 0 year. for both I want to understand as much as I can in my Ø 0 0 0 D. performance math class. and mastery goals based on a total of at least 4 items, VH853961 (2017 Grade 8)

							2019 item	D/A/ R/NC+	Rationale						
17. How much does each of the following statements describe you? Select one answer choice on each row.															and VH845134
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			were added
							 a. I want other students to think I am a good math student. 	۲	Ð	Ø	٥	Φ	VH854117		from the
							b. I want to show others that my math schoolwork is easy for me.	Ø	Ø	Θ	ø	θ	V91854118		2016 pilot assessment. The stem was
							c. I want to look smart in comparison to the other students in my math class.	\$	٩	¢	Φ	¢	V11854119		revised from "describe a
							d. I want to get better math grades than most other students in my	٨	Θ	0	Ø	θ	VIE8541.34		person like
							class.					-			you" to
 How much does each one answer choice on 		ing statements	s describe a pe	rson like you	3 Select	унултаги			ving statemen	ts describe ye	ou? Select one	answer	VIES4028	R	["] describe you". The stem wa
		ng statements A little bit like me	s describe a pe Somewhat like me	rson like you Quite a bit like me	Select Exactly like me	_	Issue: Student Fac	of the follow	A little bit	Somewhat	Quite a bit	Exactly like		R	"describe you". The stem wa
one answer choice on	each row.	A little bit	Somewhat	Quite a bit	Exactly like	_	class. Issue: Student Factoria 16. How much does each choice on each row.	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		R	, "describe you". The stem wa revised from "describe a
one answer choice on a. I enjoy doing math. b. I look forward to my math class.	each row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		Issue: Student Fac	of the follow	A little bit	Somewhat	Quite a bit	Exactly like		R	"describe you". The stem wa revised from "describe a person like
one answer choice on a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math.	each row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH267479	class. Issue: Student Fac I6. How much does each choice on each row. a. I enjoy doing math. b. I look forward to my	of the follow Not at all like me	A little bit like me ©	Somewhat like me	Quite a bit like me ©	Exactly like me D	VH854029	R	, "describe you". The stem wa revised from "describe a
 a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math. d. I think making an effort in math is worthwhile. 	each row. Not at all like me ©	A little bit like me ©	Somewhat like me ©	Quite a bit like me ©	Exactly like me ©	VH267479 V((26746)	class. Issue: Student Factoria State Stat	of the follow Not at all like me	A little bit like me ©	Somewhat like me ©	Quite a bit like me ©	Exactly like me D	V1854029 V1854030	R	"describe you". The stem wa revised from "describe a person like you" to
 one answer choice on a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math. d. I think making an effort in math is 	each row. Not at all like me © ©	A little bit like me © ©	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me © ©	VH267479 V(256746) V(256746) V(256746)	class. Issue: Student Factoria State in the second	of the follow Not at all like me © ©	A little bit like me © ©	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me D D D	V9854029 V1854030 V9854034	R	"describe you". The stem wa revised from "describe a person like you" to "describe

Previous item							2019 item							D/A/ R/NC+	Rationale
 How much do you enj one answer choice on 		h of the follow	ving types of n	nath problems	? Select	V10267498	11. How much do you er answer choice on eacl		e following t	ypes of math	activities? Sel	ect one	¥1810625	R	The stem wording was
	Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			revised to
a. Addition, subtraction, multiplication, and division	Ø	Ð	0	Ø	θ	VH267499	 Adding, subtracting, multiplying, and dividing fractions 	0	Ð	Ø	æ	Ð	VH810635		remove the word
b. Finding areas of shapes and figures	٩	٩	0	٩	θ	VH267501	 b. Finding areas of shapes and figures 	٩	Ð	0	0	Φ	V78853661		"solving" as
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	۵	۵	0	Θ	θ	VH267502	 c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems) 	۵	Ø	Ø	Ø	Ð	V704536602		per ADC feedback tha
 d. Solving equations or simplifying expressions 	Ø	•	0	Ø	θ	VH267503	d. Solving problems about ratios and rates								the stem did
 Constructing and building different types of graphs (for example, bar graph, 	¢	۲	ø	Ð	Φ	VIII267394	(for example, if 4 inches of rain fell in 16 hours, how many inches fell in 1 hour?)	Ø	Φ	Ø	Ø	Ø	VIERSION		not match rows E and F in the
line graph, or box and whisker plots) f. Working with geometric figures like rectangles and squares	Φ	@	Ø	æ	Φ	VH267505	 Constructing and building different types of graphs (for example, a bar graph or line graph) 	۹	⊕	ø	Φ	Φ	V11853674		previous phrasing.
rectangles and squares							 f. Moving geometric figures from one set of points to another (for example, rotating a rectangle 90 degrees) 	Ø	Ø	Ø	æ	Φ	VTB8546-71		Additionally, "problems" was replaced
(2017 Grade 8)							Issue: Student Fa	octors							with "activities". Sub-items "d", "e" and "f" were revised.
20. How often do you play games) outside of scho			. apps, video g	ames, or comp	outer	vitaeo)(5)	5. How often do you play games) outside of schoo	digital games (I that involve	for example, math?	apps, video g	ames, or comp	outer	V1040329	NC	N/A
 Never About once or twid About once or twide 							 Never About once or twice About once or twice 								
About once or twicEvery day or almost							 About once or twice About once or twice Every day or almost 	e a week							
(2017 Grade 8)															

Previous item	2019 item						D/A/ R/NC+	Rationale
 26. Have you ever participated in a math study group outside of school? Tes No (2017 Grade 8) 	6. Have you ever participated © Yes © No Issue: Student factor		group outside	of school?		VHANDSZY	NC	N/A
 27. Over the past seven days, how many days have you participated in a math study group outside of school? Enter the number of days. 	7. Over the past seven days, h group outside of school ? En	NC	N/A					
(2017 Grade 8)	Issue: Student facto	ors						
N/A	13. How often do you receive of school or after school?	the following ty Select one answe	pes of help wi er choice on ea	h math schoolwo ch row.	rk outside	V1033724	A	This item was added in
		Never or t	About once About once About once Every day or or twice a or twice a or twice a almost year month week every day		place of VH336233.			
	a. Help from a teacher			D D	Φ	VH853725		
	b. Help from a tutor c. Help from a family				Ф Ф Унахија Ф Ф Унахија	VH253726		This item was
	member or friend d. Help from online	0	(D) (D)	0 0			pretested and	
	d. Freip from online resources (for example, websites or apps)	٢	0	0 0	Φ	VM853719		kept in Reading, and
	Issue: Resources fo	-				VI851772		to ensure consistency, the same decision was made for math.
N/A	14. How useful do you find ea schoolwork? Select one ar	ch of the follow iswer choice on	ing types of he each row.	p to understand	our math	VH853732	A	This item was added in
		Not useful at all	Somewhat useful	Very useful	I don't receiv that type of help.	e		place of VH336233.
	a. Help from a teacher b. Help from a tutor	0	Ð	0	0	VH853733		
	 c. Help from a futtor c. Help from a family member or friend 	0	0	0	0	VH033734 VH083736		This item was pretested and
	 d. Help from online resources (for example, websites or apps) 	online resources						kept in Reading, and
	Issue: Resources fo	rloarning	and Inct	ruction				to ensure consistency,

Previous item							2019 item	D/A/ R/NC+	Rationale						
															the same decision was made for math.
25. Thinking about math following? Select one	do you think answer choice I definitely	that you woul on each row.	ld be able to o Maybe	lo each of the I probably	I definitely	V16(3323	21. Thinking about math, following? Select one	do you think answer choice I definitely	that you woul on each row.		do each of the I probably	I definitely	V1882480	R	Previous sub items "a",
a. Decide if your	can't	can't	мауре	can	can			can't	can't	Maybe	can	can			"d", and "f"
classmate's math work is correct	Ø	Ð	0	₽	Ð	VIHOUNS	 Give an example to show that a math statement is false 	Θ	Ð	©	θ	θ	V16460399		were dropped.
b. Cive an example to show that a math statement is false	Ø	Ð	Q	0	θ	VI1460399	 Explain to your classmate how you solved a math problem 	Ø	œ	Ø	Ø	Φ	A11490510		dropped.
Explain to your classmate how you solved a math problem	۵	⊕	Θ	θ	Θ	VB460910	 c. Use correct mathematical words and symbols when 	ø	œ	Ø	0	Ð	V16460502		
d. Use correct mathematical words and symbols to communicate ideas about math	0	Θ	ß	Ø	Φ	V16460000	showing your work								
e. Use correct mathematical words and symbols when	Ø	⊕	0	0	Φ	VH460902									
showing your work															

Appendix K-1ai: Pilot Grade 8 Mathematics

- 1. How often do you use math in everyday life outside of school?
 - Never
 Never
 - About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day
- **2.** Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.

- 3. Have you ever helped your friends with their math homework?
 - Yes
 Yes
 - B No
 No
- **4.** For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?
 - Never
 Never
 - Once
 Once
 - © Two or three times
 - Four or five times
 - © More than five times

VH268936

VH336085

- **5.** How often do you play digital games (for example, apps, video games, or computer games) **outside of school** that involve math?
 - Never
 Never
 - About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day
- 6. Have you ever participated in a math study group outside of school?
 - (A) Yes
 - B No
- 7. Over the past seven days, how many days have you participated in a math study group **outside of school**? Enter the number of days.

- 8. What math class are you taking this year? Select **one or more** answer choices.
 - © Eighth-grade math
 - Introduction to algebra or pre-algebra
 - © Algebra I
 - Geometry
 Geometry
 - © Algebra II
 - © Other math class. Please specify: _____

VH460923

- 9. What math class do you expect to take next year?
 - (D) Basic or general math
 - [®] Introduction to algebra or pre-algebra
 - © Algebra I
 - © Geometry
 - C Algebra II
 - © Other math class. Please specify:_____
 - © I don't know.

- **10.** In this school year, how often have you looked online for resources for help with your math assignments?
 - Never
 Never
 - (B) About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

		Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot	
a.	Adding, subtracting, multiplying, and dividing fractions	8	ß	O	Ø	Ē	VH810635
b.	Finding areas of shapes and figures	${}^{}$	B	O	Ø	Ē	VH853661
с.	Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	Ø	₿	©	Ø	¢	VH853662
d.	Solving problems about ratios and rates (for example, if 4 inches of rain fell in 16 hours, how many inches fell in 1 hour?)	0	₿	©	Ø	¢	VH853665
e.	Constructing and building different types of graphs (for example, a bar graph or line graph)	Ø	₿	©	Ø	¢	VH853674
f.	Moving geometric figures from one set of points to another (for example, rotating a rectangle 90 degrees)	0	₿	O	Ø	Ē	VH853671

11. How much do you enjoy each of the following types of math activities? Select **one** answer choice on each row.

12. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
а.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	0	₿	O	Ø	Ē	VH267682
b.	Determine a 20% tip of a \$55 restaurant dinner bill	8	₿	Ø	Ø	Ē	VH853690
c.	List all of the different possible outcomes when a coin is flipped three times	69	₿	Ø	Ø	¢	VH853692
d.	Determine the likely number of red faces a cube has if the red face lands up 130 out of 400 times the cube is rolled. The 6 faces of the cube are painted red, yellow, or blue.	0	₿	Ø	Ø	¢	VH853683
e.	Create an expression that represents the average number of miles you run in a week if you run 100 miles in <i>w</i> weeks	0	ഀ	0	Ø	¢	VH853693
f.	Calculate how many cats a pet store has if the ratio of cats to dogs is 5 to 4, and the total number of cats and dogs the store has is 27	0	ഀ	Ø	Ø	¢	VH853685
g.	Write an equation with a variable to solve a problem (for example, if pizza costs \$2 per slice, then x number of slices can be bought for \$16)	0	ß	Ø	Ø	Ē	VH853713
h.	Find the total sum of the interior angles of a pentagon with 5 equal sides	0	®	©	Ø	¢	VH853714

13. How often do you receive the following types of help with math schoolwork **outside of school or after school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Help from a teacher	A	®	O	0	Ē	VH853725
b. Help from a tutor	A	B	O	0	Ē	VH853726
c. Help from a family member or friend	A	®	0	Ø	Ē	VH853728
d. Help from online resources (for example, websites or apps)	Ø	ß	O	Ø	©	VH853729

14. How useful do you find each of the following types of help to understand your math schoolwork? Select **one** answer choice on each row.

	Not useful at all	Somewhat useful	Very useful	I don't receive that type of help.	
a. Help from a teacher	A	ß	O	D	VH853733
b. Help from a tutor	A	ß	0	Ø	VH853734
c. Help from a family member or friend	B	B	O	Ø	VH853736
d. Help from online resources (for example, websites or apps)	Ø	®	Ø	Ø	VH853737

15. How much does each of the following statements describe you? Select **one** answer choice on each row.

VH853944

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible about math in my class.	0	₿	Q	Ø	¢	VH853957
b. I want to master a lot of new math skills in my class.	Ø	ß	0	0	Ē	VH853961
c. I want to become a better math student this year.	Ø	ß	Ø	Ø	Ē	VH853949
d. I want to understand as much as I can in my math class.	۵	ß	O	Ø	Ē	VH853952
					258	3

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy doing math.	A	®	O	O	Ē	VH854029
b. I look forward to my math class.	Ø	®	O	D	Ē	VH854030
c. I am interested in the things I learn in math.	Ø	®	O	Ø	Ē	VH854034
d. I think making an effort in math is worthwhile.	æ	®	O	Ø	¢	VH854031
e. I think math will help me even when I am not in school.	æ	®	O	Ø	Ē	VH854036
f. I think it is important to do well in math.	Ø	®	©	D	Ē	VH854033

16. How much does each of the following statements describe you? Select **one** answer choice on each row.

17. How much does each of the following statements describe you? Select **one** answer choice on each row.

A little bit Not at all Somewhat Quite a bit Exactly like like me like me like me like me me a. I want other students to think I am a good VH854117 A B O D Ð math student. b. I want to show others that my math VH854118 A O Ð B \bigcirc schoolwork is easy for me. c. I want to look smart in comparison to the A © Ð VH854119 B \odot other students in my math class. d. I want to get better math grades than most VH854134 A B \odot \odot Ð other students in my class.

VH854028

18. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row.

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
pro	alk about math coblems with your iends	۵	ß	Ø	Ø	©	VH268946
1	Vrite a computer cogram		B	0	Ø	Ē	VH858371
	ay an instrument nd read music	$\textcircled{\ }$	B	0	Ø	Ē	VH268961
he	o to websites for elp with your math omework	(2)	ß	Ø	Ø	©	VH268962

19. In your math class this year, how often have you used the following types of calculators? Select **one** answer choice on each row.

VH882460

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
ez	asic calculator (for xample, four function r scientific)	0	ß	O	Ø	¢	VH853523
b. G	Fraphing calculator	A	®	Ô	O	Ē	VH266810

20. This school year, how often did the following things happen in your math class? Select **one** answer choice on each row.

		Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a.	My teacher used computers or other digital devices to show us how to work through math problems.	0	ſ	Ø	Ø	Ē	VH267416
b.	I used the Internet for my math work.	Ø	₿	0	0	Ē	VH267417
C.	My teacher used computers or other digital devices to go on websites or use apps when teaching math to my class.	0	®	Ø	Φ	¢	VH810476
d.	My teacher required us to use computers or other digital devices to go on websites or use apps to complete math assignments.	Ø	₿	O	Ø	¢	VH810477

21. Thinking about math, do you think that you would be able to do each of the following? Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Give an example to show that a math statement is false	Ø	B	O	Ø	Ē	VH460399
b.	Explain to your classmate how you solved a math problem	(9	ഀ	0	0	Ē	VH460910
c.	Use correct mathematical words and symbols when showing your work	(9	₿	0	Ø	¢	VH460902

VH882471

VH882480

261

Appendix K-1aj: Spiral Map Grade 8 Mathematics

Accnum	Grade	Grade 8 OMB PDF Sequence Number	Number of Grade 8 booklets item appears in	Grade 8 booklets item appears in
VH350115	4, 8	04_00	1	3
VH268936	4, 8	01_00	3	1 ,2, 3
VH460329	4, 8	05_00	3	1, 2, 3
VH854116	4, 8	17_00	1	3
VH854117	4, 8	17_01	1	3
VH854118	4, 8	17_02	1	3
VH854119	4, 8	17_03	1	3
VH854134	4, 8	17_04	1	3
VH853944	4, 8	15_00	1	3
VH853957	4, 8	15_01	1	3
VH853961	4, 8	15_02	1	3
VH853949	4, 8	15_03	1	3
VH853952	4, 8	15_04	1	3
VH854028	4, 8	16_00	1	3
VH854029	4, 8	16_01	1	3
VH854030	4, 8	16_02	1	3
VH854034	4, 8	16_03	1	3
VH854031	4, 8	16_04	1	3
VH854036	4, 8	16_05	1	3
VH854033	4, 8	16_06	1	3
VH336085	4, 8	03_00	3	1, 2, 3
VH269037	4, 8	02_00	3	1, 2, 3
VH853724	4, 8	13_00	2	1, 2
VH853725	4, 8	13_01	2	1, 2
VH853726	4, 8	13_02	2	1, 2
VH853728	4, 8	13_03	2	1, 2
VH853729	4, 8	13_04	2	1, 2

Accnum	Grade	Grade 8 OMB PDF Sequence Number	Number of Grade 8 booklets item appears in	Grade 8 booklets item appears in
VH853732	4, 8	14_00	2	1, 2
VH853733	4, 8	14_01	2	1, 2
VH853734	4, 8	14_02	2	1, 2
VH853736	4, 8	14_03	2	1, 2
VH853737	4, 8	14_04	2	1, 2
VH810501	8	08_00	2	1, 2
VH810507	8	09_00	2	1, 2
VH882460	8	19_00	1	3
VH853523	8	19_01	1	3
VH266810	8	19_02	1	3
VH882471	4, 8	20_00	1	3
VH267416	8	20_01	1	3
VH267417	8	20_02	1	3
VH810476	4, 8	20_03	1	3
VH810477	4, 8	20_04	1	3
VH810512	8	10_00	1	3
VH810625	8	11_00	2	1, 2
VH810635	8	11_01	2	1, 2
VH853661	8	11_02	2	1, 2
VH853662	8	11_03	2	1, 2
VH853665	8	11_04	2	1, 2
VH853674	8	11_05	2	1, 2
VH853671	8	11_06	2	1, 2
VH853682	8	12_00	2	1, 2
VH267682	4, 8	12_01	2	1, 2
VH853690	8	12_02	2	1, 2
VH853692	8	12_03	2	1, 2
VH853683	8	12_04	2	1, 2
VH853693	8	12_05	2	1, 2

VH853685	8	12_06	2	1, 2
Accnum	Grade	Grade 8 OMB PDF Sequence Number	Number of Grade 8 booklets item appears in	Grade 8 booklets item appears in
VH853713	8	12_07	2	1, 2
VH853714	8	12_08	2	1, 2
VH882480	8	21_00	2	1, 2
VH460399	8	21_01	2	1, 2
VH460910	8	21_02	2	1, 2
VH460902	8	21_03	2	1, 2
VH882452	4, 8	18_00	1	3
VH268946	4, 8	18_01	1	3
VH858371	8	18_02	1	3
VH268961	4, 8	18_03	1	3
VH268962	4, 8	18_04	1	3
VH460923	8	06_00	3	1, 2, 3
VH460925	8	07_00	3	1, 2, 3

Appendix K-1ak: Summary of Changes Operational Grade 12 Mathematics

2019 Operational Grade 12 Mathematics Student

revious item								2019 item								D/A/ R/NC+	Rationale
 Which courses ha course more than taken in summer part of a longer co programming taug 	once, give th school, but I urse (such as	e most recei DO NOT ING s trigonomet	nt year you to CLUDE topic ry taught in	ook it. INCL is that were drafting clas	UDE course only taught s or compute	as	VH240819	24. Which courses hav course more than of taken in summer s part of a longer cou programming taug	once, give th chool, but I urse (such as	ne most recen	nt year you to CLUDE topic ry taught in	ook it. INCL is that were drafting clas	UDE course only taught s or compute	as	VH240819	R	Sub-item " was droppe since "Othe
	I have never taken this course.	I took this course in or before Grade 8.	I took this course in Grade 9.	I took this course in Grade 10.	I took this course in Grade 11.	I took this course in Grade 12.			I have never taken this course.	I took this course in or before Grade 8.	I took this course in Grade 9.	I took this course in Grade 10.	I took this course in Grade 11.	I took this course in Grade 12.			is not an option
a. Basic or general mathematics course	0	œ	0	θ	θ	Θ	VH240820	a. Basic or general mathematics course	Θ	⊕	Θ	Φ	Ð	Ð	V11240820		preferred t
b. Tech-prep mathematics, business mathematics, consumer mathematics, or other applied mathematics course	۲	Ð	0	Θ	θ	Φ	VH240844	b. Tech-prep mathematics, business mathematics, consumer mathematics, or other applied mathematics course	Ø	œ	Ø	Ø	Φ	Φ	V11240844		for studen operationa administra n.
c. Introduction to algebra or pre-algebra course	۵	⊕	Θ	Θ	Θ	Ø	VH240822	c. Introduction to algebra or pre-algebra course	8	®	0	Ð	Ð	Ð	VH240822		
d. Algebra I course	0	⊕	O	0	Ð	©	VH240823	d. Algebra I course	0	®	©	•	Ð	Ð	VH240823		
e. Geometry course	۲	۲	Ø	0	Φ	Ð	VH240824	e. Geometry course	•	⊕	O	Ð	Ð	©	V14240824		
f. Algebra II course, with or without trigonometry	٩	⊕	Ø	Φ	Φ	٢	VH240825	f. Algebra II course, with or without trigonometry	3	®	Θ	Ø	Φ	Ð	VH240825		
 g. Trigonometry (as a separate course) 	۲	⊛	©	0	Ð	٢	VH240826	g. Trigonometry (as a separate course)	۲	⊛	0	®	Ð	©	VH240826		
 h. Pre-calculus course (also called introductory analysis) 	۵	œ	Θ	0	θ	Ð	VH240833	h. Pre-calculus course (also called introductory analysis)	۹	⊕	Θ	۵	Φ	Ø	VH240833		
i. Integrated mathematics 1 (first year of a multi-year course)	۵	œ	0	Ð	Φ	Ð	VEE240841	i. Integrated mathematics 1 (first year of a multi-year course)	٩	®	Θ	Ø	¢	©	VH240841		
j. Integrated mathematics 2 (second year of a multi-year course)	8	®	0	0	Ð	Ð	VH240842	j. Integrated mathematics 2 (second year of a multi-year course)	Θ	@	Θ	Ø	Θ	Ð	VH240842		
k. Integrated mathematics 3 (third year of a multi-year course)	۹	®	Ø	Ø	Ð	¢	VH240843	k. Integrated mathematics 3 (third year of a multi-year course)	Θ	@	Θ	۵	œ	©	VH240843		
	I have never taken this course.	I took this course in or before Grade 8.	I took this course in Grade 9.	I took this course in Grade 10.	I took this course in Grade 11.	I took this course in Grade 12.		multi-year course)	I have never taken this course.	I took this course in or before Grade 8.	I took this course in Grade 9.	I took this course in Grade 10.	I took this course in Grade 11.				
. Integrated mathematics 4 (fourth year of a multi-year course)	۲	®	0	0	Ð	©	VH240821	I. Integrated mathematics 4 (fourth year of a	course.	Grade 8.	©	Ð	Ð	Ð	VH240821		
n. Probability or	0	®	O	Ø	Ð	Ð	VH240836	multi-year course)	1.5.1		1.1			1.2.1	1		
statistics course	3	and Charles	10 10 10 10 10 10 10 10 10 10 10 10 10 1	10 C 12 C 10 C	1	1.1.1.1.1.1.1.1.1	V31240829	m. Probability or	0	⊕	O	®	©	Ð	VH240836		
. Computer programming		® 0	0	0	0	Ð	VH240829	n. Calculus course o. Computer	9	•	0 O	0	©	©	VH240829		
course (such as C++, Visual Basic, etc.)	٩	œ	0	Ð	θ	Ð	¥21240835	programming course (such as	۹	®	Θ	0	Ð	Ð	VH240835		
 Other mathematics course (specify): 	Θ	₿	0	0	Ð	Ð	VH240834	C++, Visual Basic, etc.)									

Previous item	2019 item		D/A/	Rationale
			R/NC+	
 2. Are you currently enrolled in or have you taken any of the following Advanced Placement (AP[®]) courses? Select all that apply. (a) Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus AB. (b) Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus BC. (c) Yes, I am enrolled in or have taken Advanced Placement (AP) Statistics. (b) No, I have not taken any of the courses listed above. 	 25. Are you currently enrolled in or have you taken any of the following Advanced Placement (AP[®]) courses? Select all that apply. P Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus AB. P Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus BC. P Yes, I am enrolled in or have taken Advanced Placement (AP) Statistics. P No, I have not taken any of the courses listed above. 	VII230444	NC	N/A
(2018 Grade 12)	Issue: Organization of Instruction	VH240048		
 3. Are you currently enrolled in or have you taken an International Baccalaureate[®] (IB) mathematics course? ③ Yes ⑤ No (2018 Grade 12) 	 26. Are you currently enrolled in or have you taken an International Baccalaureate[®] (IB) mathematics course? © Yes © No Issue: Organization of Instruction 		NC	N/A
VIL2808		VH240049	NC	N/A
Are you currently enrolled in or have you taken any online mathematics courses for high school or college credit?	27. Are you currently enrolled in or have you taken any online mathematics courses for high school or college credit?		NC	
© Yes	© Yes			
No No	1 No			
(2018 Grade 12)	Issue: Organization of Instruction			
VIEROSO		VH240050	NC	N/A
5. Was there a mathematics course that you would have liked to have taken this school year but did not take?	28. Was there a mathematics course that you would have liked to have taken this school year but did not take?			,
Yes, but my school does not offer the course.	Yes, but my school does not offer the course.			
Tes, but the course was full.	Tes, but the course was full.			
© Yes, but I did not have the necessary prerequisites.	© Yes, but I did not have the necessary prerequisites.			
Yes, but my schedule was full.	Yes, but my schedule was full.			
D No, there was no other course that I wanted to take.	© No, there was no other course that I wanted to take.			
(2018 Grade 12)	Issue: Organization of Instruction			

revious item							2019 item							D/A/ R/NC+	Rationale
6. Please indicate how m statements. Select one	uch you DISA answer choi	AGREE or AG ce on each row	REE with the	following		VH240763	N/A							D	This item was
2	Stror	igly Di	sagree	Agree	Strongly agree										dropped in
 Math is one of my favor subjects. 			®	©	Ø	VH240768									lieu of keeping item
 b. I take mathematics because it will help me the future. 	in @		0	0	Φ	VH240770									VH731852.
c. I take mathematics to n my high school graduati requirements.	on @		٢	Ø	Ø	V11240767									
2018 Grade 12)															
7. How much does each one answer choice on		ing statement	s describe a po	erson like yo	u? Select	VH267478	47. How much does each choice on each row.	n of the follow	ving statement	ts describe you	a? Select one	answer	VH731852	R	The version o the item that
	Not at all like me	A little bit like me	Somewhat like me	Quite a bi like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			uses
a. I enjoy doing math.	0	٩	0	٩	Ð	VH267479	a. I enjoy doing math.	۲	©	©	Ø	¢	VH731853		"describe
 I look forward to my math class. 	0	۲	©	Ø	٢	VH267481	b. I look forward to my math class.	0	Ð	0	Ø	Θ	VH731854		you" in the
 c. I am interested in the things I learn in math. d. I think making an 	0	٩	0	Ø	©	VH617324	c. I am interested in the things I learn in math.	۵	®	Θ	Θ	Ð	VH731858		stem was
effort in math is worthwhile.	۵	٩	Ø	Ø	Φ	VH267485	d. I think making an effort in math is worthwhile.	۵	®	0	Θ	©	VH731855		retained for
e. I think math will help me even when I am not in school.	0	Ð	Ø	Ø	©	VH267486	e. I think math will help me even when I am	0	®	0	Ø	Ð	VH731860		operational.
f. I think it is important to do well in math.	0	⊕	0	Φ	Ð	VH267487	not in school. f. I think it is important	۵	Ð	0	Ð	Φ	VH731857		
g. I take mathematics because it will help me in the future.	۵	⊕	Ø	Ø	٢	VH651872	to do well in math. g. I take mathematics because it will help	0	®	0	0	©	VH731859		
 I take mathematics to meet my high school graduation 	0	⊕	Ø	Φ	©	VH651874	me in the future. h. I take mathematics to meet my high school	Ø	Ð	0	Ø	Ð	VH731856		
requirements. 8. How much docs cach	of the follow	ving statemen	ts describe yo	ou? Select or	e answer	V)(71)452	graduation requirements.	^y	U U	9	^w	U	11/51050		
choice on each row.	Not at all	A little bit	Somewhat	Quite a bi	Exactly like										
Luis Line de	like me	like me	like me	like me	me										
a. I enjoy doing math. b. I look forward to my	0	00	0 0	0	0	V20731853									
math class. c. I am interested in the things I learn in math.	0	6	8	9	Ð	VE02118-38									
d. I think making an effort in math is worthwhile.	Ø	Ð	0	ø	Φ	VH731855									
e. I think math will help me even when I am not in school.	Ø	œ	0	0	Φ	V24731860									
f, I think it is important to do well in math.	0	0	0	Ø	æ	V2051857									
g. I take mathematics because it will help me in the future.	Ð	Ð	0	ø	Φ	VH7518EP									
h. I take mathematics to meet my high school graduation	0	Ð	0	Ð	Ø	VH/731956									

Previous item	erational Grade 12 Mathematics Student 2019 item	D/A/	Rationale
r revious item	2013 (16)	R/NC+	Nationale
VH24	51 VII24		
9. Are you currently taking a mathematics course?	29. Are you currently taking a mathematics course?	NC	N/A
⊕ Yes	© Yes		
D No	© No		
(2018 Grade 12)	Issue: Organization of Instruction		
VIE		NC	N/A
10. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?	30. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?	NC	
D Never	Never		
③ Once	① Once		
© Two or three times	© Two or three times		
Four or five times	D Four or five times		
© More than five times	D More than five times		
(2018 Grade 12)	Issue: Organization of Instruction		
VH3	N/A	D	This item was
11. For school this year, how often do you work in pairs or small groups to talk about something that you have done in math?		5	dropped to
(1) Never			keep in line
About once or twice a year			
© About once or twice a month			with the
D About once or twice a week			ADC's
D Every day or almost every day			recommendat
			ion for grades
(2018 Grade 12)			4 and 8.
VIESO	^{sa} N/A	D	This item was
 How often do you use a computer or other digital device (excluding handheld calculators) for math at school? 			
 Never 			dropped to
 About once or twice a year 			keep in line
 About once or twice a your 			with NCES's
About once or twice a week About once or twice a week			review of
© Every day or almost every day			technology-
			•
(2018 Grade 12)			use items for
(2010 Glaue 12)			grades 4 and
			8.

Previous item	2019 item	D/A/ R/NC+	Rationale
visse	42. How often do you receive help or tutoring with math outside of school or after school?	NC	N/A
school?	Never		
Never	D About once or twice a year		
About once or twice a year	© About once or twice a month		
© About once or twice a month	D About once or twice a week		
About once or twice a week	© Every day or almost every day		
© Every day or almost every day			
(2018 Grade 12)	Issue: Resources for Learning and Instruction		
14. In your math class this year, how often have you used the following types of calculators? Select one answer choice on each row.	31. In your math class this year, how often have you used the following types of calculators? Select one answer choice on each row.	NC	N/A
	Never or hardly ever hardly ever		
Never or hardly ever time Less than half of the time About half of the time More than All or half of the time the time half of the time the time the time the time	time time time the time		
hardly were half of the About half of the almost all of	a. Basic calculator © © © © © VIII.068009		

Previous item							2019 item							D/A/ R/NC+	Rationale
15. This school year, how one answer choice on o		ollowing thing	gs happen in yo	our math class	? Select	VH589166	32. This school year, how one answer choice on		ollowing thing	gs happen in yo	our math class	? Select	VH589166	NC	N/A
	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time			
 My teacher used computers or other digital devices to show us how to work through math problems. 	۵	Ð	Ø	Φ	Φ	VH267416	 a. My teacher used computers or other digital devices to show us how to work through math problems. 	۵	₿	Ø	Φ	Ð	VH267416		
b. I used the Internet for my math work.	0	Ð	O	Ø	©	VH267417	b. I used the Internet for my math work.	0	€	0	Φ	θ	VH267417		
c. My teacher used computers or other digital devices when teaching math to my class.	0	٩	Ø	۵	Φ	VH588077	c. My teacher used computers or other digital devices when teaching math to my class.	0	6	Θ	Ø	θ	VH588077		
My teacher required us to use computers or other digital devices to complete math assignments.	٩	œ	©	۵	Ð	VH267419	d. My teacher required us to use computers or other digital devices to complete math assignments.	0	۲	©	۵	٩	VH267419		
 6. In this school year, how (excluding handheld call) Never About once or twice About once or twice About once or twice Every day or almost 	culators) to c a year a month a week	ou used a com omplete your	nputer or other math assignm	r digital devic	e	VIDMON VIDMON	N/A						VIII38077	D	This item w dropped to keep in line with NCES's review of technology use items for grades 4 an 8.
 17. In this school year, how (excluding handheld cal math assignments? ② Never ③ About once or twice ③ About once or twice ③ About once or twice ④ Every day or almost 	culators) to l e a year e a month e a week						 33. In this school year, how of (excluding handheld calcul math assignments? ③ Never ③ About once or twice a 1 ④ About once or twice a 4 ④ About once or twice a 4 ④ Every day or almost events 	ators) to look year nonth week						NC	N/A
2018 Grade 12)							Issue: Resources fo	or Learn	ing and	Instruct	ion				

Previous item				<u> </u>	<u></u>		tional Grade 12 2019 item	math						D/A/	Rationale
						VH617207								R/NC+	
18. In this school year, how				digital device			N/A							D	This item was
(excluding handheld ca	alculators) to t	ake an online	practice test?												dropped to
Mever															keep in line
Once															with NCES's
© Two or three times	5														
Four or five times A second seco															review of
More than five tim	ies														technology-
															use items for
2018 Grade 12)														grades 4 and
															-
						VH268936	-						VH268936		8.
19. How often do you use	e math in every	dav life outsid	le of school?			11400930	39. How often do you use	math in ever	vdav life outsi	de of school?			Course of	NC	N/A
Mon order as you ase O Never		au) nie outor					Never		,,,						
About once or twi	ice a vear						About once or twice About once or twice	e a vear							
About once or twi							 About once or twice 								
About once or twi							 About once or twice About once or twice 								
D Every day or almo	ost every day						 About once of twice © Every day or almost 								
2018 Grade 12))						Issue: Resources	for Lea	arning an	d Instruc	ction				
2018 Grade 12 20. How often do you pa school? Select one ar	articipate in eac	ch of the follow n each row.	ving activities	s outside of		VH589204	Issue: Resources	ticipate in ea	ich of the follow				VH589204	NC	N/A
20. How often do you pa	articipate in eac	ch of the follow n each row. About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	VH589204	41. How often do you par	ticipate in ea	ich of the follow		s outside of	Every day or almost every day	VH589204	NC	N/A
 20. How often do you pa school? Select one ar a. Talk about math problems with your friends 	nrticipate in cad nswer choice of Never	n each row. About once or twice a year ©	About once or twice a month	About once or twice a week	almost every day ©	VH268946	41. How often do you par	ticipate in ea swer choice c	About once or twice a	wing activities About once or twice a	About once or twice a	almost	VH589204 VH268946	NC	N/A
 20. How often do you pa school? Select one ar a. Talk about math problems with your friends b. Program computers 	Articipate in each nswer choice of Never	About once or twice a year ©	About once or twice a month ©	About once or twice a week ©	almost every day ©	VH589204 VH268986 VH268986	 41. How often do you par school? Select one ans a. Talk about math problems with your friends b. Program computers 	ticipate in ea swer choice c Never	About once or twice a year	About once or twice a month	About once or twice a week	almost every day	VH589204 VH268946 VH268946	NC	N/A
 20. How often do you pa school? Select one ar a. Talk about math problems with your friends b. Program computers c. Play an instrument and read music 	nrticipate in cad nswer choice of Never	n each row. About once or twice a year ©	About once or twice a month	About once or twice a week	almost every day ©	VH268946	 41. How often do you par school? Select one ans a. Talk about math problems with your friends b. Program computers c. Play an instrument 	ticipate in ea swer choice o Never ©	About once or twice a year	About once or twice a month	About once or twice a week	almost every day ©	VH268946	NC	N/A
 20. How often do you pa school? Select one ar a. Talk about math problems with your friends b. Program computers c. Play an instrument 	Articipate in each nswer choice of Never	About once or twice a year ©	About once or twice a month ©	About once or twice a week ©	almost every day ©	VH268946	 41. How often do you par school? Select one ans a. Talk about math problems with your friends b. Program computers 	ticipate in ea swer choice o Never © ©	About once or twice a year	About once or twice a month ©	About once or twice a week ©	almost every day ©	VH268946	NC	N/A
 20. How often do you pa school? Select one ar a. Talk about math problems with your friends b. Program computers c. Play an instrument and read music d. Go to websites for help with your math homework 	Never	About once or twice a year	About once or twice a month © ©	About once or twice a week	almost every day © ©	VH268946	 41. How often do you par school? Select one ans a. Talk about math problems with your friends b. Program computers c. Play an instrument and read music d. Go to websites for help with your math 	ver choice of Never	About once or twice a year	About once or twice a month © © ©	About once or twice a week	almost every day © ©	V1E268946 V1E268949 V1E268961 V1E268962	NC	N/A
20. How often do you pa school? Select one ar a. Talk about math problems with your friends b. Program computers c. Play an instrument and read music d. Go to websites for help with your math homework 2018 Grade 12	Never	About once or twice a year	About once or twice a month © ©	About once or twice a week	almost every day © ©	VH268946	 41. How often do you par school? Select one ans a. Talk about math problems with your friends b. Program computers c. Play an instrument and read music d. Go to websites for help with your math homework 	Never	About once or twice a year	About once or twice a month © © © d Instruc	About once or twice a week	almost every day © ©	VH268946 VH268949 VH268961	NC	N/A N/A
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			2	019 O	perat	onal Grade 12 Mather	natics	s Stud	ent				
					•	2019 item						D/A/ R/NC+	Rationale
		helped your f	friends with th	leir	VR269037	math homework? Enter the number of	lays.			h their	VH260037	NC	N/A
				each row.	VH589192	36. Thinking about math, do you think th	at you woul	d be able to o	lo each of the		VII613511	R	A subset of items was
I definitely can't	I probably can't	Maybe	I probably can	I definite can	ely			ect one answ					selected from
۵	Θ	0	Φ	θ	VH267674	can't	I probably can't	Maybe	I probably can	I definitely can			the previous
۲	⊕	©	Ø	Ð	VH617317	that represents the average number of	٩	Ø	Ø	©	VH460383		two matrices to be
۵	œ	Ø	Ø	¢	VH267679	week if you run 100 miles in w weeks b. Determine a 20 percent in cf a							included in the self-
0	Ð	Θ	0	Ð	VH267681	67-dollar restaurant dinner bill c. Describe the	¢	Q	Ø	Ð	VH267679		efficacy matrix for
0	₽	Ø	Ø	Ø	VH267682	every isosceles right triangle	Φ	Q	Φ	Ð	VH267681		operational.
θ	⊕	Ø	Φ	Φ	VH267683	Issue: Student factors							
				h row.	VH613511								
I definitely can't	I probably can't	Maybe	I probably can	I definitely can									
Ø	٩	Ø	Ø	٩	VH460383								
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	the number of th	the number of days.	the number of days. I definitely I probably can't Maybe \boxed{ac}	s, how many days have you helped your friends with the number of days.	s, how many days have you helped your friends with their the number of days.	s, how many days have you helped your friends with their the number of days. a, do you think that you would be able to do each of the number of days. vesses I definitely I probably Maybe I probably I definitely I definitely I probably Maybe I probably I definitely wesses I definitely I probably I definitely I definitely wesses I definitely I probably Maybe I probably I definitely I definitely I probably Maybe I probably I definitely I definitely I probably I defi	s, how many days have you helped your friends with their useer s, how many days have you helped your friends with their 44. Over the past seven days, how many day math homework? Enter the number of users i.d. or you think that you would be able to do each of the unally solve the postense. Select one answer choice on each row. issue: Resources for Learni i.d. do you think that you would be able to do each of the unally solve the postense. Select one answer choice on each row. issue: A counce of the following? Do not actually solve the postense of a counce of the select of the do actually solve the postense of a counce of the select of the do actually solve the postense of a counce of the select of the do actually solve the postense of a counce of the select of the ally solve the postense. iiii iiii iiiiiiiiiiiiiiiiiiiiiiiiiii	Solver many days have you helped your friends with their 44. Over the past seven days, how many days have you math homework? Enter the number of days. 44. Over the past seven days, how many days have you math homework? Enter the number of days. a. do you think that you would be able to do each of the mathy solve the problems. Select one answer choice on each row. Summer Idefinitely i probably i definitely i monoming in the the processing here and in the processing here in the representation is week if your no an iteration is week if your no and iteration is week if your no an iteration is an iteration	a, how many days have you helped your friends with their the number of days. 44. Over the past seven days, how many days have you helped you math homework? Enter the number of days. 1 definitient in the you would be able to do each of the mally solve the problems. Select one answer choice on each row. 1 definitient in the you would be able to do each of the mally solve the problems. Select one answer choice on each row. 1 definitient in the you would be able to do each of the many in the that you would be able to do each of the many in		2019 item a. how many drys have you helped your friends with their a. how many drys have you helped your friends with their a. how many drys have you helped your friends with their a. how many drys have you helped your friends with their a. do you think they you would be able to do each of the cash of the following Do not actually solve the problems. Select one answer choice on each row. If definitely involve the cash of th	A bow many days have you helped your friends with their A by many days have you helped your friends with their A de you had that you would be able to do each of the and your that that you would be able to do each of the and you that that you would be able to do each of the and and	Item 2019 item D/A/ R/AC+ n. how many day have you helped your friends with their Total NC n. how many days have you helped your friends with their NC de you think that you would be able to do each of the cart's index in probability dotter information. Select on answer chair on each row. NC de you think that you would be able to do each of the cart's index index index in your would be able to do each of the cart's index

							2019 item							D/A/ R/NC+	Rationale
24. How much does each one answer choice on	of the follow each row.	ving statemen	ts describe a p	erson like yo	ul Select	Votassias	34. How much does each choice on each row.	of the follow	wing statemen	ts describe yo	u? Select one	answer	VH844870	R	The version of the item that
1.1.1.1	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly lik	e		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			uses
 a. I want other students to think I am good at math. 	60	90	Ø	ø	Ð	VIIIMAN	a. I want other students to think I am good at math.	Ø	٩	O	Ø	Ð	VH844871		"describe
 I want to show others that my math schoolwork is easy for 	Ø	Ð	Θ	ø	θ	VH2/0050	b. I want to show others that my math schoolwork is easy for	Ø	Ð	©	Ø	Ð	VH844872		you" in the stem was
me. c. I want to look smart in comparison to the other students in my math class.	0	œ	Ø	ø	æ	VI KANACE I	me. c. I want to look smart in comparison to the other students in my math class.	0	٩	Q	Ø	¢	V14844873		retained for operational
 I want to learn as much as possible in my math class. 	Ø	Ø	Φ	ø	θ	V14269053	d. I want to get better grades than most other students in my math	0	®	©	Ø	Œ	VH844882		The single matrix was
 I want to become better in math this year. 	Ø	٩	Φ	θ	θ	VH2#9056	class.						VH845110		separated
f. I want to understand as much as I can in my math class.	8	œ	0	ø	ø	VISTORIA	35. How much does each choice on each row.	of the follow				answer			into two
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			matrices of achievemer
 How much does each choice on each row. 	of the follow	ring statement	ts describe yo	u? Select one	answer	VB731863	 a. I want to learn as much as possible in my math class. 	0	Ð	Ø	Ø	Θ	VH845117		goals items
															-
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		 b. I want to master a lot of new skills in my math class 	(3)	٢	Ø	0	Ð	VH845114		(performan
 I want other students to think I am good at math. 	Not at all like me					VH731ass	of new skills in my math class. c. I want to become better in math this	0	©	Ø	Ø	¢	VH845114 VH845115		(performan and master In order to
to think I am good at math. I want to show others that my math schoolwork is easy for	fike me	like me	like me	like me	те	YHT31805 YHT31807	of new skills in my math class. c. I want to become								and master In order to create indic
to think I am good at math. I want to show others that my math schoolwork is easy for me.	like me ©	like me ©	like me ©	like me	Φ	үнглияа үнглияа	of new skills in my math class. c. I want to become better in math this year. d. I want to understand as much as I can in my	۵	®	©	۵	¢	VH845115		and master In order to create indic for both performance
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Previous item							2019 item							D/A/ R/NC+	Rationale
26. How much do you enjo one answer choice on	oy solving cac each row.	h of the follow	ving types of n	nath problem	si Select	VIDDAN	38. How much do you er answer choice on eac		e following t	types of math	activities? Sel	ect one	VH860546	R	Previous sub- items "a" –
	Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			Enjoy not at	Enjoy a little bit	Enjoy	Enjoy quite	Enjoy a lot			"c" were
a. Addition, subtraction, multiplication, and division	0	Ð	ø	ø	Ð	VH267499	a. Solving equations or simplifying	an ©	Ittle bit	somewhat ©	a bít D	Đ	VH860653		dropped.
 b. Finding areas of shapes and figures 	8	œ	ø	œ	dD	9106790	expressions b. Constructing and		_			1			
 c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems) 	8	69	0	0	θ	N18967402	building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	Ø	Ð	Ø	Ø	Ð	VH860651		
d. Solving equations or simplifying expressions	æ	Ø	Ø	Ø	œ	WHERE THE R	c. Working with geometric figures like rectangles and squares	۹	٩	O	Ð	®	VH860652		
 Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots) 	0	Ð	Ø	ß	Ø	V11267504					1				
f. Working with geometric figures like rectangles and squares	Ø	Ø	e	0	Φ	VEDA7505									
2018 Grade 12)	gital games (for example, a	apps, video ga	mes, or comp	outer	VH460329	40. How often do you play	the second second	for example,	apps, video ga	mes, or compu	iter	VH460329	NC	N/A
games) outside of school t Ø Never	that involve	math{					games) outside of school	ol that involve	math?						
 About once or twice a 	vear						Never								
 About once or twice a 							About once or twic About once or twice About once or twice	1 A A A A A A A A A A A A A A A A A A A							
About once or twice a							© About once or twic								
D Every day or almost e	very day						About once or twicEvery day or almost								
2018 Grade 12)							Issue: Resources	for Lear	ning and	d Instruc	tion				
28. How often do you use a of school to play educa	a computer, t tional games	ablet, smartp that involve	hone, or gamin math?	ng console ou	tside	VH460337	N/A							D	This item wa dropped to
Never															keep in line
															with NCES's
 About once or twice About once or twice 															review of
D Every day or almost															technology-
All company of the second															
															use items fo
															grades 4 and
2018 Grade 12)							1							1	8.

2019 Operat	tional Grade 12 Mathematics St	udent	
Previous item	2019 item	D/A/ R/NC+	Rationale
 29. How often do you use a computer, tablet, smartphone, or gaming console outside of school to play popular games that involve math? ① Never ① About once or twice a year ○ About once or twice a month ○ About once or twice a week ○ Every day or almost every day 	N/A	D	This item was dropped to keep in line with NCES's review of technology- use items for grades 4 and
(2018 Grade 12)			8.

revious item							2019 item							D/A/ R/NC+	Rationale
 Thinking about math following? Select one 			d be able to	do each of the		V186133723	37. Thinking about math, do you think that you would be able to do each of the following? Select one answer choice on each row.					VH613523	R	Previous sub item "d" was	
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			I definitely can't	I probably can't	Maybe	I probably can	I definitely can			dropped.
 a. Decide if your classmate's math worl is correct 	k 0	æ	0	Ð	0	Vileouve	a. Decide if your classmate's math work	0	1	Ø	Ø	©	VH460398		aropped.
 Give an example to show that a math statement is false 	ø	Φ	0	æ	Φ	VIEROUSS	b. Give an example to show that a math	۵	٦	Ø	Ø	©	VH460399		
c. Explain to your classmatc how you solved a math problem	3	đĐ	©.	æ	θ	At messarie	statement is false c. Explain to your classmate how you	۵	(1)	Ø	۵	Đ	VH460910		
d. Use correct mathematical words and symbols to communicate ideas about math	Ø	Ø	Ø	Ø	ø	victoria	solved a math problem d. Use correct mathematical words and symbols when showing your work	۵	۲	Ø	۵	œ	VH460902		
 Use correct mathematical words and symbols when showing your work 	æ	¢	Ø	ø	Ð	VHIM012	e. Use definitions of geometric shapes to support an argument	۵	®	Ø	Ø	©	VH460912		
f. Use definitions of geometric shapes to support an argument	Ø	Ð	0	æ	Φ	VH460912									
2018 Grade 12)							Issue: Student fact	tors							
 2. Have you ever participate ③ Yes ⑤ No 		aa, group ou					45. Have you ever participate① Yes① No		70 1						
018 Grade 12)							Issue: Student fact	tors					VH460925		
. Over the past seven days, group outside of school? E			articipated in	n a math stud	y	VH460925	46. Over the past seven days, group outside of school? E			rticipated ir	ı a math study		VH460925	NC	N/A
2018 Grade 12)							Issue: Student fact	tors							
 4. Have you ever participate Ø Yes 	ed in a math st	tudy group at (school?			VH460401	N/A							D	This item wa dropped based on th ADC's
© No © No															recommend ion for grad 4 and 8.

2019	2019 Operational Grade 12 Mathematics Student							
Previous item	2019 item	D/A/ R/NC+	Rationale					
(2010 Crada 12)		K/NC+						
(2018 Grade 12)			recommendat					
			ion for grades					
			4 and 8.					

Appendix K-1al: Operational Grade 12 Mathematics

24. Which courses have you taken from eighth grade to the present? If you have taken a course more than once, give the **most recent** year you took it. INCLUDE courses taken in summer school, but DO NOT INCLUDE topics that were only taught as part of a longer course (such as trigonometry taught in drafting class or computer programming taught in Algebra II). Select **one** answer choice on each row.

		I have never taken this course.	I took this course in or before Grade 8.	I took this course in Grade 9.	I took this course in Grade 10.	I took this course in Grade 11.	I took this course in Grade 12.	
а.	Basic or general mathematics course	Ø	ß	O	Ø	Ē	Ð	VH240820
b.	Tech-prep mathematics, business mathematics, consumer mathematics, or other applied mathematics course	9	©	Ø	Ø	Θ	Θ	VH240844
с.	Introduction to algebra or pre-algebra course	Ø	ß	O	Ø	Ē	Ē	VH240822
d.	Algebra I course	A	®	©	O	Ē	Ē	VH240823
e.	Geometry course	A	®	©	D	Ē	Ð	VH240824
f.	Algebra II course, with or without trigonometry	0	®	O	Ø	Ð	Ð	VH240825
g.	Trigonometry (as a separate course)	Ø	®	O	Ø	Ē	Ð	VH240826
h.	Pre-calculus course (also called introductory analysis)	9	ſ	O	Ø	Ē	Ē	VH240833
i.	Integrated mathematics 1 (first year of a multi-year course)	Ø	ſ	O	Ø	Ē	¢	VH240841
j.	Integrated mathematics 2 (second year of a multi-year course)	Ø	®	O	Ø	Ē	Ð	VH240842
k.	Integrated mathematics 3 (third year of a multi-year course)	0	ß	O	Ø	Ē	Ð	VH240843

		I have never taken this course.	I took this course in or before Grade 8.	I took this course in Grade 9.	course in	I took this course in Grade 11.	I took this course in Grade 12.	
1.	Integrated mathematics 4 (fourth year of a multi-year course)	Ø	ß	0	0	Ē	¢	VH240821
m	. Probability or statistics course	A	®	O	Ø	Ē	Ē	VH240836
n.	Calculus course	æ	®	©	Ø	Ē	Ē	VH240829
0.	Computer programming course (such as C++, Visual Basic, etc.)	Ø	®	Ø	Ø	©	©	VH240835

- **25.** Are you currently enrolled in or have you taken any of the following Advanced Placement (AP[®]) courses? Select **all** that apply.
 - (AP) Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus AB.
 - (B) Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus BC.
 - © Yes, I am enrolled in or have taken Advanced Placement (AP) Statistics.
 - ◎ No, I have not taken any of the courses listed above.

- **26.** Are you currently enrolled in or have you taken an International Baccalaureate[®] (IB) mathematics course?
 - (A) Yes
 - B No
 No

283

- **27.** Are you currently enrolled in or have you taken any **online** mathematics courses for **high school or college credit**?
 - (A) Yes
 - B No
- **28.** Was there a mathematics course that you would have liked to have taken this school year but did not take?
 - Tes, but my school does not offer the course.
 - [®] Yes, but the course was full.
 - © Yes, but I did not have the necessary prerequisites.
 - Yes, but my schedule was full.
 - $\textcircled{\sc black}$ No, there was no other course that I wanted to take.
- 29. Are you currently taking a mathematics course?
 - Yes
 Yes
 - B No
 No
- **30.** For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?
 - Never
 Never
 - Once
 Once
 - © Two or three times
 - Four or five times
 - © More than five times

VH240050

VH240049

VH240051

31. In your math class this year, how often have you used the following types of calculators? Select **one** answer choice on each row.

	Never or hardly ever	Less than half of the time	About half of the time	More than half of the time	All or almost all of the time	
a. Basic calculator	A	®	Ô	O	Ē	VH266809
b. Graphing calculator	A	B	Ô	0	Ē	VH266810

32. This school year, how often did the following things happen in your math class? Select **one** answer choice on each row.

Less than More than All or Never or About half almost all of half of the half of the hardly ever of the time the time time time a. My teacher used computers or other digital devices to show © Ð VH267416 A B \odot us how to work through math problems. b. I used the Internet for VH267417 A B \bigcirc \bigcirc Ð my math work. c. My teacher used computers or other digital devices when A © Ð VH588077 B \odot teaching math to my class. d. My teacher required us to use computers or other digital devices to VH267419 A B O \odot Ð complete math assignments.

VH266808

VH589166

284

- **33.** In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to look online for resources for help with your math assignments?
 - Never
 Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day
- **34.** How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
	ther students I am good at	Ø	ß	O	Ø	Ē	VH844871
that my	o show others math ork is easy for	Ø	(9	Ø	Ø	¢	VH844872
comparis	o look smart in son to the idents in my iss.	Ø	6	0	0	Ē	VH844873
	o get better han most other in my math	Ø	ß	Ø	Ø	¢	VH844882

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want to learn as much as possible in my math class.	0	B	O	Ø	©	VH845117
b.	I want to master a lot of new skills in my math class.	(9)	B	Ø	Ø	©	VH845114
c.	I want to become better in math this year.	0	B	Ø	Ø	©	VH845115
d.	I want to understand as much as I can in my math class.	Ø	B	Ø	Ð	Ē	VH845118

35. How much does each of the following statements describe you? Select **one** answer choice on each row.

36. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select **one** answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Create an ex that represen average num miles you ru week if you miles in w w	nts the ober of in in a run 100	Ø	₿	Q	Ø	¢	VH460383
b. Determine a percent tip o 67-dollar res dinner bill	of a	Ø	₿	Ø	Ø	¢	VH267679
c. Describe the properties sh every isosce triangle	nared by	۵	₿	Ø	Ø	Ē	VH267681

VH613511

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Decide if your classmate's math work is correct	Ø	®	O	Ø	¢	VH460398
b.	Give an example to show that a math statement is false	Ø	ß	Ø	Ø	Ē	VH460399
c.	Explain to your classmate how you solved a math problem	(9	ß	Ø	0	Ē	VH460910
d.	Use correct mathematical words and symbols when showing your work	0	©	0	Ø	¢	VH460902
e.	Use definitions of geometric shapes to support an argument	Ø	ß	Ø	0	Ē	VH460912

37. Thinking about math, do you think that you would be able to do each of the following? Select **one** answer choice on each row.

38. How much do you enjoy each of the following types of math activities? Select **one** answer choice on each row.

		Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot	
а.	Solving equations or simplifying expressions	Ø	ß	O	Ø	Ē	VH860653
b.	Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	0	₿	Ø	Φ	©	VH860651
c.	Working with geometric figures like rectangles and squares	Ø	B	O	Ø	Ē	VH860652

VH860646

VH613523

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- 39. How often do you use math in everyday life outside of school?
 - (A) Never
 - (B) About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

- **40.** How often do you play digital games (for example, apps, video games, or computer games) **outside of school** that involve math?
 - Never
 - [®] About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day
- **41.** How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row.

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Talk about math problems with your friends	Ø	ß	O	Ø	©	VH268946
b. Program computers	A	®	Ô	0	Ē	VH268949
c. Play an instrument and read music	A	ß	0	0	Ē	VH268961
d. Go to websites for help with your math homework	Ø	ß	O	Ø	¢	VH268962

- **42.** How often do you receive help or tutoring with math **outside of school or after school**?
 - Never
 Never
 - (B) About once or twice a year
 - © About once or twice a month
 - About once or twice a week
 - © Every day or almost every day
- 43. Have you ever helped your friends with their math homework?
 - (A) Yes
 - B No
- **44.** Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.

- **45.** Have you ever participated in a math study group **outside of school**?
 - (A) Yes
 - B No
- **46.** Over the past seven days, how many days have you participated in a math study group **outside of school**? Enter the number of days.

VH336085

VH336233

VH460923

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I e	njoy doing math.	A	B	0	O	Ē	VH731853
	ook forward to my ath class.		B	0	Ø	Ē	VH731854
1	m interested in the ings I learn in math.	${}^{}$	B	0	Ø	Ē	VH731858
eff	hink making an fort in math is orthwhile.	(2)	B	O	Ø	¢	VH731855
me	hink math will help e even when I am ot in school.	(3)	B	Ø	Ø	¢	VH731860
	hink it is important do well in math.	${}^{}$	B	0	Ø	Ē	VH731857
be	ake mathematics cause it will help e in the future.	(2)	B	Ø	Ø	Ē	VH731859
me gra	ake mathematics to eet my high school aduation quirements.	0	₿	O	Ø	¢	VH731856

Appendix K-1am: Summary of Changes Operational Grade 4 Science

Previous item	2019 item	D/A/ R/NC+	Rationale
via 1. In your science class this year, how often have you learned about living things (for example, plants, animals, or bacteria)?	17. In your science class this year, how often have you learned about living things (for example, plants, animals, or bacteria)?	1639912 NC	N/A
Never or hardly ever	Never or hardly ever		
D Once in a while	D Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
© Very often	D Very often		
(2018 Grade 4)	Issue: Organization of Instruction		
Vik		NC	N/A
In your science class this year, how often have you learned about electricity (for example, circuits, batteries, or light bulbs)?	18. In your science class this year, how often have you learned about electricity (for example, circuits, batteries, or light bulbs)?		
Never or hardly ever	Solution Never or hardly ever		
D Once in a while	D Once in a while		
© Sometimes	© Sometimes		
D Often	D Often		
© Very often	D Very often		
(2018 Grade 4)	Issue: Organization of Instruction		
VII63	9001	NC	N/A
In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)?	19. In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)?		
Never or hardly ever	Never or hardly ever		
D Once in a while	D Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
© Very often	© Very often		
(2018 Grade 4)	Issue: Organization of Instruction		
VIIO	817	NC	N/A
4. In your science class this year, how often have you learned about rocks or minerals (for example, diamond, iron, or lava rock)?	20. In your science class this year, how often have you learned about rocks or minerals (for example, diamond, iron, or lava rock)?		,
Never or hardly ever	Never or hardly ever		
D Once in a while	D Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
D Very often	© Very often		
(2018 Grade 4)	Issue: Organization of Instruction		

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item	2019 item	D/A/ R/NC+	Rationale
5. In your science class this year, how often have you done science activities using scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)?	21. In your science class this year, how often have you done science activities using scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)?	NC	N/A
Never or hardly ever	Ø Never or hardly ever		
Once in a while	D Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
D Always or almost always	D Always or almost always		
(2018 Grade 4)	Issue: Organization of Instruction		
6. In your science class this year, how often have you read from a science textbook	vi 22. In your science class this year, how often have you read from a science textbook	NC	N/A
(print or digital)?	(print or digital)?		
Never or hardly ever	Never or hardly ever		
Once in a while	D Once in a while		
© Sometimes	© Sometimes		
© Often	D Often		
© Always or almost always	D Always or almost always		
(2018 Grade 4)	Issue: Organization of Instruction		
7. In your science class this year, how often have you learned about science topics on the Internet?	23. In your science class this year, how often have you learned about science topics on the Internet?	NC	N/A
Never or hardly ever	Never or hardly ever		
D Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	D Often		
D Always or almost always			
(2018 Grade 4)	Issue: Organization of Instruction		
VI63M6T	24. In your science class this year, how often have you watched a short video clip, movie, or video about science topics?	NC	N/A
8. In your science class this year, how often have you watched a short video clip, movie, or video about science topics?	Never or hardly ever		
Never or hardly ever	Once in a while		
Once in a while	© Sometimes		
© Sometimes	© Often		
D Often	Always or almost always		
(2018 Grade 4)	Issue: Organization of Instruction		

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item	2019 item	D/A/ R/NC+	Rationale
9. In your science class this year, how often have you been asked to write about science topics (for example, a science journal, lab report, or essay)?	25. In your science class this year, how often have you been asked to write about science topics (for example, a science journal, lab report, or essay)?	NC	N/A
Never or hardly ever	Never or hardly ever		
D Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Ofren	© Often		
D Always or almost always	D Always or almost always		
(2018 Grade 4)	Issue: Organization of Instruction		
Yikawa7	N/A	D	Due to
10. In this school year, how often have you understood what the teacher talks about in science class?			overlap with
Never or hardly ever			new content
D Once in a while			and to keep
© Sometimes			student
D Often			
D Always or almost always			burden low,
			this item was
(2018 Grade 4)			dropped.
Veksioopu	N/A	D	Due to
11. In this school year, how often have you done well on your science tests?	N/A	D	
Never or hardly ever			overlap with
D Once in a while			new content
© Sometimes			and to keep
D Often			student
D Always or almost always			
			burden low,
(2018 Grade 4)			this item was
(2010 01 due 4)			dropped.
VH63003	N/A	D	Due to
12. In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)?			overlap with
 Never or hardly ever 			•
© Once in a while			new content
© Sometimes			and to keep
© Often			student
D Always or almost always			burden low,
(2010 Crode 1)			this item was
(2018 Grade 4)			dropped.

Previous item							2019 item						D/A/ R/NC+	Rationale	
 Thinking about science following activities? S 	ce, do you thir elect one answ	nk that you wo wer choice on e	uld be able to each row.	o do each of th	ne	VIRGINIA	27. Thinking about science, do you think that you would be able to do each of the following activities? Select one answer choice on each row.							Due to a lack of response	
	I definitely can't	l probably can't	Maybe	I probably can	I definitely can			1 definitely can't	I probably can't	Maybe	I probably can	I definitely can			variability and
 Describe different ways to heat or cool water 	ø	٩	0	Ø	Φ	VH638368	 a. Describe different ways to heat or cool water 	Ø	Ð	0	Ð	θ	V16635868		to keep student
b. Describe how the length of a vibrating string affects the sound it makes	0	θ	Ø	0	θ	YIM38570	b. Describe how the length of a vibrating string affects the sound it makes	۲	Ð	0	θ	Φ	¥14638%70		burden low, sub-item g
c. Design an experiment to show how sunlight affects the growth of a plant	٩	Ð	Q	Φ	θ	Y21638872	c. Design an experiment to show how sunlight affects the growth of a plant	θ	θ	0	θ	Θ	VH638872		was dropped.
d. Use examples to show how one living thing has helped another to survive	Φ	œ	0	Φ	θ	V2H038875	d. Use examples to show how one living thing has helped another to survive	θ	Ð	Ø	0	Φ	V16088875		
 c. Describe what would happen to the number of trogs at a pond if all the insects were removed from the pond 	۵	Θ	Ø	θ	θ	Valuan 7n	 e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the 	۵	Ð	Ø	Φ	Ø	VIISA6470		
f. Decide which tool to use if you want to measure wind speed	®.	Ø	Ø	0	Ð	Vanaessa	pond f. Decide which tool to use if you want to	Θ	Ð	0	0	Φ	214438881		
g. Describe why the weather in the summer is different than in the winter	۵	Ð	0	θ	θ	үнынка	measure wind speed								

Previous item							2019 item							D/A/ R/NC+	Rationale
 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	u? Select one	answer	¥18659879	 How much does each of the following statements describe you? Select one answer choice on each row. 						R	This item was divided into	
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			two items to
 a. I want other students to think I am good at science. 	0	Ð	0	θ	θ	¥11639080	 a. I want other students to think I am good at science. 	Θ	Ð	Θ	8	θ	VH639080		reduce
b. I want to show others that science schoolwork is easy for me.	0	¢	Θ	0	θ	V11639062	b. I want to show others that science schoolwork is easy for mc.	Ø	œ	Ø	Ø	Φ	VHICTHOM2		scrolling and align presentation
c. I want to look smart in comparison to the other students in my science class.	Ø	Ð	0	۵	Φ	Y1639064	c. I want to look smart in comparison to the other students in my science class.	٩	Ð	Ø	Ø	Ø	VHISTOPH		with similar
d. I want to get better science grades than most other students in my class.	Ø	\$	0	ø	θ	VH732329	d. 1 want to get better grades than most other students in my science class.	۵	œ	Ø	Ø	Φ	VERSONS		subjects. Additionally,
 I want to learn as much as possible in my science class. 	Ø	0	0	Ø	θ	WHENDOSS	29. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? Select one	answer	Vieidarist		the wording
 I want to become better in science this year. 	0	٩	0	θ	Ð	VH\$39087	choice on each row.	Not at all	A little bit	Somewhat	Quite a bit	Exactly like			of sub-items d and h (now
g. I want to understand as much as I can in my science class.	٩	٢	0	Ø	Φ	VH639089	a. I want to learn as much as possible in	like me	like me	like me	like me	me	V715.590005		sub-item d in
 I want to master a lot of new science skills in my class. 	Ø	٢	Q	Ø	Ø	VH735430	my science class. b. I want to become better in science	9	0	ø	ø	0	729639067		the second matrix) have
(2018 Grade 4)							 this year. c. I want to understand as much as I can in my science class. 	۹	Ð	٥	۵	Φ	V11639089		been revised, with the word
							d. I want to master a lot of new skills in my science class.	Ø	Ð	Ø	Ø	Ð	VMKeGAeyi		"science" moved to
							Issue: Student Fac								before the word "class".

Previous item							2019 item							D/A/ R/NC+	Rationale
15. In this school year, ho of school? Select one a	w often have inswer choice	you done each on each row.	of the follow	ing activities	outside	100539951	30. In this school year, how of school? Select one as			of the follow	ing activities	outside	VHEIMSI	R	Due to a lack of response
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			variability and
 Work on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets) 	Ø	¢	0	Ø	Ð	V3468870	 a. Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets) 	٩	¢	Θ	Θ	Φ	VHS9162		to keep student burden low, sub-item b
b. Write or blog about science topics	0	Ð	0	٩	θ	VH638983	b. Used scientific tools (for example,)	1		1			was dropped.
c. Use scientific tools (for example, microscopes, thermometers, beakers, or weighing	Φ	٩	0	θ	Θ	V1636985	microscopes, thermometers, beakers, or weighing scales)	0	œ	Q	Ø	θ	VH891927		Additionally, the verbs at
scales) d. Read about science topics in books or magazines (print or	٩	¢	Ø	٩	Ð	V21636987	 c. Read about science topics in books or magazines (print or digital) 	Ð	Ø	Ø	Ð	Ð	VH035967		the beginning of the origina
digital)						-	d. Attended clubs or programs that include science or engineering	ø	Ð	0	θ	Ð	VH893268		sub-items a and c have
Attend clubs or programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)	æ	Ð	Ø	Ø	Φ	VH516991	activities (for example chemistry club, roboties club, or coding programs)								to past tense
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)	Φ	Φ	Ø	۵	Ð	VH638991	chemistry club. robotics club, or								to past tense for consistency
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)						<u>улынул</u> улынтт	chemistry club, robotics club, or coding programs)	ctors					VHADBIDS	NC	to past tense for consistency with the item
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 4) 16. How much does each							chemistry club, robotics club, or coding programs) Issue: Student Fac 31. How much does each	ctors					VHGNRIS	NC	to past tense for consistency with the item stem.
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 4) 16. How much does each	of the follow	ving statemen A little bit	ts describe yo Somewhat	u? Select one Quite a bit	answer Exactly like		chemistry club, robotics club, or coding programs) Issue: Student Fac 31. How much does each choice on each row.	of the follow	ving statemen A little bit	ts describe yo Somewhat	u? Select one Quite a bit	answer Exactly like	VH69035	NC	to past tense for consistency with the item stem.
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 4) 16. How much does each choice on each row.	of the follov Not at all like me	ving statemen A little bit like me	ts describe yo Somewhat like me	u? Select one Quite a bit like me	answer Exactly like me	YHG015	chemistry club, robotics club, or coding programs) Issue: Student Fac 31. How much does each choice on each row.	of the follow Not at all like me	ving statemen A little bit like me	ts describe yo Somewhat like me	u? Select one Quite a bit like me	answer Exactly like me		NC	to past tense for consistency with the item stem.
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 4) 16. How much does each choice on each row.	of the follow Not at all like me	ving statemen A little bit like me D	ts describe yo Somewhat like me ©	u? Select one Quite a bit like me D	answer Exactly like me	УНЮНЦС УНЮЗНЦС	chemistry club, robotics club, or coding programs) Issue: Student Fac 31. How much does each choice on each row. a. I enjoy science activities. b. 1 look forward to my science class. c. I am intrested in the things I learn in	of the follow Not at all like me	ring statemen A little bit like me D	ts describe yo Somewhat like me ©	u? Select one Quite a bit like me D	answer Exactly like me	VH639(17	NC	to past tense for consistency with the item stem.
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 4) 16. How much does each choice on each row.	of the follow Not at all like me ©	ving statemen A little bit like me D D	somewhat like me ©	u? Select one Quite a bit like me © ©	answer Exactly like me ©	978-30115 978-30117 978-30117 978-30120	chemistry club, robotics club, or coding programs) Issue: Student Fac 31. How much does each choice on each row. a. I enjoy science activities. b. I look forward to my science class. c. I am interested in the	of the follow Not at all like me	ving statemen A little bit like me D D	ts describe yo Somewhat like me ©	ui Select one Quite a bit like me D D	answer Exactly like me D	VH639([7 V16539120	NC	to past tense for consistency with the item stem.
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 4) 16. How much does each choice on each row.	of the follow Not at all like me D D	A little bit like me D D	somewhat like me © ©	u? Select one Quite a bit like me D D D	answer Exactly like @ @	91830115 91830117 91830122 91830122	chemistry club, robotics club, or coding programs) Issue: Student Fac 31. How much does each choice on each row. a. I enjoy science activities. b. I look forward to my science class. c. I am interested in the things I learn in science class. d. I think making an effort in science class	of the follow Not at all like me D D D	A little bit like me D D	ts describe yo Somewhat like me © ©	ui Select one Quite a bit like me D	answer Exactly like me © ©	V94639122 V94639122	NC	for consistency with the item stem.

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item							2019 item							D/A/ R/NC+	Rationale
 In this school year, ho class? Select one answ 	w often have y er choice on e	ou done the l ach row.	following activi	ities in your	science	V18:19110	26. In this school year, how often have you done the following activities in your science class? Select one answer choice on each row.					NC	N/A		
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
 Made a drawing that explains why or how something happens 	۵	ø	Θ	0	Φ	Valisativa filo	 Made a drawing that explains why or how something happens 	9	®	θ	0	Ð	VHGIVISA		
 b. Used a science experiment to answer a question 	0	®	Ø	0	θ	V98639162	b. Used a science experiment to answer a question	Ð	θ	ø	0	θ	VH639142		
c. Put information you collected into a table or graph	Ø	Ð	0	0	Φ	VH639164	 Put information you collected into a table or graph 	Ø	₿	Ø	0	Ð	VH639164		
d. Used evidence to explain why something happens	Ø	Ð	Ø	0	Φ	VERYING	d. Used evidence to explain why something happens	θ	θ	0	0	θ	VH639166		
e. Found news articles about science on the Internet	Ø	Ð	0	0	Φ	VHILKIIN	e. Found news articles about science on the Internet	۵	٩	ø	0	Ð	V11639169		
(2018 Grade 4)							Issue: Organizatio	on of Ins	truction						
 How often do you talk someone in your family 		ou have learn	ned in science o	class with		VH745490	32. How often do you talk someone in your famil		you have lear	rned in science	class with		VHTASAM	NC	N/A
Never or hardly ever	r.						Never or hardly ev	er							
Once in a while							D Once in a while								
© Sometimes							© Sometimes								
D Often							D Often								
© Very often							D Very often								
(2018 Grade 4)							Issue: Student Fa								

Appendix K-1an: Operational Grade 4 Science

- 17. In your science class this year, how often have you learned about living things (for example, plants, animals, or bacteria)?
 - Never or hardly ever
 - [®] Once in a while
 - © Sometimes
 - Often
 - © Very often

- **18.** In your science class this year, how often have you learned about electricity (for example, circuits, batteries, or light bulbs)?
 - Never or hardly ever
 - [®] Once in a while
 - © Sometimes
 - Often
 - © Very often

- **19.** In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)?
 - Never or hardly ever
 - Once in a while
 - © Sometimes
 - Often
 - C Very often

VH639043

- **20.** In your science class this year, how often have you learned about rocks or minerals (for example, diamond, iron, or lava rock)?
 - Never or hardly ever
 - ③ Once in a while
 - © Sometimes
 - Often
 - © Very often
- **21.** In your science class this year, how often have you done science activities using scientific tools (for example, microscopes, thermometers, beakers, or weighing
 - Never or hardly ever
 - [®] Once in a while
 - © Sometimes
 - Often

scales)?

© Always or almost always

- **22.** In your science class this year, how often have you read from a science textbook (print or digital)?
 - Never or hardly ever
 - [®] Once in a while
 - © Sometimes
 - Often
 - © Always or almost always

- **23.** In your science class this year, how often have you learned about science topics on the Internet?
 - Never or hardly ever
 - ③ Once in a while
 - © Sometimes
 - Often
 - © Always or almost always

- **24.** In your science class this year, how often have you watched a short video clip, movie, or video about science topics?
 - Never or hardly ever
 - ③ Once in a while
 - © Sometimes
 - Often
 - © Always or almost always

- **25.** In your science class this year, how often have you been asked to write about science topics (for example, a science journal, lab report, or essay)?
 - Never or hardly ever
 - [®] Once in a while
 - © Sometimes
 - Often
 - © Always or almost always

VH639149

26. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row.

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Made a drawing that explains why or how something happens	Ø	ß	O	Ø	Ē	VH639156
b.	Used a science experiment to answer a question	Ø	ß	O	Ø	Ē	VH639162
c.	Put information you collected into a table or graph	Ø	ß	O	Ø	Ē	VH639164
d.	Used evidence to explain why something happens	(8)	ß	O	Ø	Ē	VH639166
e.	Found news articles about science on the Internet	Ø	ß	O	Ø	Ē	VH639169

27. Thinking about science, do you think that you would be able to do each of the
following activities? Select one answer choice on each row.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Describe different ways to heat or cool water	Ø	®	Ø	Ø	Ē	VH638868
b.	Describe how the length of a vibrating string affects the sound it makes	Ø	ഀ	Ø	Ø	Ē	VH638870
c.	Design an experiment to show how sunlight affects the growth of a plant	(3)	ß	Ø	Ø	Ē	VH638872
d.	Use examples to show how one living thing has helped another to survive	(6)	ß	Ø	Ø	Ē	VH638875
e.	Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ø	®	Q	Ø	Ē	VH638876
f.	Decide which tool to use if you want to measure wind speed	Ø	ß	O	Ø	Ē	VH638883

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want other students to think I am good at science.	(2)	®	O	Ø	¢	VH639080
b. I want to show others that science schoolwork is easy for me.	۵	ß	Ø	Ø	©	VH639082
c. I want to look smart in comparison to the other students in my science class.	۵	ß	Ø	Ø	©	VH639084
d. I want to get better grades than most othe students in my science class.		®	Ø	Θ	©	VH860366

29. How much does each of the following statements describe you? Select **one** answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want to learn as much as possible in my science class.	0	B	Ø	Ø	¢	VH639086
b.	I want to become better in science this year.	(9)	B	0	Ø	¢	VH639087
c.	I want to understand as much as I can in my science class.	0	B	0	Ø	Ē	VH639089
d.	I want to master a lot of new skills in my science class.	0	B	O	Ø	Ē	VH860369

VH859155

30.	In this school year, how often have you done each of the following activities outside
	of school? Select one answer choice on each row.

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a.	Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	0	®	©	Ø	©	VH859162
b.	Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	0	©	O	Ø	Θ	VH891927
c.	Read about science topics in books or magazines (print or digital)	0	®	O	Ø	©	VH638987
d.	Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	0	®	©	Ø	¢	VH893268

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy science activities.	Ø	®	O	Ø	Ē	VH639117
b. I look forward to my science class.	A	®	O	Ø	Ē	VH639120
c. I am interested in the things I learn in science class.	Ø	®	O	Ø	Œ	VH639122
d. I think making an effort in science class is worthwhile.	Ø	®	O	Ø	Ē	VH639125
e. I think science will help me even when I am not in school.	Ø	®	O	Ø	Ē	VH639127
f. I think it is important to do well on science assignments.	Ø	®	O	Ø	Ē	VH639128

VH743438

- **32.** How often do you talk about things you have learned in science class with someone in your family?
 - (Never or hardly ever
 - [®] Once in a while
 - © Sometimes
 - Often
 - © Very often

Appendix K-1ao: Summary of Changes Operational Grade 8 Science

2019 Operational Grade 8 Science Student									
Previous item	2019 item	D/A/ R/NC+	Rationale						
visawer 1. In this school year, how often have you understood what the teacher talks about in science class?	N/A	D	Due to overlap with						
© Never or hardly ever			new content						
D Once in a while			and to keep						
© Sometimes									
© Often			student						
© Always or almost always			burden low,						
			this item was						
(2018 Grade 8)			dropped.						
Vile 8999	N/A	D	Due to						
2. In this school year, how often have you done well on your science tests?			overlap with						
Never or hardly ever			•						
D Once in a while			new content						
© Sometimes			and to keep						
© Often			student						
			burden low,						
			this item was						
(2018 Grade 8)									
			dropped.						
3. In this school year, how often have you done well on your science assignments (for	N/A	D	Due to						
example, projects, homework, or worksheets)?			overlap with						
Never or hardly ever			new content						
D Once in a while			and to keep						
© Sometimes			student						
D Often									
			burden low,						
			this item was						
(2018 Grade 8)			dropped.						

revious item							2019 item							D/A/ R/NC+	Rationale
 In your science class t projects on any of the 						11638071	 In your science class t projects on any of the 						VH639071	NC	N/A
	Never or hardly ever	Once in a while	Sometimes	Often	Very often		1	Never or hardly ever	Once in a while	Sometimes	Often	Very often			
 Living things (for example, plants, animals, or bacteria) 	Θ	Θ	0	Φ	θ	VH839072	a. Living things (for example, plants, animals, or bacteria)	۲	٩	Ø	۵	Φ	VH6.80071		
 Electricity (for example, circuits, batteries, or light bulbs). 	Ø	Ð	0	0	Ð	VHISO9074	 Electricity (for example, circuits, batteries, or light bulbs) 	Θ	œ	θ	Φ	θ	174639074		
 Chemicals (for example, vinegar, baking soda. or hydrogen peroxide) 	۲	۹	θ	0	Φ	VH639023	c. Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	٨	٩	Φ	Φ	θ	134601073		
 Rocks or minerals (for example, diamond, iron, or lava rock) 	θ	θ	ø	Φ	Φ	V11638077	d. Rocks or minerals (for example, diamond, iron, or lava rock)	Ð	Ð	0	Ð	Φ	VH6300?7		
							e. Technology and		-						
 Technology and engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class t activities? Select one 			© u done each of	© the followin	Ð	V16520076	engineeting (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t	this year, how	often have yo		© the followin	ED Ig	VH639376 VH639311	R	To simplify
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class t	his year, how answer choice Never or	often have yo on each row. Once in a					engineering (for example, robots, pulley systems, or ramps)	on of Inst this year, how answer choice Never or	truction often have yo on each row. Once in a	ou done each of	the followir	ag Always or		R	wording
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class t activities? Select one : . Read from a science textbook (print or	his year, how answer choice	often have yo on each row,	u done each of	the followin	ng Always or		engineeting (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t	on of Insi this year, how answer choice	truction often have yo on each row.	ou done each of		ag		R	wording based on stakeholde
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class t activities? Select one a	his year, how inswer choice Never or hardly ever	often have yo on each row, Once in a while	u done each of Sometimes	the followin Often	18 Always or almost always		engineeting (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one a. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) about science	on of Inst this year, how answer choice Never or hardly ever	truction often have yo on each row. Once in a while	ou done each of Sometimes	the followir Often	Always or almost always	VII693)1	R	wording based on stakeholde feedback, sub-item e
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class t activities? Select one a crivities? Select one a	his year, how answer choice Never or hardly ever	often have yo on each row. Once in a while Ø	u done each of Sometimes	the followin Often ©	Always or almost always ©	VHAMUA	engineeting (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one activities? Select one activities? Select one activities? Select one b. Read from a science rextbook (print or digital) b. Read a book or magazine (print or digital) about science topics c. Used the Internet to learn about science	on of Insi this year, how answer choice Never or hardly ever	truction often have yo on each row. Once in a while Ø	ou done each of Sometimes	the followir Often Ø	Always or almost always ©	V163033	R	based on stakeholde
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class t activities? Select one a 6. Read from a science textbook (print or digital) 6. Read a book or magazine (print or digital) about science topics 0. Used the Internet to learn about science	his year, how unswer choice Never or hardly ever ©	often have yo on each row, Once in a while D	u done each of Sometimes	the followin Often ©	Always or almost always	v163033	engineeting (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one activities? Select one activities? Select one activities? Select one b. Read a book or magazine (print or digital) b. Read a book or magazine (print or digital) about science topics c. Used the Internet to learn about science topics. d. Watched a short video	on of Inst this year, how answer choice Never or hardly ever \odot	truction often have ye on each row. Once in a while D	ou done each of Sometimes ©	the followir Often ©	Always or almost always © ©	V1852011 V1852011	R	wording based on stakeholde feedback, sub-item e
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class t activities? Select one a 6. Read from a science textbook (print or digital) 6. Read a book or magazine (print or digital) about science topics 1. Used the Internet to learn about science topics 1. Watched a short video clip, movie, or video	his year, how answer choice hardly ever	often have yo on each row, Once in a while D D D	u done each of Sometimes	the followin Often © ©	Always or almost always	VH60034 V94639315 V94639315 V94639315	engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one activities? Select one activities? Select one activities? Select one activities? Select one book of the select one digital) b. Read a book or magazine (print or digital) about science topics c. Used the Internet to learn about science topics. d. Watched a short video	on of Inst his year, how answer choice Never or hardly ever @ @	truction often have yo on each row. Once in a while D D	ou done each of Sometimes © ©	the followir Often ©	Always or almost always	V1852011 V28630313 V28630313 V28630315	R	wording based on stakeholde feedback, sub-item e

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item							2019 item						D/A/ R/NC+	Rationale	
6. Thinking about science following activities? S	Thinking about science, do you think that you would be able to do each of the following activities? Select one answer choice on each row.							24. Thinking about science, do you think that you would be able to do each of the following activities? Select one answer choice on each row.							Due to a lack of response
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			I definitely can't	I probably can't	Maybe	I probably can	I definitely can			variability and
 a. Describe different ways to heat or cool water b. Describe how the 	۲	θ	0	۵	θ	VModiment	a. Describe how the length of a vibrating string affects the sound it makes	Ø	Φ	0	Ø	æ	VH638870		to keep student
length of a vibrating string affects the sound it makes	۲	Ð	0	۵	Ð	VEMMER 70	b. Design an experiment to show how sunlight affects the growth	0	Ð	0	0	Ð	V11636872		burden low, sub-items a,
c. Design an experiment to show how sunlight affects the growth of a plant	۵	Ð	0	Φ	Φ	V16036872	of a plant c. Describe what would happen to the number								d, and g were
d. Use examples to show how one living thing has helped another to survive	۵	⊕	0	۵	Φ	V16633875	of frogs at a pond if all the insects were removed from the pond	0	θ	Ø	Ð	Φ	VH658876.		dropped.
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	٩	Φ	9	٩	0	VH638876	d. Decide which tool to use if you want to measure wind speed	Ø	Φ	Ø	Ð	Ð	VHSHERI		
 Decide which tool to use if you want to measure wind speed 	Ø	Ð	0	Ø	Ø	VERSING									
g. Describe why the weather in the summer is different than in the winter	٩	Ð	0	۵	Ø	VPRCIBILITY									

Previous item							2019 item							D/A/ R/NC+	Rationale
7. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	ou? Select one	answer	VIIOTOR	25. How much does each of the following statements describe you? Select one answer choice on each row.							R	This item was divided into
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			two items to
 a. I want other students to think I am good at science. 	Ð	Φ	θ	₽	θ	VH/39580	 a. I want other students to think I am good at science. 	θ	89	0	Ð	θ	¥14639080		reduce scrolling and
b. I want to show others that science schoolwork is easy for mc.	Ð	Φ	0	Ð	θ	¥38/39082	b. I want to show others that science schoolwork is easy for me.	Ð	®	Ø	Ð	Ð	V14639082		align
c. I want to look smart in comparison to the other students in my science class.	Θ	Φ	θ	Φ	θ	17HATWINI	 c. I want to look smart in comparison to the other students in my science class. 	Ø	œ	Ø	Ø	Φ	VER-SOURA		with similar
d. I want to get better science grades than most other students in my class.	9	Φ	Θ	Φ	θ	Y117a2329	d. I want to get better grades than most other students in my science	Θ	œ	0	Ð	θ	V71360366		subjects. Additionally,
e. I want to learn as much as possible in my science class.	æ	æ	0	Ф	θ	¥11639086	class.								the wording
 I want to become better in science this year. 	θ	Φ	0	Ð	θ	521/139387	26. How much does each choice on each row.	of the follow	ving statemen	uts describe yo	u? Select one	answer	V18059155		of sub-items d and h (now
g. I want to understand as much as I can in my science class.	Ø	Ø	0	Φ	θ	¥11639089		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			sub-item d in
h. I want to master a lot of new science skills in my class.	θ	0	0	Ð	θ	V91792336	 a. I want to learn as much as possible in my science class. 	Φ	Ð	0	0	Ð	VHS19066		the second matrix) have
							b. 1 want to become better in science this year.	Ø	œ	0	Ø	Ð	VER39067		been revised,
							c. I want to understand as much as I can in my science class.	۵	œ	Q	Ø	Ø	YH639089		with the word "science"
							d. I want to master a lot of new skills in my science class.	۹	Ð	Ø	Θ	θ	VH860369		moved to before the
(2018 Grade 8)							Issue: Student Fa	ctors							word "class".

have you done of the choice on each root or twice year or twice year of the choice of	nce About once		Every day or almost every day	Vile3628y	27. In this school year, ho of school? Select one a		on each row.	About once	ng activities (About once		V14638951	R	Due to a lack of response
or twice year	c or twice a month	or twice a week	almost every day			Never			About once	Every day as			orresponse
> @		0				1124	or twice a year	or twice a month	or twice a week	almost every day			variability and
	0		θ	v3463897 0	 a. Worked on science-related projects (for example, making a volcano, growing plants from sceds, or building simple rockets) 	۵	œ	9	θ	θ	VIRSUINT		to keep student burden low, sub-item b
) @		0	θ	VH638983	b. Used scientific tools (for example,	1.000							was dropped
_	Ø	Ø	Ð	VHEINORS	microscopes, thermometers, beakers, or weighing scales) c. Read about science	۲	¢	θ	θ	Ð	V18891923		Additionally, the verbs at
0	Ø	œ	θ	vHs3698?	topics in books or magazines (print or digital)	Ø	0	0	Φ	Φ	VHoasse?		the beginnin of the origina
, _©	Ø	Ø	Ð	VH638991	d. Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	۲	Ð	Ø	Ø	Ø	V1689/8264		sub-items a and c have been change to past tense
following stater	nents describe yo	u? Select one	answer	AH-2012	28. How much does each		ring statement	s describe yo	1? Select one	answer	¥3(0310) [3	NC	consistency with the iten stem. N/A
		Quite a bit			choice on each row.	Not at all	A little bit	Somewhat	Quite a bit	Exactly like	m		
				010539317	a. I enjoy science						VH63WF17		
, @	ø	٥	Ø	VI639120	b. I look forward to my	0	0	0	0	Ð	VH639120		
o o	ø	Ð	Θ	Y1649121	c. I am interested in the things I learn in	@	Ð	0	Ð	θ	V14639122		
o o	Ø	۵	Φ	VH639125	d. I think making an effort in science class is worthwhile.	Ð	Ð	0	0	Ð	VH609125		
0	Ø	۵	Φ	WHEEM127	c. I think science will help me even when I am not in school.	۹	θ	0	Φ	θ	VH639117		
	0	0	θ	V14519126	f. I think it is important to do well on science	Θ	Ð	0	Ð	θ	VHOWER		
	following stater trall A little ne 0 0 0 0 0 0 0 0 0 0	following statements describe yo t all A little bit Somewhat like me like me 0 0 0 0 0	following statements describe you? Select one t all A little bit like me Bike me Bike me 0	A little bit me Somewhat like me Quite a bit like me Exactly like me 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	following statements describe you? Select one answer t all hittle bit like me Somewhat like me Quite a bit like me Exactly like me 0 0 0 0 0 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 0 0 0 0 9 9 9 0 0 0 0 0 9 9 9 0 0 0 0 0 9 9 9	Image: Select one answer VIEWERS Image: Statements describe you? Select one answer VIEWERS Image:	Image: Statements describe you? Select one answer VIEWUS 28. How much does each of the follow choice on each row. following statements describe you? Select one answer VIEWUS 28. How much does each of the follow choice on each row. in all A little bit like me Somewhat like me Exactly like me Issue: Student Factors in all A little bit like me Somewhat like me Moi at all like me Issue: One accord to my choice class. Image: Class of the follow choice class. in all A little bit like me Image: Class of the follow choice on each row. Image: Class of the follow choice on each row. in all A little bit like me Image: Class of the follow choice on each row. Image: Class of the follow choice on each row. in a lite me Image: Class of the follow choice on each row. Image: Class of the follow choice on each row. in a lite me Image: Class of the follow choice on each row. Image: Class of the follow choice on each row. in a lite me Image: Class of the follow choice on each row. Image: Class of the follow choice on each row. in a lite me Image: Class of the follow choice on each row. Image: Class of the follow choice on each row. in a lite me Image: Class of the follow choice on each row. Image: Class of the follow choice on each row. <td>Image: second of the second</td> <td>Image: Second of the second</td> <td>Image: Second of the second</td> <td>Image: second of the second</td> <td>Science or engineering activities for example chemistry club, or coding programs) Image: Student Factors Image: Student Factors following statements describe you? Select one answer theme following statements describe you? Select one answer theme in all A little bit Somewhar Nuise a bit Reactly like me Exactly like me 0 Image: Student Pactors 0 Image: Student Pactors 1 A little bit Somewhar Nuise a bit Reactly like me 0 Image: Student Pactors 0 Image: Student Pactors <td>a a</td></td>	Image: second of the second	Image: Second of the second	Image: Second of the second	Image: second of the second	Science or engineering activities for example chemistry club, or coding programs) Image: Student Factors Image: Student Factors following statements describe you? Select one answer theme following statements describe you? Select one answer theme in all A little bit Somewhar Nuise a bit Reactly like me Exactly like me 0 Image: Student Pactors 0 Image: Student Pactors 1 A little bit Somewhar Nuise a bit Reactly like me 0 Image: Student Pactors 0 Image: Student Pactors <td>a a</td>	a a

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item							2019 item							D/A/ R/NC+	Rationale
10. In this school year, ho class? Select one answ			ollowing activi	ties in your	science	VH639733	29. In this school year, how often have you done the following activities in your science class? Select one answer choice on each row.							NC	N/A
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
a. Came up with research questions to explore how something works	Θ	٩	Ø	Ø	Ø	VH639744	a. Came up with research questions to explore how something works	Ø	®	©	Ø	©	VH639744		
b. Made drawings that explain why or how something happens	۵	٩	©	Φ	©	VH639749	 b. Made drawings that explain why or how something happens 	0	₿	Θ	Θ	Ð	VH639749		
c. Came up with experiments that you could use to answer a research question	۵	٩	٥	۵	©	VH639753	c. Came up with experiments that you could use to answer a research question	۲	(1)	Ø	Θ	©	VH639753		
d. Used tables or graphs to identify relationships between variables	۵	٩	Ø	۵	٢	VH639760	d. Used tables or graphs to identify relationships between	6	₿	Θ	Φ	Ð	VH639760		
e. Used math equations to explain or support scientific conclusions	0	٢	©	Φ	Ø	VH639763	variables e. Used math equations to explain or support	٩	(1)	O	0	©	VH639763		
f. Used evidence from experiments to explain why something happens	0	٩	Ø	Ø	¢	VH639765	scientific conclusions f. Used evidence from experiments to explain why something	۵	(1)	Q	Ø	¢	VH639765		
 g. Used information to disagree with someone about a scientific idea 	۲	٩	Ø	Φ	©	VH639770	happens g. Used information to disagree with someone		0	o	Ø	©	VH639770		
 Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment 	۵	¢	Ø	٩	¢	VH639777	about a scientific idea h. Combined information about science from multiple sources (for example, books,	0	0	0	9	e	VH639777		
							websites, or articles) for an assignment								
(2018 Grade 8)							Issue: Organizatio	on of Ins	truction						
11. How often do you talk someone in your family		ou have lear	ned in science	class with		VH743438	30. How often do you talk someone in your family		ou have lear	ned in science o	lass with		\$18745433	N/C	N/A
Never or hardly ever	er						Dever or hardly even	r							
Once in a while							Once in a while								
© Sometimes © Often							© Sometimes								
OftenOvery often							OftenVery often								
2018 Grade 8)															

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Appendix K-1ap: Operational Grade 8 Science

		Never or hardly ever	Once in a while	Sometimes	Often	Very often	
a.	Living things (for example, plants, animals, or bacteria)	8	®	Ø	Θ	Ē	VH639072
b.	Electricity (for example, circuits, batteries, or light bulbs)	Ø	®	Ø	Ø	¢	VH639074
c.	Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	(3)	®	Ø	Ø	¢	VH639073
d.	Rocks or minerals (for example, diamond, iron, or lava rock)	Ø	ß	Ø	Ø	Ē	VH639077
e.	Technology and engineering (for example, robots, pulley systems, or ramps)	Ø	(6)	Q	Ø	¢	VH639076

22. In your science class this year, how often have you done hands-on activities or projects on any of the following topics? Select **one** answer choice on each row.

23.	In your science class this year, how often have you done each of the following
	activities? Select one answer choice on each row.

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Read from a science textbook (print or digital)	Ø	ß	O	Ø	Ē	VH639313
b.	Read a book or magazine (print or digital) about science topics	0	6	Ø	Ø	Ē	VH639315
c.	Used the Internet to learn about science topics	Ø	ß	0	Ø	Ē	VH639314
d.	Watched a short video clip, movie, or video about science topics	Ø	ß	Ø	Ø	Ē	VH639312
e.	Used a magnifying glass or microscope	A	B	0	Ø	Ē	VH887984
f.	Used a thermometer or weighing scale for making measurements	Ø	ß	O	Ø	Ē	VH639078

- I definitely I probably I probably I definitely Maybe can't can't can can a. Describe how the length of a vibrating VH638870 A $^{\odot}$ \bigcirc Ð B string affects the sound it makes b. Design an experiment to show how sunlight Ø B © D Ð VH638872 affects the growth of a plant c. Describe what would happen to the number of frogs at a pond if all VH638876 A \bigcirc Ð B \odot the insects were removed from the pond d. Decide which tool to use if you want to VH638883 A B \odot \odot Ð measure wind speed
- **24.** Thinking about science, do you think that you would be able to do each of the following activities? Select **one** answer choice on each row.

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want other students to think I am good at science.	Ø	ß	Ø	Ø	Ē	VH639080
b. I want to show others that science schoolwork is easy for me.	Ø	ß	Ø	Ø	©	VH639082
c. I want to look smart in comparison to the other students in my science class.	Ø	6	0	Θ	©	VH639084
d. I want to get better grades than most other students in my science class.	۵	ß	0	Θ	Ē	VH860366

VH639079

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want to learn as much as possible in my science class.	Ø	ß	O	Ø	Ē	VH639086
b.	I want to become better in science this year.	0	ß	Ø	Ø	Ē	VH639087
c.	I want to understand as much as I can in my science class.	0	®	Ø	Ø	Ē	VH639089
d.	I want to master a lot of new skills in my science class.	Ø	ß	O	Ø	Ē	VH860369

27. In this school year, how often have you done each of the following activities **outside of school**? Select **one** answer choice on each row.

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a.	Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	0	®	O	Ø	¢	VH859162
b.	Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	0	®	Ø	Ø	©	VH891927
c.	Read about science topics in books or magazines (print or digital)	0	®	Ø	Ø	©	VH638987
d.	Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	0	ſ	©	Ø	Ē	VH893268

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy science activities.	B	®	O	D	Œ	VH639117
b. I look forward to my science class.	A	®	O	Ø	Ē	VH639120
c. I am interested in the things I learn in science class.	@	®	O	Ø	Ē	VH639122
d. I think making an effort in science class is worthwhile.	@	®	O	Ø	Ē	VH639125
e. I think science will help me even when I am not in school.	@	®	O	Ø	Ē	VH639127
f. I think it is important to do well on science assignments.	۵	®	O	Ø	Ē	VH639128

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Came up with research questions to explore how something works	Ø	®	Q	Ø	¢	VH639744
b.	Made drawings that explain why or how something happens	Ø	ß	Ø	Ø	Ē	VH639749
c.	Came up with experiments that you could use to answer a research question	Ø	ß	Ø	Ø	¢	VH639753
d.	Used tables or graphs to identify relationships between variables	Ø	ഀ	Ø	Ø	¢	VH639760
e.	Used math equations to explain or support scientific conclusions	Ø	B	Ø	Ø	Ē	VH639763
f.	Used evidence from experiments to explain why something happens	Ø	®	Ø	Ø	¢	VH639765
g.	Used information to disagree with someone about a scientific idea	Ø	ß	Ø	Ø	Ē	VH639770
h.	Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	Ø	®	Ø	Ø	Ē	VH639777

29. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row.

30. How often do you talk about things you have learned in science class with someone in your family?

- (a) Never or hardly ever
- [®] Once in a while
- © Sometimes
- Often
- © Very often

Appendix K-1aq: Summary of Changes Operational Grade 12 Science

2019 Operational Grade 12 Science Student						
Previous item	2019 item	D/A/ R/NC+	Rationale			
 In this school year, how often have you understood what the teacher talks about in science class? 	VIENNAT N/A	D	Due to overlap with			
Never or hardly ever			new content			
D Once in a while			and to keep			
© Sometimes						
D Often			student			
D Always or almost always			burden low, this item was			
(2018 Grade 12)			dropped.			
 In this school year, how often have you done well on your science tests? Never or hardly ever 	VIRSENVY N/A	D	Due to overlap with			
Once in a while			new content			
© Sometimes			and to keep			
© Often						
D Always or almost always			student burden low,			
(2018 Grade 12)			this item was dropped.			
 In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)? 	VTIESXXXX N/A	D	Due to overlap with			
Never or hardly ever			new content			
D Once in a while						
© Sometimes			and to keep			
© Often			student			
Always or almost always Always			burden low,			
			this item was			
(2018 Grade 12)			dropped.			

							2019 item							D/A/ R/NC+	Rationale
In your science class projects on any of the						Vila 2017)	 In your science class t projects on any of the 						\$1630071	NC	N/A
	Never or hardly ever	Once in a while	Sometimes	Often	Very often			Never or hardly ever	Once in a while	Sometimes	Often	Very often			
Living things (for example, plants, animals, or bacteria)	۵	Ð	Ø	Ø	Φ	V11639072	 Living things (for example, plants, animals, or bacteria) 	۲	Ð	Ø	0	Φ	VHA0072		
Electricity (for example, circuits, patteries, or light pulbs)	۲	œ	0	Ø	θ	V18639674	 Electricity (for example, circuits, batteries, or light bulbs) 	Ø	Ð	0	0	Φ	VH5/0074		
Themicals (for example, vinegar, oaking soda, or iydrogen peroxide)	۵	Φ	0	Φ	θ	V11639073	 Chemicals (for example, vinegar, baking soda, or hvdrogen peroxide) 	۲	Ð	ø	٩	Φ	¥H6,9907.8		
Rocks or minerals (for xample, diamond, ron, or lava rock)	٩	Φ	Ø	Φ	Φ	VH639077	 d. Rocks or minerals (for example, diamond, iron, or lava rock) 	ø	0	Ø	ø	Φ	V2H619077		
Fechnology and rigineering (for scample, robots, oulley systems, or amps)	۹	¢	Θ	Ð	Φ	VH630077	c. Technology and engineering (for example, robots, pulley systems, or	®	Ð	ø	Ø	Φ	VH03//076		
In your science class	this year, how		u done each of	the followin	g	73629411	ramps) Issue: Organizatio 29. In your science class t activities? Select one	his year, how	often have yo		the followin	18	¥1639311	R	To simplif
In your science class	this year, how answer choice Never or	on each row. Once in a	u done each of Sometimes	the followin Often	Always or almost	VIRSINIT	Issue: Organizatio	his year, how answer choice Never or	often have yo on each row, Once in a		the followin Often	Always or almost	V163011	R	To simplif wording based on
In your science class activities? Select one lead from a science extbook (print or	this year, how answer choice	on each row.			Always or	VH639033	Issue: Organizatio	his year, how answer choice	often have yo on each row.			Always or	V180011	R	wording based on
In your science class (activities? Select one cead from a science extbook (print or igital) end a book or tagazine (print or igital) about science	this year, how answer choice Never or hardly ever	on each row. Once in a while	Sometimes	Often	Always or almost always	П	Issue: Organizatio 29. In your science class t activities? Select one : a. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) about science	his year, how answer choice Never or hardly ever	often have ye on each row, Once in a while	Sometimes	Often	Always or almost always		R	wording based on stakehold feedback, sub-item
In your science class activities? Select one tead from a science extbook (print or igital) tead a book or nagazine (print or igital) about science opics Jsed the Internet to earn about science	this year, how answer choice Never or hardly ever	on each row. Once in a while ©	Sometimes	Often	Always or almost always	VERANGER.	Issue: Organizatio 29. In your science class t activities? Select one : a. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) about science topics c. Used the Internet to learn about science	his year, how answer choice Never or hardly ever	often have ye on each row, Once in a while D	Sometimes	Often	Always or almost always	V1639313	R	wording based on stakehold feedback, sub-item
In your science class activities? Select one tead from a science extbook (print or ligital) tead a book or nagazine (print or ligital) about science opics Jsed the Internet to earn about science opics Vatched a short video lip, movic, or video hout science topics	his year, how answer choice Never or hardly ever	on each row. Once in a while ©	Sometimes ©	Often ©	Always or almost always D D	YH638314 VH658315	Issue: Organizatio 29. In your science class t activities? Select one : a. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) about science topics c. Used the Internet to learn about science topics d. Watched a short video clip, movie, or video	his year, how answer choice Never or hardly ever \odot	often have ye on each row, Once in a while D	Sometimes © ©	Often D	Always or almost always Ф Ф	99639313 99639313	R	wording based on stakehold feedback, sub-item
18 Grade 12) In your science class i activities? Select one extbook (print or ligital) Read a book or magazine (print or ligital) about science opics Jsed the Internet to earn about science opics Vatched a short video libout science topics Jsed a magnifying class or microscope for ooking at small things	his year, how answer choice Never or hardly ever	on each row. Once in a while	Sometimes © ©	Often © ©	Always or almost always D D D	YH638314 VH658315	Issue: Organizatio 29. In your science class t activities? Select one : a. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) about science topics c. Used the Internet to learn about science topics d. Watched a short video	his year, how answer choice Never or hardly ever	often have ye on each row, Once in a while D D	Sometimes © ©	Often © ©	Always or almost always © ©	V1639313 V1639315 V1639314	R	based on stakehold

Previous item								2019 item								D/A/ R/NC+	Rationale
 Which courses hav than once, give the INCLUDE courses as part of a longer 	e most recen s taken in su	t year you to	ook it. Select	t one answer	choice on ea	ach row. at were only		24. Which courses hav than once, give the INCLUDE courses as part of a longer	e most recer taken in su	t year you to	ook it. Selec	t one answer	choice on e	ach row. at were only		R	The "Other (Please specify)"
	I did not take this course.	course in Grade 8.	I took this course in Grade 9.	course in Grade 10.	course in Grade 11.	I am taking or have taken this course in Grade 12.			I did not take this course.	I took this course in Grade 8.	I took this course in Grade 9,	I took this course in Grade 10.	course in	I am taking or have taken this course in Grade 12.			response option was removed. Thi
a. General science b. First-year biology	0	©	0 0	0	Ð	Ð	VH241150 VH241151	a. General science	Ð	Ø	©	۵	Θ	Ð	V18241150		response
c. Second-year biology	0	0	0	Ð	Ð	θ	VH241159	 b. First-year biology c. Second-year biology 	0	0	0	0	0 0	0	VED40151 VED40159		option is only
d. Life science (other than biology)	۲	@	0	٩	©	Ð	VH241148	d. Life science (other than biology)	٩	۲	0	0	Ð	Ð	VIII241140		used in pilot
e. First-year chemistry	۲	۵	O	Φ	Ø	Ð	VH241154	e. First-year chemistry	Ø	Ð	Ø	0	Θ	θ	VID41164		administratio
f. Second-year chemistry	۲	٢	0	۲	Ð	Ð	VH241 (55	f. Second-year chemistry	Ø	®	Ø	Ø	Ð	Ð	111241155		ns.
g. First-year physics	0	(1)	Q	٢	٢	٢	VH241156	g. First-year physics	Ø	æ	Ø	Ø	Ø	Ð	VH24)156		
h. Second-year physics i. Physical science	۵	٩	Q	Φ	©	Ð	VH241157	h. Second-year physics	Ø	٩	©	0	Ð	Ð	Y31241167		
(other than chemistry or physics)	۵	Ð	©	Φ	©	©	VH241149	i. Physical science (other than chemistry or	Ø	Ð	0	Ð	θ	Ð	VH241149		
j. Earth and space science	۲	٩	0	۵	Ð	Ð	VH241147	physics) j. Earth and space	٩	œ	0	0	Φ	Ð	VH241147		
k. Engineering and technology	۲	٢	0	Ð	©	٩	VH241158	science k. Engineering and	0	0	0	0	Ð	Ð	VHD41158		
 Other science course (Please specify): 	۲	٦	Ø	Ø	©	©	VH241153	technology									
2018 Grade 1	2)							Issue: Organiza	ition of	Instruc	tion						
 Are you currently en high school or colleg 	nrolled in or	have you ta	ken any onl	ine science	courses for		VH240111	 Are you currently e high school or colle 		r have you t	aken any on	line science	courses for	ç	¥H240111	NC	N/A
Tes 2								Tes									
Mo No								D No									
2018 Grade 1	2)							Issue: Organiza	ition of	Instruc	tion						

Previous item	2019 item	D/A/ R/NO	
 Are you currently enrolled in or have you taken an Advanced Placement[®] course in science? Select all that apply. 	vie 26. Are you currently enrolled in or have you taken an Advanced Placement [®] course in science? Select all that apply.	NC	N/A
Yes, I am enrolled in or have taken Advanced Placement Biology.	Tes, I am enrolled in or have taken Advanced Placement Biology.		
Yes, I am enrolled in or have taken Advanced Placement Environmental Science.	© Yes, I am enrolled in or have taken Advanced Placement Environmental Science.		
© Yes, I am enrolled in or have taken Advanced Placement Chemistry.	© Yes, I am enrolled in or have taken Advanced Placement Chemistry.		
Tes, I am enrolled in or have taken Advanced Placement Physics C.	Tes, I am enrolled in or have taken Advanced Placement Physics C.		
© Yes, I am enrolled in or have taken Advanced Placement Physics 1.	D Yes, I am enrolled in or have taken Advanced Placement Physics 1.		
Yes, I am enrolled in or have taken Advanced Placement Physics 2.	D Yes, I am enrolled in or have taken Advanced Placement Physics 2.		
Yes, I am enrolled in or have taken Advanced Placement Computer Science A.	© Yes, I am enrolled in or have taken Advanced Placement Computer Science A.		
Yes, I am enrolled in or have taken Advanced Placement Computer Science Principles.	Tes, I am enrolled in or have taken Advanced Placement Computer Science Principles.		
O No, I have never taken an Advanced Placement science course.	D No, I have never taken an Advanced Placement science course.		
(2018 Grade 12)	Issue: Organization of Instruction		
9. Are you currently taking a science course?	27. Are you currently taking a science course?	NC	N/A
∞ Yes	© Yes		
D No	Φ No		
(2018 Grade 12)	Issue: Organization of Instruction		

Previous item							2019 item							D/A/ R/NC+	Rationale
10. Thinking about science following activities? S				o do each of th	ie.	VH651609	 Thinking about science following activities? Set 				o do each of th	c	VHist roop	R	Due to a lack of response
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			I definitely can't	I probably can't	Maybe	I probably can	I definitely can			variability and
a. Describe different ways to heat or cool water	۹	٩	0	Φ	Ð	VH638868	a. Describe how the length of a vibrating string affects the	٩	Ð	Ø	0	Ð	V94636820		to keep student
 b. Describe how the length of a vibrating string affects the sound it makes 	۹	٩	0	Ø	Φ	VH638870	sound it makes b. Design an experiment to show how sunlight affects the growth	ø	Ø	0	Ø	Ð	V88/38/972		burden low,
c. Design an experiment to show how sunlight affects the growth of a plant	Θ	٩	0	Ø	Θ	VH638872	of a plant c. Decide which tool to use if you want to	Ø	Ø	0	0	Ð	¥21635583		sub-items a, d, e, f, and g
d. Use examples to show how one living thing has helped another to survive	0	٩	0	۵	©	VH638875	measure wind speed d. Design an experiment to test how the growth of a plant is affected by	Ø	Ð	Ø	Ð	Ð	V34638877		were dropped.
 e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond 	0	Ø	0	Φ	Φ	VH638876	light, water, and soil quality e. Create a diagram that shows how bees and plants need each other for survival	٩	Φ	Ø	۵	¢	VH638878		
f. Decide which tool to use if you want to measure wind speed	Θ	®	0	Θ	Ð	VH638883	f. Describe how the combination of parental genes can								
g. Describe why the weather in the summer is different than in the winter	Θ	٢	0	Φ	Φ	VH638885	result in different traits in their offspring (for example, eye or hair color)	Ø	0	Ø	Ø	Ð	V14638879		
b. Design an experiment to test how the growth of a plant is affected by light, water, and soil quality	0	Ð	0	٩	Φ	VH638877									
 Create a diagram that shows how bees and plants need each other for survival 	Θ	٩	0	Φ	©	VH638878									
j. Describe how the combination of parental genes can result in different traits in their offspring (for example, eye or hair color)	۵	Ð	0	Ø	Ð	VH638879									

Previous item							2019 item							D/A/ R/NC+	Rationale
 How much does each choice on each row. 	of the follow	ring statemen	ts describe yo	ou? Select one	answer	Vin.v60%	31. How much does each choice on each row.	of the follow	ing statemen	ts describe yo	u? Select one	answer	V16.39070	R	This item was divided into
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			two items to
 a. I want other students to think I am good at science. 	Ø	Ð	Ø	Ø	θ	V16/19080	 a. I want other students to think I am good at science. 	Ð	٢	0	Φ	Ð	V14639080		reduce scrolling and
b. I want to show others that science schoolwork is easy for me.	9	Θ	0	8	θ	VH619082	b. I want to show others that science schoolwork is easy for me.	٩	٩	٥	Φ	θ	VH639062		align
c. I want to look smart in comparison to the other students in my science class.	۵	Ð	0	θ	θ	1746304284	c. I want to look smart in comparison to the other students in my science class.	Ø	œ	0	œ	Φ	V98639084		with similar
d. I want to get better science grades than most other students in my class.	Θ	ø	Q	ø	θ	VH732329	d. I want to get better grades than most other students in my science	٩	¢	Q	Φ	Ð	VHiso366		subjects. Additionally,
c. I want to learn as much as possible in my science class.	0	۵	Ø	ø	θ	VH639Q86	class.								the wording
 I want to become better in science this year. 	Θ	٩	٩	θ	Φ	VIIA3MOD 7	32. How much does each choice on each row.	of the follow	ving statemen	uts describe yo	u? Select one	answer	A180/00175		of sub-items d and h (now
g. 1 want to understand as much as 1 can in my science class.	0	Ð	Ø	0	θ	V11639089		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			sub-item d in
h. I want to master a lot of new science skills in my class.	Ð	Ð	0	٥	Φ	V10732330	 a. I want to learn as much as possible in my science class. 	٩	Φ	٢	Φ	٩	V)1639065		the second matrix) have
							b. I want to become better in science this year.	Ø	Θ	0	Θ	ø	¥16330#7		been revised,
							c. I want to understand as much as I can in my science class.	۲	Ø	ø	ø	Φ	V1853908#		with the word "science"
							d. I want to master a lot of new skills in my science class.	Ø	Ð	©	Ø	Φ	VEtsenjäsei		moved to before the
(2018 Grade 12)							Issue: Student Fa	ctors							word "class".

Previous item							2019 item							D/A/ R/NC+	Rationale
12. In this school year, ho of school? Select one a			of the follow	ing activities	outside	VIIn38031	34. In this school year, how of school? Select one an			of the followi	ing activities	outside	VH639951	R	Due to a lack of response
	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day			variability and
 Work on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets) 	60	Ð	Ø	Ð	Ð	A34049970	 Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets) 	Ø	Ð	Ø	Θ	Φ	VHXXV163.		to keep student burden low, sub-item b
b. Write or blog about science topics	Ø	Φ	0	0	θ	VHIGHNES	b. Used scientific tools								was dropped.
 c. Use scientific tools (for example, microscopes, thermometers, beakers, or weighing 	æ	٩	Ø	Φ	Φ	VIII686985	(for example, microscopes, thermometers, beakers, or weighing scales) c. Read about science	Ø	œ	Ø	Ø	Φ	VH801927		Additionally, the verbs at
scales) d. Read about science topics in books or magazines (print or	Ø	Ø	O	Φ	θ	¥240/88287	 c. Read about science topics in books or magazines (print or digital) d. Attended clubs or 	Ø	Ð	0	Ø	Ð	VH638937		the beginning of the origina
digital) c. Attend clubs or	-						a. Attended clubs of programs that include science or engineering activities (for example	Ø	æ	0	0	θ	VH893269		sub-items a and c have
programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)	¢	٢	Ø	٢	Φ	()IU9699)	chemistry club, robotics club, or coding programs)	. Car							to past tense for
science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 12) 13. How much does each						AMP0012	chemistry club, robotics club, or coding programs) Issue: Student Fac 33. How much does each o		ving statemen	ts describe yo	u? Select one	answer	.vHebal18	NC	to past tense for consistency
cience or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 12)	a of the follow	ving statemen A little bit	ts describe yo Somewhat	u? Select one Quite a bit	answer Exactly like		chemistry club, robotics club, or coding programs)	of the follow	A little bit	Somewhat	Quite a bit	Exactly like	VHADILIS	NC	to past tense for consistency with the item stem.
science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 12) 13. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? Select one	answer		chemistry club, robotics club, or coding programs) Issue: Student Fac 33. How much does each o choice on each row,	of the follow Not at all like me	A little bit like me		Quite a bit like me		VH430115	NC	to past tense for consistency with the item stem.
science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 12) 13. How much does each choice on each row.	of the follow Not at all like me	ving statemen A little bit like me	ts describe yo Somewhat like me	u? Select one Quite a bit like me	answer Exactly like me	Antonia	chemistry club, robotics club, or coding programs) Issue: Student Fac 33. How much does each o choice on each row.	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me ©	Exactly like me		NC	to past tense for consistency with the item stem.
 science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 12) 13. How much does each choice on each row. a. 1 enjoy science activities. 	of the follow Not at all like me	wing statemen A little bit like me D	ts describe yo Somewhat like me ©	u? Select one Quite a bit like me ©	answer Exactly like me	Antonia	chemistry club, robotics club, or coding programs) Issue: Student Fac 33. How much does each o choice on each row, a. I enioy science activities. b. I look forward to my science class. c. I am interested in the things I learn in	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	V1639117	NC	to past tense for consistency with the item stem.
 science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 12) 13. How much does each choice on each row. a. 1 enjoy science activities. b. 1 look forward to my science class. c. 1 am interested in the things I learn in science class. d. 1 think making an cifort in science class is worthwhile. 	of the follow Not at all like me ©	ving statemen A little bit like me ©	ts describe yo Somewhat like me ©	u? Select one Quite a bit like me ©	e answer Exactly like me © ©	YH6041(5 Y21639117 Y91639125)	chemistry club, robotics club, or coding programs) Issue: Student Fac 33. How much does each o choice on each row.	of the follow Not at all like me ©	A little bit like me D	Somewhat like me ©	Quite a bit like me ©	Exactly like me Ф	V26639117 V18639120	NC	to past tense for consistency with the item stem.
 science or engineering activities (for example, chemistry club, robotics club, or coding programs) 2018 Grade 12) 13. How much does each choice on each row. a. Lenjoy science activities. b. Hook forward to my science class. c. I am interested in the things Hearn in science class. d. I think making an effort in science class. 	Not at all like me	A little bit like me D D D	somewhat like me © ©	u? Select one Quite a bit like me © ©	answer Exactly like me © ©	24809152 24809155 24809155	chemistry club, robotics club, or coding programs) Issue: Student Fac 33. How much does each o choice on each row, a. I enioy science activities. b. I look forward to my science class. c. I am interested in the things I learn in science class. d. I think making an effort in science class	of the follow Not at all like me D D D	A little bit like me D D	Somewhat like me © ©	Quite a bit like me © ©	Exactly like me Ф Ф	V26639317 V18639320 V38639320	NC	consistency with the item stem.

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item							2019 item							D/A/ R/NC+	Rationale
14. In this school year, ho class? Select one answ	w often have y er choice on e	you done the seach row.	following activ	ities in your	science	VH6397,33	 In this school year, ho class? Select one answ 			following activ	ities in your	science	VH639733	NC	N/A
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
a. Came up with research questions to explore how something works	0	6	0	Θ	٩	VH639744	a. Came up with research questions to explore how something works	0	٩	Ø	٩	©	VH639744		
 Made drawings that explain why or how something happens 	Θ	٢	Ø	۵	٢	VH639749	 Made drawings that explain why or how something happens 	@	⊕	Ø	Ø	٢	VH639749		
c. Came up with experiments that you could use to answer a research question	Θ	۵	Ø	۵	Ø	VH639753	c. Came up with experiments that you could use to answer a research question	Ø	B	Ø	Ø	¢	VH639753		
d. Used tables or graphs to identify relationships between variables	Θ	(6)	Ø	۵	٢	VH639760	d. Used tables or graphs to identify relationships between variables	Ø	٩	Ø	٩	¢	VH639760		
e. Used math equations to explain or support scientific conclusions	Θ	⊕	Ø	0	Ø	VH639763	e. Used math equations to explain or support scientific conclusions	Ø	(1)	Ø	Ø	٢	VH639763		
f. Used evidence from experiments to explain why something happens	0	\$	Ø	0	٢	VH639765	f. Used evidence from experiments to explain why something	Ø	₪	Θ	٩	C	VH639765		
 g. Used information to disagree with someone about a scientific idea 	0	10	Ø	0	٢	VH639770	happens g. Used information to disagree with someone	۵	٢	Q	Ø	¢	VH639770		
 Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment 	۵	Ð	Q	۵	©	VH639777	about a scientific idea h. Combined information multiple sources (for example, books, websites, or articles) for an assignment	0	٩	Ø	۵	Ø	VH639777		
(2018 Grade 12)							Issue: Organizatio	on of Ins	truction	-					
15. How likely are you to p	oursue a caree	r in science?				VHeBik71	37. How likely are you to j	pursue a caree	r in science?				VII63987[N/C	N/A
Not at all likely							(Not at all likely								
Mot likely							Not likely								
© Somewhat likely							© Somewhat likely								
Quite likelyExtremely likely							Ø Quite likelyØ Extremely likely								
(2018 Grade 12)							Issue: Student Fa	ctors							

Previous item				2019 item				D/A/ R/NC+	Rationale
16. In this school year, have you done any of the fc career in science? Select one answer choice on	ollowing activities to each row.	o prepare for a	- v16480723	 In this school year, have you done any of the career in science? Select one answer choice of 	following activities to pr on each row.	repare for a	¥8560721	R	To keep student
	Yes	No			Yes	No			
a. Attended a career fair	٩	Ð	¥116407.19	a. Spoken with a guidance counselor or	0	Ø	VH640754		burden low
Answered questions on a career interest survey (for example, the Vocational-Interest Inventory, the Career Interest Test, or the Strong Interest Inventory[®])	۵	Φ	VI(640746	teacher about science-related careers b. Spoken with a guidance counselor or teacher about science-related college programs	0	®	V21640757		sub-items a b, c, d, e, h,
c. Taken a science course in addition to what you need to graduate.	⊛	۳	131640748	 c. Shadowed a person who does science-related work at his or her iob 	Ø	œ	V11640773		and k were
d. Collected information about science-related careers on your own	۲	Θ	VH840749	d. Worked as an intern or employee doing science-related work	۵	Ø	VH640773		dropped.
 Collected information about science-related college programs on your own 	Ø	⊕	VH640750	Science rented work					
 Spoken with a guidance counselor or teacher about science-related careers 	Ø	œ	v34040754						
 g. Spoken with a guidance counselor or teacher about science-related college programs 	Ø	æ	V166407A7						
 h. Spoken with a family member or family friend who works in a scientific field about his or her job 	۵	œ	¥1640758						
i. Shadowed a person who does science-related work at his or her job	Φ	٩	VH640771						
). Worked as an intern or employee doing science-related work	Ð	Φ	VH640773						
k. Other (Please specify):	۲	Ð	VH640776						
(2018 Grade 12)				Issue: Student Factors					
17. How often do you talk about things you have le someone in your family?	arned in science cla	iss with	V11743438	36. How often do you talk about things you have someone in your family?	learned in science class	with	V8743438	NC	N/A
Solution Never or hardly ever				Never or hardly ever					
D Once in a while				D Once in a while					
© Sometimes				© Sometimes					
D Often				D Often					
				© Very often					
(2018 Grade 12)									

Appendix K-1ar: Operational Grade 12 Science

24. Which courses have you taken from eighth grade to the present? If you have taken a course more than once, give the most recent year you took it. Select **one** answer choice on each row. INCLUDE courses taken in summer school, but DO NOT INCLUDE topics that were only taught as part of a longer course.

		I did not take this course.	I took this course in Grade 8.	I took this course in Grade 9.	I took this course in Grade 10.	I took this course in Grade 11.	I am taking or have taken this course in Grade 12.	
a.	General science	A	®	Ô	O	Ē	Ē	VH241150
b.	First-year biology	A	®	©	O	Ē	Ē	VH241151
c.	Second-year biology	A	®	O	Ø	Ē	Ē	VH241159
d.	Life science (other than biology)	A	®	O	D	Ē	Ē	VH241148
e.	First-year chemistry	A	®	0	Ø	Ē	Ē	VH241154
f.	Second-year chemistry	A	®	O	D	Ē	Ē	VH241155
g.	First-year physics	A	®	Ô	O	Ē	Ē	VH241156
h.	Second-year physics	A	®	O	Ø	Ē	Ē	VH241157
i.	Physical science (other than chemistry or physics)	Ø	ß	0	Ø	Θ	Ð	VH241149
j.	Earth and space science	Ø	®	O	D	Ē	Ē	VH241147
k.	Engineering and technology	A	®	0	Ø	Ē	Ē	VH241158

- **25.** Are you currently enrolled in or have you taken any online science courses for high school or college credit?
 - Yes
 Yes
 - B No

VH240112

- **26.** Are you currently enrolled in or have you taken an Advanced Placement[®] course in science? Select **all** that apply.
 - Tes, I am enrolled in or have taken Advanced Placement Biology.
 - (Yes, I am enrolled in or have taken Advanced Placement Environmental Science.
 - © Yes, I am enrolled in or have taken Advanced Placement Chemistry.
 - ^(D) Yes, I am enrolled in or have taken Advanced Placement Physics C.
 - © Yes, I am enrolled in or have taken Advanced Placement Physics 1.
 - © Yes, I am enrolled in or have taken Advanced Placement Physics 2.
 - © Yes, I am enrolled in or have taken Advanced Placement Computer Science A.
 - (D) Yes, I am enrolled in or have taken Advanced Placement Computer Science Principles.
 - No, I have never taken an Advanced Placement science course.

27. Are you currently taking a science course?

- (A) Yes
- B No

		Never or hardly ever	Once in a while	Sometimes	Often	Very often	
a.	Living things (for example, plants, animals, or bacteria)	8	ß	Ø	Θ	Ē	VH639072
b.	Electricity (for example, circuits, batteries, or light bulbs)	0	ഀ	0	Ø	¢	VH639074
c.	Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	(3)	ഀ	Ø	Ø	¢	VH639073
d.	Rocks or minerals (for example, diamond, iron, or lava rock)	Ø	ß	Ø	0	Ē	VH639077
e.	Technology and engineering (for example, robots, pulley systems, or ramps)	Ø	®	Ø	Φ	Ē	VH639076

28. In your science class this year, how often have you done hands-on activities or projects on any of the following topics? Select **one** answer choice on each row.

29.	In your science class this year, how often have you done each of the following
	activities? Select one answer choice on each row.

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Read from a science textbook (print or digital)	Ø	ß	Ø	Ø	Ē	VH639313
b.	Read a book or magazine (print or digital) about science topics	Ø	Θ	0	Θ	Θ	VH639315
c.	Used the Internet to learn about science topics	Ø	ß	0	Ø	Ē	VH639314
d.	Watched a short video clip, movie, or video about science topics	Ø	ß	0	Ø	Ē	VH639312
e.	Used a magnifying glass or microscope	A	B	Ö	Ø	Ē	VH887984
f.	Used a thermometer or weighing scale for making measurements	Ø	ß	O	Ø	Ē	VH639078

		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	
a.	Came up with research questions to explore how something works	Ø	(6)	O	Ø	Ē	VH639744
b.	Made drawings that explain why or how something happens	Ø	ß	O	0	Ē	VH639749
c.	Came up with experiments that you could use to answer a research question	Ø	ß	O	Ø	Ē	VH639753
d.	Used tables or graphs to identify relationships between variables	Ø	®	O	Ø	Ē	VH639760
e.	Used math equations to explain or support scientific conclusions	Ø	®	O	Ø	Ē	VH639763
f.	Used evidence from experiments to explain why something happens	Ø	®	O	Ø	Ē	VH639765
g.	Used information to disagree with someone about a scientific idea	Ø	ß	O	0	Ē	VH639770
h.	Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	۵	₿	©	Ø	Ē	VH639777

30. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row.

338

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want other students to think I am good at science.	Ø	®	O	Ø	Ē	VH639080
b. I want to show others that science schoolwork is easy for me.	(3)	ß	Ø	Ø	¢	VH639082
c. I want to look smart in comparison to the other students in my science class.	(3)	ß	Ø	Ø	Ē	VH639084
d. I want to get better grades than most other students in my science class.		®	Ø	Θ	Ē	VH860366

31. How much does each of the following statements describe you? Select one answer choice on each row.

32. How much does each of the following statements describe you? Select one answer choice on each row.

		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a.	I want to learn as much as possible in my science class.	Ø	B	O	Ø	Ē	VH639086
b.	I want to become better in science this year.	(9)	B	0	Ø	Ē	VH639087
c.	I want to understand as much as I can in my science class.	0	B	0	Ø	Ē	VH639089
d.	I want to master a lot of new skills in my science class.	0	₿	Q	Ø	Ē	VH860369

VH859155

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I enjoy science activities.	Ø	B	O	Ø	Ē	VH639117
b. I look forward to my science class.	Ø	B	O	Ø	Ē	VH639120
c. I am interested in the things I learn in science class.	Ø	®	O	Ø	Ē	VH639122
d. I think making an effort in science class is worthwhile.	Ø	®	O	Ø	Ē	VH639125
e. I think science will help me even when I am not in school.	æ	®	O	Ø	¢	VH639127
f. I think it is important to do well on science assignments.	Ø	B	C	Ø	Ē	VH639128

33. How much does each of the following statements describe you? Select **one** answer choice on each row.

34. In this school year, how often have you done each of the fol	lowing activities outside
of school? Select one answer choice on each row.	

		Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a.	Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	0	℗	Ø	Ø	©	VH859162
b.	Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	0	®	O	Ø	¢	VH891927
c.	Read about science topics in books or magazines (print or digital)	Ø	ß	Ø	Ø	¢	VH638987
d.	Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	0	ſ	Ø	Ø	Ē	VH893268

- I definitely I probably I probably I definitely Maybe can't can't can can a. Describe how the length of a vibrating VH638870 A B \bigcirc \odot Ð string affects the sound it makes b. Design an experiment to show how sunlight VH638872 A B © D Ð affects the growth of a plant c. Decide which tool to use if you want to VH638883 A B \bigcirc \bigcirc Ð measure wind speed d. Design an experiment to test how the growth of a plant is affected by VH638877 A O Đ B \bigcirc light, water, and soil quality e. Create a diagram that shows how bees and VH638878 A B \bigcirc \odot Ð plants need each other for survival f. Describe how the combination of parental genes can result in different VH638879 A B O \odot Đ traits in their offspring (for example, eye or
- **35.** Thinking about science, do you think that you would be able to do each of the following activities? Select **one** answer choice on each row.

hair color)

- **36.** How often do you talk about things you have learned in science class with someone in your family?
 - Never or hardly ever
 - Once in a while
 - © Sometimes
 - Often
 - © Very often
- **37.** How likely are you to pursue a career in science?
 - Not at all likely
 - Not likely
 - © Somewhat likely
 - O Quite likely
 - © Extremely likely
- **38.** In this school year, have you done any of the following activities to prepare for a career in science? Select **one** answer choice on each row.

		Yes	No	
a.	Spoken with a guidance counselor or teacher about science-related careers	Ø	ß	VH640754
b.	Spoken with a guidance counselor or teacher about science-related college programs	0	®	VH640757
c.	Shadowed a person who does science-related work at his or her job	Ø	ß	VH640771
d.	Worked as an intern or employee doing science-related work	0	®	VH640773

VH639871

Appendix K-1as: Summary of Changes Operational Grade 4 NIES

Previous item	2019 item	D/A/ R/NC+	Rationale
VC759180 1. How much do you know about your American Indian tribe or Alaska Native group? For example, you may know about the history, traditions, or arts and crafts of your tribe or group. (2) Nothing (2) A little (2) Some (2) A lot	 Nothing A little Some A lot 	NC	N/A
(2015 Grade 4) 2. Who taught you most of what you know about American Indian or Alaska Native history? (D No one has taught me about American Indian or Alaska Native history. (D Family members (Friends (Tribal representatives or elders (Some else (please specify):	 2. Who taught you most of what you know about American Indian or Alaska Native history? No one has taught me about American Indian or Alaska Native history. Family members Friends Teachers Tribal representatives or elders Someone else (please specify):	NC	N/A
 (2015 Grade 4) 3. Who taught you most of what you know about American Indian or Alaska Native traditions (ways of life, customs)? ③ No one has taught me about American Indian or Alaska Native traditions. ⑤ Family members ③ Friends ④ Tribal representatives or elders ④ Some clse (please specify): (2015 Grade 4) 	 Who taught you most of what you know about American Indian or Alaska Native traditions (ways of life, customs)? No one has taught me about American Indian or Alaska Native traditions. Family members Friends Teachers Tribal representatives or elders Someone else (please specify): 	NC	N/A

Previous item	2019 item	D/A/ R/NC+	Rationale
 Who taught you most of what you know about American Indian or Alaska Native arts and crafts? No one has taught me about American Indian or Alaska Native arts and crafts. Family members Friends Teachers Tribal representatives or elders Some else (please specify):	 Who taught you most of what you know about American Indian or Alaska Native arts and crafts? No one has taught me about American Indian or Alaska Native arts and crafts. Family members Friends Teachers Tribal representatives or elders Someone else (please specify):	NC	N/A
(2015 Grade 4) S. How often do you go to American Indian or Alaska Native ceremonies and gatherings? O Never D Every few years O At least once a year D Several times a year (2015 Grade 4)	 5. How often do you go to American Indian or Alaska Native ceremonies and gatherings? Ø Never Ø Every few years Ø At least once a year Ø Several times a year 	NC	N/A
6. How often do members of your family talk to each other in your American Indian or Alaska Native language? Once or twice a month Once or twice a week Every day or almost every day (2015 Grade 4)	 How often do members of your family talk to each other in your American Indian or Alaska Native language? Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day 	NC	N/A

Previous item	2019 item	D/A/ R/NC+	Rationale
vc759195 7. How often do people in your school talk to each other in your American Indian or Alaska Native language?	7. How often do people in your school talk to each other in your American Indian or Alaska Native language? Once or hardly ever Once or twice a month Once or twice a week Every day or almost every day	NC	N/A
(2015 Grade 4) VHI53907 8. How often do you attend classes in school that are taught in an American Indian or Alaska Native language? (a) My school does not offer classes that are taught in an American Indian or Alaska Native language. (b) Never or hardly ever (c) Once or twice a month (c) Once or twice a week (c) Every day or almost every day	 NUMENT 8. How often do you attend classes in school that are taught in an American Indian or Alaska Native language? My school does not offer classes that are taught in an American Indian or Alaska Native language. Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day 	NC	N/A
 (2015 Grade 4) 9. How do you rate yourself in speaking an American Indian or Alaska Native language? I cannot speak an American Indian or Alaska Native language. I can speak a few words or phrases. I can speak well. 	 9. How do you rate yourself in speaking an American Indian or Alaska Native language? I cannot speak an American Indian or Alaska Native language. I can speak a few words or phrases. I can speak well. 	NC	N/A
(2015 Grade 4) VHHMODG7 10. How do you rate yourself in reading an American Indian or Alaska Native language? Ф I cannot read in an American Indian or Alaska Native language. Ф I can read a few words or phrases. Ф I can read well.	 10. How do you rate yourself in reading an American Indian or Alaska Native language? I cannot read in an American Indian or Alaska Native language. I can read a few words or phrases. I can read well. 	NC	N/A

Previous item	2019 item	D/A/ R/NC+	Rationale
(2015 Grade 4)		-	
VIDEONS 11. Who taught you most of what you know about an American Indian or Alaska Native language? O No one has taught me about an American Indian or Alaska Native language.	11. Who taught you most of what you know about an American Indian or Alaska Native language?	NC	N/A
	 No one has taught me about an American Indian or Alaska Native language. Family members 		
D Family members	© Friends		
© Friends	© Teachers		
© Teachers	Tribal representatives or elders		
Tribal representatives or elders	© Someone else (please specify):		
© Some else (please specify):	- Converter 1991 999 Visible Marator (Charles Annual Converter Charles Annual Converter Converte		
(2015 Grade 4)			
VHI58483 12. During 4th grade, have you attended school field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people?	ve 12. During 4th grade, have you attended school field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people? ① Yes ① No	NC	N/A
T No			
(2015 Grade 4)			
VH153935 13. During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people in school? ① Yes, once or twice ① Yes, three or more times ② No	 13. During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people in school? Ø Yes, once or twice Ø Yes, three or more times Ø No 	NC	N/A
(2015 Grade 4)			

Previous item	2019 item	D/A/ R/NC+	Rationale
VHI53940 14. During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people outside of school? ② Yes, once or twice ③ Yes, three or more times ③ No	 14. During 4th grade, have you used books, videos, or other materials (including, Internet resources) about American Indian or Alaska Native people outside of school? Yes, once or twice Yes, three or more times No 	NC	N/A
(2015 Grade 4)			
 WHIS3945 15. In school, do you have access to a library, media center, or resource center with books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people? ② Yes ③ No 	 In school, do you have access to a library, media center, or resource center with books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people? 	NC	N/A
2015 Grade 4)			
 When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it. This is not like me. This is a little like me. This is a lot like me. 	 when my teacher talks about American Indian or Alaska Native history or culture. I try to read more about it. This is not like me. This is a little like me. This is a lot like me. 	NC	N/A
2015 Grade 4)		0144	
 VC/95280 17. I enjoy reading about American Indian or Alaska Native people. This is not like me. This is a little like me. This is a lot like me. 	 17. I enjoy reading about American Indian or Alaska Native people. This is not like me. This is a little like me. This is a lot like me. 	NC	N/A
(2015 Grade 4)			

Previous item	2019 item		D/A/ R/NC+	Rationale
 VC759283 18. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have. This is not like me. This is a little like me. This is a lot like me. 	 18. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have. This is not like me. This is a little like me. This is a lot like me. 	VH280145	NC	N/A
(2015 Grade 4) ^{VII040240} 19. I put a lot of effort into my schoolwork. (a) This is not like me. (b) This is a little like me. (c) This is a lot like me. (2005 C and a 4)	 19. I put a lot of effort into my schoolwork. This is not like me. This is a little like me. This is a lot like me. 	V1030146	NC	N/A
(2015 Grade 4) 20. I want to be one of the best students in my class. This is not like me. This is a little like me. This is a lot like me.	 20. I want to be one of the best students in my class. This is not like me. This is a little like me. This is a lot like me. 	VH2#047	NC	N/A
(2015 Grade 4) 21. I enjoy being challenged in my classes. This is not like me. This is a little like me. This is a lot like me.	 21. I enjoy being challenged in my classes. This is not like me. This is a little like me. This is a lot like me. 	VII240146	NC	N/A
(2015 Grade 4) 22. I feel that I belong at school. This is not like me. This is a little like me. C This is a lot like me.	 22. 1 feel that I belong at school. This is not like me. This is a little like me. This is a lot like me. 	V16240149	NC	N/A

Previous item	2019 item		D/A/ R/NC+	Rationale
(2015 Grade 4)				
 WHOAGS91 23. If I put in enough effort, I will succeed in school. The strongly disagree Disagree Agree Strongly agree 	 23. If I put in enough effort, I will succeed in school. Strongly disagree Disagree Agree Strongly agree 	V1(2-01)5(#	NC	N/A
2015 Grade 8)		VH240151	NC	N/A
 24. Trying hard in school will help me live a good life when I grow up. Strongly disagree Disagree Agree Strongly agree 	 24. Trying hard in school will help me live a good life when I grow up. Strongly disagree Disagree Agree Strongly agree 		NC	N/A
(2015 Grade 4) vcrs9288 25. How often does a parent or someone else from your family help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you. ① Never or hardly ever ① Once or twice a month ② Once or twice a week ④ Every day or almost every day	 25. How often does a parent or someone else from your family help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you. © Never or hardly ever © Once or twice a month © Once or twice a week © Every day or almost every day	VIDALIZ	NC	N/A

Previous item	2019 item		D/A/ R/NC+	Rationale
26. How often does a teacher or another adult from your school help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you.	 26. How often does a teacher or another adult from your school help you with your school work? For example, they might help you to study for a test, help you with a school project, or go over your homework with you. Once or hardly ever Once or twice a month Once or twice a week Every day or almost every day	And the set of the	NC	N/A
2015 Grade 4)		VICADIS4	NC	N/A
 27. How often does another student from your school help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you. ① Never or hardly ever ① Once or twice a month ② Once or twice a week ④ Every day or almost every day 	 27. How often does another student from your school help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you. ③ Never or hardly ever ④ Once or twice a month © Once or twice a week ⑤ Every day or almost every day 			
2015 Grade 4)				
 WHANA389 28. How often do you help other students from your school with their schoolwork? For example, you might help other students to study for a test, help them with a school project, or go over their homework with them. ③ Never or hardly ever ⑤ Once or twice a month © Once or twice a week ⑨ Every day or almost every day	 28. How often do you help other students from your school with their schoolwork? For example, you might help other students to study for a test, help them with a school project, or go over their homework with them. ③ Never or hardly ever ④ Once or twice a month ③ Once or twice a week ④ Every day or almost every day 	VIELIOU V	NC	N/A
(2015 Grade 4)				

Previous item	2019 item	D/A/ R/NC-	Rationale
29. How much do you like school? Not at all A little Somewhat Very much	 29. How much do you like school? O Not at all A little Somewhat Very much 	NC	N/A
(2015 Grade 4) ^{VC759294} 30. Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in? ⁽¹⁾ Yes ⁽¹⁾ No ⁽²⁾ I'm not sure.	 30. Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in? Yes No I'm not sure. 	Vildent? NC	N/A
(2015 Grade 4) VECTORENTS 31. If you know the name of the American Indian tribe or Alaska Native group that you belong to or are enrolled in, or if you think you know it, please print it on the line below. Do not worry about spelling. If you belong to more than one American Indian tribe or Alaska Native group, write the names of as many as you know.	31. If you know the name of the American Indian tribe or Alaska Native group that you belong to or are enrolled in, or if you think you know it, please print it on the line below. Do not worry about spelling. If you belong to more than one American Indian tribe or Alaska Native group, write the names of as many as you know.	VIDC28H NC	N/A
(2015 Grade 4) 32. What else would you like to say about yourself, your school, or about American Indian or Alaska Native people? Use these lines to write your ideas.	32. What else would you like to say about yourself, your school, or about American Indian or Alaska Native people? Use these lines to write your ideas.	VIEGAS: NC	N/A

Appendix K-1at: Operational Grade 4 NIES

355

- VH240128
- 1. How much do you know about your American Indian tribe or Alaska Native group? For example, you may know about the history, traditions, or arts and crafts of your tribe or group.
 - Nothing
 - A little
 - © Some
 - A lot
 A
- **2.** Who taught you **most** of what you know about American Indian or Alaska Native history?
 - (No one has taught me about American Indian or Alaska Native history.
 - Family members
 - © Friends
 - Teachers
 Teachers
 - © Tribal representatives or elders
 - © Someone else (please specify):_____
- **3.** Who taught you **most** of what you know about American Indian or Alaska Native traditions (ways of life, customs)?
 - The No one has taught me about American Indian or Alaska Native traditions.
 - Family members
 - © Friends
 - Teachers
 - © Tribal representatives or elders
 - Someone else (please specify):

VH240129

- **4.** Who taught you **most** of what you know about American Indian or Alaska Native arts and crafts?
 - (2) No one has taught me about American Indian or Alaska Native arts and crafts.
 - Family members
 - © Friends
 - Teachers
 - © Tribal representatives or elders
 - © Someone else (please specify):_____

- **5.** How often do you go to American Indian or Alaska Native ceremonies and gatherings?
 - Never
 Never
 - B Every few years
 - © At least once a year
 - Several times a year

- **6.** How often do members of your family talk to each other in your American Indian or Alaska Native language?
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

- 7. How often do people in your school talk to each other in your American Indian or Alaska Native language?
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day
- 8. How often do you attend classes in school that are taught in an American Indian or Alaska Native language?
 - My school does not offer classes that are taught in an American Indian or Alaska Native language.
 - [®] Never or hardly ever
 - © Once or twice a month
 - Once or twice a week
 - © Every day or almost every day
- **9.** How do you rate yourself in speaking an American Indian or Alaska Native language?
 - I cannot speak an American Indian or Alaska Native language.
 - I can speak a few words or phrases.
 - © I can speak well.
- **10.** How do you rate yourself in reading an American Indian or Alaska Native language?
 - I cannot read in an American Indian or Alaska Native language.
 - I can read a few words or phrases.
 - © I can read well.

VH240135

VH240136

- **11.** Who taught you **most** of what you know about an American Indian or Alaska Native language?
 - The No one has taught me about an American Indian or Alaska Native language.
 - Family members
 - © Friends
 - Teachers
 Teachers
 - © Tribal representatives or elders
 - Someone else (please specify):

- **12.** During 4th grade, have you attended school field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people?
 - (D) Yes
 - B No
- **13.** During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **in school**?
 - Tes, once or twice
 - [®] Yes, three or more times
 - © No
- **14.** During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **outside of school**?
 - Tes, once or twice
 - [®] Yes, three or more times
 - © No

VH240139

- **15.** In school, do you have access to a library, media center, or resource center with books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people?
 - Tes Yes
 - B No
 No
- **16.** When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it.
 - This is not like me.
 - [®] This is a little like me.
 - © This is a lot like me.
- 17. I enjoy reading about American Indian or Alaska Native people.
 - This is not like me.
 - [®] This is a little like me.
 - © This is a lot like me.

18. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have.

- This is not like me.
- (B) This is a little like me.
- © This is a lot like me.

VH240144

VH240145

VH240142

- **19.** I put a lot of effort into my schoolwork.
 - ℬ This is not like me.
 - [®] This is a little like me.
 - ◎ This is a lot like me.
- 20. I want to be one of the best students in my class.
 - This is not like me.
 - [®] This is a little like me.
 - © This is a lot like me.
- **21.** I enjoy being challenged in my classes.
 - ℬ This is not like me.
 - [®] This is a little like me.
 - © This is a lot like me.
- **22.** I feel that I belong at school.
 - This is not like me.
 - [®] This is a little like me.
 - © This is a lot like me.

VH240148

VH240150

- 23. If I put in enough effort, I will succeed in school.
 - Strongly disagree
 - Disagree
 Disagree
 - © Agree
 - Strongly agree

VH240151

- **24.** Trying hard in school will help me live a good life when I grow up.
 - Strongly disagree
 - Disagree
 - © Agree
 - Strongly agree

- **25.** How often does **a parent or someone else from your family** help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you.
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

- **26.** How often does a **teacher or another adult from your school** help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you.
 - (Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

- VH240154
- **27.** How often does **another student from your school** help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you.
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

- **28.** How often do **you** help other students from your school with their schoolwork? For example, you might help other students to study for a test, help them with a school project, or go over their homework with them.
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

VH240156

- **29.** How much do you like school?
 - Not at all
 - A little
 - © Somewhat
 - O Very much

VH240157

- **30.** Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in?
 - (D) Yes
 - B No
 No
 - © I'm not sure.

VH242881

31. If you know the name of the American Indian tribe or Alaska Native group that you belong to or are enrolled in, or if you think you know it, please print it on the line below. Do not worry about spelling. If you belong to more than one American Indian tribe or Alaska Native group, write the names of as many as you know.

32. What else would you like to say about yourself, your school, or about American Indian or Alaska Native people? Use these lines to write your ideas.

Appendix K-1au: Summary of Changes Operational Grade 8 NIES

Previous item						2019 item						D/A/ R/NC+	Rationale
 How much do you know about each of t a. Your American Indian or Alaska Native history b. Your American Indian or Alaska Native traditions and culture (way of life, customs) c. Issues today that are important to American Indian or Alaska Native people (2015 Grade 8) 	he followi Nothing	ng? Fill in (A little (D) (D) (D)	one oval or Some © ©	n each line A lor © ©	VC996582 VC996582 VC996583	 How much do you know a each row. Your American Indian or Alaska Native history Your American Indian or Alaska Native traditions and culture (way of life, customs) Issues today that are important to American Indian or Alaska Native people 	Nothing © ©	e following? Sel A little D D D	Concernsion of the sector of t	choice on A lot	VID453 VID4535 VID4537 VID4537	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on
 2. Who taught you most of what you know history? D No one has taught me about Americ D Family members D Friends D Tribal representatives or elders D Someone else (please specify): (2015 Grade 8) 	can Indian		Native hist	tory.	V18039733	 2. Who taught you most of what history? No one has taught me ab Family members Friends Teachers Tribal representatives or Someone else (please spectric) 	out American I elders	ndian or Alaska			VH2a0129	NC	each row." N/A
 3. Who taught you most of what you know traditions (ways of life, customs)? O No one has taught me about Americ O Family members O Friends O Teachers O Tribal representatives or elders O Someone else (please specify): (2015 Grade 8) 					1794030760	 3. Who taught you most of what rraditions (ways of life, custo No one has taught me ab Family members Friends Teachers Tribal representatives or Someone else (please specification) 	ms)? out American I elders	ndian or Alaska			Vithan so	NC	N/A

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item						2019 item						D/A/ R/NC+	Rationale
 4. Who taught you most of what you kno American Indian or Alaska Native people. ③ No one has taught me about issues Alaska Native people. ④ Family members ③ Friends ③ Teachers ④ Tribal representatives or elders ④ Someone else (please specify):	ple?	are impor	rtant to Am	erican Ind	ian or vowes4	 4. Who taught you most of wha American Indian or Alaska N No one has taught me ab Native people. Family members Friends Treachers Tribal representatives or Someone else (please spection) 5. How often have you particip each row. 	lative people? out issues tod elders cify):	lay that are impo	ortant to America	an Indian or Ala	vipious iska vipusus	NC	N/A The in-line direction was
	Never	Every few	At least once	Several times a			Never	Every few years	At least once a year	Several times a year			adapted from
a. Ceremonies and gatherings for people from your American Indian tribe or Alaska Native group	®	wears (D)	a year ©	wear ©	VC996586	a. Ceremonies and gatherings for people from your American Indian tribe or Alaska Native group	Ø	œ	Ø	Ø	VH241519		PBA to DBA: "Fill in one
b. Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups	٩	⊕	0	٢	V0396587	 b. Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups 	Ø	Ø	0	Ø	VII:14(52)		oval on each line." was adapted to
c. Other American Indian or Alaska Native activities	0	•	Ø	0	VC996589	c. Other American Indian or Alaska Native activities	٩	Ð	Ø	Φ	VHRATSIO		"Select one answer
(2015 Grade 8)													choice on each row."
 6. How often do members of your family Alaska Native language? Never or hardly ever Once or twice a month Once or twice a week 	talk to each	a other in y	your Ameri	can Indian	vc758193. Of	 6. How often do members of yo or Alaska Native language? Never or hardly ever Once or twice a month Once or twice a week. Every day or almost every 		t to each other ir	n your American	Indian	VRQ40133	NC	N/A
© Every day or almost every day (2015 Grade 8)													

Previous item	2019 item	D/A/ R/NC+	Rationale
7. How often do people in your school talk to each other in your American Indian or Alaska Native language?	7. How often do people in your school talk to each other in your American Indian or Alaska Native language?	NC	N/A
 Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day 	 Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day 		
(2015 Grade 8) ************************************	 8. How often do you attend classes in school that are taught in an American Indian or Alaska Native language? My school does not offer classes that are taught in an American Indian or Alaska Native language. Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day 	NC	N/A
9. How do you rate yourself in speaking an American Indian or Alaska Native language? (D) I cannot speak an American Indian or Alaska Native language. (D) I can speak a few words or phrases. (C) I can speak well. (2015 Grade 8)	 9. How do you rate yourself in speaking an American Indian or Alaska Native language? ① I cannot speak an American Indian or Alaska Native language. ① I can speak a few words or phrases. ② I can speak well. 	NC	N/A
 (2015 Grade 8) (2015 Grade 8) 	 10. How do you rate yourself in reading an American Indian or Alaska Native language? ① I cannot read in an American Indian or Alaska Native language. ① I can read a few words or phrases. ① I can read well. 	NC	N/A

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item				2019 item				D/A/ R/NC+	Rationale
 11. Who taught you most of what you know about an Am language? No one has taught me about an American Indian of Family members Friends Teachers Tribal representatives or elders Someone else (please specify):	or Alaska M	Native langua		 11. Who taught you most of what you know abou Native language? No one has taught me about an American Family members Friends Teachers Tribal representatives or elders Someone else (please specify); 			VIDAOISE	NC	N/A
 (2015 Grade 8) 12. During 8th grade, how often have any of your teacher history, traditions, and cultures (ways of life, customs Native people? 	s talked to) of Ameri	your class ab can Indian oi	vcsøsso- oout the r Alaska	 12. During 8th grade, how often have any of your the history, traditions, and cultures (ways of li Alaska Native people? ② Never or hardly ever ③ Once or twice a month ③ Once or twice a week ④ Every day or almost every day 			УЦС40159 -	NC	N/A
(2015 Grade 8) 13. During 8th grade, have you attended any of the follow school? Fill in one oval on each line.	ing activiti	ies organized	vH158490 by your	 During 8th grade, have you attended any of th your school? Select one answer choice on each 		organized by	VH241522	NC	The in-line direction was
	Yes	No			Yes	No			adapted from
a. Presentations by American Indian or Alaska Native people about their traditions and cultures	۲	0	VH158491	 Presentations by American Indian or Alaska Native people about their traditions and cultures (ways of life, customs) 	Ø	Ð	VH241523		PBA to DBA:
(ways of life, customs)	-		VH158492	 American Indian or Alaska Native art and craft demonstrations 	\$	₿	VH241526		"Fill in one
 b. American Indian or Alaska Native art and craft demonstrations 	0	₿	111.000	c. Traditional American Indian or Alaska Native music and/or dance performances	Ø	Φ	VH241525		oval on each
c. Traditional American Indian or Alaska Native music and/or dance performances	(9)	0	VH158493	d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people	۵	œ	VH241524		line." was adapted to
 d. Field trips to muscums, traditional villages, or other places to learn about American Indian or Alaska Native people (2015 Grade 8) 	0	¢	¥71158494						"Select one answer choice on each row."

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item				2019 item				D/A/ R/NC+	Rationale
14. During 8th grade, have you participated in any of the your school? Fill in one oval on each line.	following	activities orga	viii:40140 nized by	 During 8th grade, have you participated in any by your school? Select one answer choice on e 		tivities organized	VH241527	NC	The in-line direction was
	Yes	No			Yes	No			adapted from
a. Sports team	Ø	®	VH040143	a. Sports team	Ø	Ø	VH241528		PBA to DBA:
b. Music club, orchestra, or band	Ø	œ	VHD40347	b. Music club, orchestra, or band c. Cultural dances or other American Indian	Ø	Ø	VH241532		
				or Alaska Native activities (for example,	۲	Ð	V11240.531		"Fill in one
 Cultural dances or other American Indian or Alaska Native activities (for example, drum groups) 	8	®	VH040150	drum groups) d. Academic club (for example, math club)	۵	٩	V11241530		oval on each line." was
d. Academic club (for example, math club)	0	۵	V18040152						adapted to "Select one answer choice on each row."
15. During 8th grade, have you used books, videos, or oth	her materia	ls (including l	vH159106 nternet	15. During 8th grade, have you used books, videos	or other materials	lincluding	VII240160	NC	N/A
resources) about American Indian or Alaska Native J	people in sc	hool?		Internet resources) about American Indian or .					
Tes, once or twice				Yes, once or twice					
The second secon				D Yes, three or more times					
© No				© No					
(2015 Grade 8)			-				VIDaniši.		
 During 8th grade, have you used books, videos, or oth resources) about American Indian or Alaska Native p 	her materia people outsi	ls (including I de of school?	vinis9110 nternet	 During 8th grade, have you used books, videos Internet resources) about American Indian or outside of school? 			V1240161	NC	N/A
Yes, once or twice				Yes, once or twice					
D Yes, three or more times				Yes, three or more times					
© No				© No					
(2015 Grade 8)									
17. In school, do you have access to a library, media cent videos, or other materials (including Internet resourc Native people?				17. In school, do you have access to a library. med books, videos, or other materials (including In Indian or Alaska Native people?			VII240142	NC	N/A
Tes Yes				Tes Yes					
I No				D No					
(2015 Grade 8)									

					2019 item					D/A/ R/NC+	Rationale
 Here are some sentences about reading. Fill in one sentence describes a person like you. 	oval on ea	ch line to s	how whet	vc996624 her the	 Here are some sentences about r sentence describes a person like 	eading. Fill in one o you.	val on each line to	show whether the	VRDAUSIS	NC	The in-line direction was
	This is not like	This is a little like	This is a lot like			This is not like me.	This is a little like me.	This is a lot like me.			adapted from
a. When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it.	me.	me.	me.	YHD43704	a. When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it.	۵	œ	Ø	¥1:241536		PBA to DBA: "Fill in one
b. I enjoy reading about American Indian or Alaska Native people.	Θ	⊕	0	VC996627	 b. I enjoy reading about American Indian or Alaska Native people. 	۵	۵	Ø	¥74241538		oval on each line to show
 c. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have. 	0	₿	0	VC996628	c. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have.	Ø	٢	¢	VIDA1867		whether the sentence
(2015 Grade 8)											describes a person like you." was adapted to "Select one answer choice on
19. Here are some sentences about your school. Fill in the sentence describes a person like you.	one oval c	on each line	to show y	vH040130 whether	 Here are some sentences about y sentence describes a person like 		ne oval on each lin	e to show whether	vasasso the	NC	each row." The in-line direction was
	This is	This is a	This is a			This is not like me.	This is a little like me.	This is a lot like me.			adapted from
	not like	little like	lot like		a. I put a lot of effort into my		Ð	~	VH241540		adapted non
	me.	me.	me.	and the second sec	schoolwork.	Ø	ω.	0	VPL041540		PBA to DBA:
a. I put a lot of effort into my schoolwork.	۲	⊕	0	VH040131		0	Ø	0	VID41543		PBA to DBA: "Fill in one
 a. I put a lot of effort into my schoolwork. b. I want to be one of the best students in my class. 				VH040131 VH040134	schoolwork. b. I want to be one of the best				-		PBA to DBA: "Fill in one oval on each
b. I want to be one of the best students in my	۲	⊕	0		schoolwork. b. I want to be one of the best students in my class. c. I enjoy being challenged in my	۲	Ð	©	VH241543		PBA to DBA: "Fill in one oval on each line to show
b. I want to be one of the best students in my class.	0	•	0	VH040134	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each
b. I want to be one of the best students in my class.c. I enjoy being challenged in my classes.d. I feel that I belong at school.	9 9 9	0	0 0	V1040134 V1040137	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each line to show whether the
b. I want to be one of the best students in my class.c. I enjoy being challenged in my classes.d. I feel that I belong at school.	9 9 9	0	0 0	V1040134 V1040137	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each line to show whether the sentence
b. I want to be one of the best students in my class.c. I enjoy being challenged in my classes.d. I feel that I belong at school.	9 9 9	0	0 0	V1040134 V1040137	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each line to show whether the sentence describes a
b. I want to be one of the best students in my class.c. I enjoy being challenged in my classes.d. I feel that I belong at school.	9 9 9	0	0 0	V1040134 V1040137	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each line to show whether the sentence describes a person like you." was adapted to
b. I want to be one of the best students in my class.c. I enjoy being challenged in my classes.d. I feel that I belong at school.	9 9 9	0	0 0	V1040134 V1040137	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each line to show whether the sentence describes a person like you." was
b. I want to be one of the best students in my class.c. I enjoy being challenged in my classes.	9 9 9	0	0 0	V1040134 V1040137	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each line to show whether the sentence describes a person like you." was adapted to
b. I want to be one of the best students in my class.c. I enjoy being challenged in my classes.d. I feel that I belong at school.	9 9 9	0	0 0	V1040134 V1040137	schoolwork. b. I want to be one of the best students in my class. c. Lenjoy being challenged in my classes.	© ©	Ð	Ø	VH241543 VH241542		PBA to DBA: "Fill in one oval on each line to show whether the sentence describes a person like you." was adapted to "Select one

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item						2019 item						D/A/ R/NC+	Rationale
20. How much do you agree with each of the line.	he followin	ig statement	ts? Fill in	one oval o	viititititi on each	 How much do you agree w choice on each row. 	ith each of the	following stater	nents? Select	one answer	V1041544	NC	The in-line direction was
	Strongly disagree	Disagree	Agree	Strongly agree			Strongly disagree	Disagree	Agree	Strongly agree			adapted from
 a. If I put in enough effort, I will succeed in school. 	0	₿	0	0	V11040158	a. If I put in enough effort, I will succeed in school.	٩	Ð	Q	0	VH241545		PBA to DBA:
b. If I put in enough effort in school, I will get into college.	0	Ð	0	0	VH040160	b. If I put in enough effort in school, I will get into college.	0	٢	Ø	0	VH241547		"Fill in one oval on each
c. If I put in enough effort in school, I will get a good job.	Θ	۲	0	0	VH040161	c. If I put in enough effort in school, I will get a good job.	Θ	٩	0	0	VH241546		line." was adapted to
(2015 Grade 8)													"Select one answer choice on each row."
21. How much do you like school?	VC759293					21. How much do you like scho	ol?				VH240156	NC	N/A
Not at all						Ø Not at all							
③ A little						A little A A A							
© Somewhat						© Somewhat © Very much							
© Very much													
(2015 Grade 8)													
22. How much are the things you are learn to lead?	ing in scho	ol preparing	g you for t	he life you	vessaat I want	22. How much are the things yo want to lead?	ou are learning	in school prepari	ng you for the	e life you	VH240162	NC	N/A
Not at all						D Not at all							
T A little						D A little							
© A fair amount						 A fair amount Wery much 							
© Very much						Wery much							
(2015 Grade 8)													
 During 8th grade, how often have you t class periods? For example, to get extra that matter to you, or just to visit. 						 During 8th grade, how often regular class periods? For ex about issues that matter to y 	imple, to get en	xtra help with yo	ur teachers o ur assignmen	utside of ts, to talk	VH240163	NC	N/A
Never or hardly ever						Never or hardly ever							
Once or twice a month						© Once or twice a month							
© Once or twice a week						© Once or twice a week							
© Every day or almost every day						D Every day or almost ever	y day						
(2015 Grade 8)													

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item						2019 item						D/A/ R/NC+	Rationale
24. How often do you help other students i example, you might help other student project, or go over their homework wit	s to study					24. How often do you help othe For example, you might hel school project, or go over th	other student	ts to study for a t			VH240155	NC	N/A
Never or hardly ever						Never or hardly ever							
D Once or twice a month						Once or twice a month							
© Once or twice a week						O Once or twice a week							
 Once of twice a week Every day or almost every day 						D Every day or almost e	ry day						
2015 Grade 8)													
 How often do any of the following peop they might help you to study for a test, homework with you. Fill in one oval or 	help you y	with a school				 How often do any of the for example, they might help y go over your homework wi 	ou to study for	a test, help you	with a school pro	For bject, or	VH241548	NC	The in-line direction was
	Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day			Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day			adapted from PBA to DBA:
a. A parent or someone else from my family	(3)	۲	Ø	Ø	VC996636	a. A parent or someone else from my family	Ø	œ	0	œ	VHZ41549		"Fill in one
b. A teacher or another adult from my school	9	₽	0	0	VC996637	 b. A teacher or another adult from my school c. Another student 	® ®	0	0	0	VH241550 VH241553		oval on each line." was
c. Another student	Θ	۲	0	0	VC996639	d. A tribal representative or elder	٩	Ð	0	Φ	VH241551		adapted to
d. A tribal representative or elder	3	⊕	O	Ø	V18018268								"Select one answer
(2015 Grade 8)													choice on each row."
26. During 8th grade, how many times hav about the classes you should take in hig school? Fill in one oval on each line.	e you talke gh school c	ed to each of or about wha	the follo it you war	wing people nt to do afte	r high	 During 8th grade, how man about the classes you shou high school? Select one ans 	d take in high	school or about v	n of the followin, what you want to	g people o do after	VICAISSA	NC	The in-line direction was
	Never	One time	Two or three times	Four or more times			Never	One time	Two or three times	Four or more times			adapted from PBA to DBA:
A family manufact	®				VC996645	a. A family member	8	Ø	Ø	Ø	VH241335		
a. A family member		®	0	0		b. A teacher c. A school counselor	0	0	0	0	VH241556- VH241557		"Fill in one
b. A teacher	3	•	0	0	VC996646	d. Another student	@ @	© ©	0	0	VH241557 VH241561		oval on each
c. A school counselor	3	•	0	Ø	VC996547	e. A tribal representative or	٩	0	0	Ø	VH241560		line." was
d. Another student	•	⊕	0	0	VC996648	elder f. Someone else who lives in							adapted to
e. A tribal representative or elder	(3)	•	0	0	V1026209	my community or is a friend of my family	Ø	۵	0	۵	VH241558		"Select one
f. Someone else who lives in my community or is a friend of my family	0	٢	0	Ø	VH026311								answer choice on
2015 Grade 8)													each row."

Previous item					2019 item						D/A/ R/NC+	Rationale
27. Which of the following would you plan to c many ovals as apply.	lo in your first y	ear after high	school? Fi	vcsssso ll in as	 Do you plan to do any of the answer choice on each row. 	following in g	your first year afte	er high schooli	Select one	YIDIISQ	R	This item was revised in
a. Go to college full time		0		¥C996651			Yes		No			
		1		VC996652	a. Go to college full time		Ø		ø	VH241563		item type and
b. Go to college part time		0			b. Go to college part time		Ø	1	Ð	VH241384		sentence
c. Go to another school (for example, career or trade/vocational) full time	r training, techn	ical, ©		VC996653	c. Go to another school (for exar training, technical, or trade/vo time	nple, career ocational) full	Θ		Ð	VH241565		structure of this item
d. Go to another school (for example, career or trade/vocational) part time	r training, techn	ical, O		VC996654	Go to another school (for exar training, technical, or trade/vo time		Ø		Φ	V11241566		based on the
e. Join the military		O		VC996655	c. Join the military		Ø		Ð	VH241572		structure for
f. Work full time		Ø		VC996656	f. Work full time		۵		Ð	VH241548		
					g. Work part time		Ø		0	VH241569		Core
g. Work part time		ø		VC996657	h. Travel		۲	-	Ø	VH241570		household
h. Travel		•		VC996658	i. Care for family i. I don't know.		0		0	NH241571 VH241667		possession
		Φ		VC996659	1. I don't know.		ø		<u>s</u>	VIL28199-1		•
i. Care for family		Φ		VC996660								item.
(2015 Grade 8)				VERAGZIA						VID4HTM		direction was adapted from PBA to DBA: "Fill in as many ovals as apply." was adapted to "Select one answer choice on each row."
28. To what extent is each of the following a pr line.	oblem in your s	chool? Fill in	one oval o		 To what extent is each of th choice on each row. 	e following a j	problem in your s	chool? Select	one answer	VICALSTA	NC	The in-line direction was
Ν	lot at Small all extent	Moderate extent	Large extent			Not at all	Small extent	Moderate extent	Large extent			adapted from
a. Student tardiness	0	0	0	VEI040217	a. Student tardiness	۲	©	©	Ø	VH241574		PBA to DBA:
b. Student health problems	@ ®	0	0	VH040219	b. Student health problems	Ø	Ø	Ø	Ø	VH241575		"Fill in one
	0 0	0	0	V1040221	 c. Student misbehavior in class 	۲	۲	Ø	Ø	VH241576		
					d. Physical conflicts among	۲	٩	0	ø	VH241580		oval on each
d. Physical conflicts among students	0	0	0	VH040223	students e. Bullying			0	0	VII241578		line." was
e. Bullying	(B) (B)	0	0	VH040226	f. Low student motivation	0	0	0	0	VH141578		adapted to
f. Low student motivation	a a	0	m	V14040227								

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item	2019 item		D/A/ R/NC+	Rationale
(2015 Grade 8)				"Select one answer choice on each row."
29. Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in?	 29. Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in? ① Yes ① No ② I'm not sure, 	VH240157	NC	N/A
2015 Grade 8) vcrsezes 30. If you know the name of the American Indian tribe or Alaska Native group that you belong to or are enrolled in, or if you think you know it, please print it on the line below. Do not worry about spelling. If you belong to more than one American Indian tribe or Alaska Native group, write the names of as many as you know.	30. If you know the name of the American Indian tribe or Alaska Native group that you belong to or are enrolled in, or if you think you know it, please print it on the line below. Do not worry about spelling. If you belong to more than one American Indian tribe or Alaska Native group, write the names of as many as you know.	VIELEN	NC	N/A
(2015 Grade 8)				
31. What else would you like to say about yourself, your school, or about American Indian or Alaska Native people? Use these lines to write your ideas.	31. What else would you like to say about yourself, your school, or about American Indian or Alaska Native people? Use these lines to write your ideas.	100392	NC	N/A
(2015 Grade 8)				

Appendix K-1av: Operational Grade 8 NIES

1. How much do you know about each of the following? Select **one** answer choice on each row.

	Nothing	A little	Some	A lot	
a. Your American Indian or Alaska Native history	A	B	Ø	Ø	VH241515
b. Your American Indian or Alaska Native traditions and culture (way of life, customs)	0	®	0	0	VH241517
c. Issues today that are important to American Indian or Alaska Native people	0	®	Ø	Ø	VH241516

VH240129

VH241514

- **2.** Who taught you **most** of what you know about American Indian or Alaska Native history?
 - No one has taught me about American Indian or Alaska Native history.
 - Family members
 - © Friends
 - Teachers
 Teachers
 - © Tribal representatives or elders
 - © Someone else (please specify):_____

- **3.** Who taught you **most** of what you know about American Indian or Alaska Native traditions (ways of life, customs)?
 - No one has taught me about American Indian or Alaska Native traditions.
 - [®] Family members
 - © Friends
 - Teachers
 Teachers
 - © Tribal representatives or elders
 - Someone else (please specify):

- **4.** Who taught you **most** of what you know about issues today that are important to American Indian or Alaska Native people?
 - No one has taught me about issues today that are important to American Indian or Alaska Native people.
 - Family members
 - © Friends

each row.

- Teachers
 Teachers
- © Tribal representatives or elders
- Someone else (please specify):

Several times **Every few** At least once a Never vears year a year a. Ceremonies and gatherings for people from your VH241519 A B O D American Indian tribe or Alaska Native group b. Ceremonies and gatherings that bring people together from many different VH241521 \bigcirc A B \bigcirc American Indian tribes or Alaska Native groups c. Other American Indian or A B O \odot VH241520 Alaska Native activities

5. How often have you participated in each of the following? Select one answer choice on

VH240133

- **6.** How often do members of your family talk to each other in your American Indian or Alaska Native language?
 - (Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

378

- 7. How often do people in your school talk to each other in your American Indian or Alaska Native language?
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day
- 8. How often do you attend classes in school that are taught in an American Indian or Alaska Native language?
 - My school does not offer classes that are taught in an American Indian or Alaska Native language.
 - Never or hardly ever
 - © Once or twice a month
 - Once or twice a week
 - © Every day or almost every day
- 9. How do you rate yourself in speaking an American Indian or Alaska Native language?
 - I cannot speak an American Indian or Alaska Native language.
 - I can speak a few words or phrases.
 - © I can speak well.
- **10.** How do you rate yourself in reading an American Indian or Alaska Native language?
 - I cannot read in an American Indian or Alaska Native language.
 - I can read a few words or phrases.
 - © I can read well.

VH240134

VH240135

VH240136

- **11.** Who taught you **most** of what you know about an American Indian or Alaska Native language?
 - The No one has taught me about an American Indian or Alaska Native language.
 - Family members
 - © Friends
 - Teachers
 Teachers
 - © Tribal representatives or elders
 - Someone else (please specify):

- **12.** During 8th grade, how often have any of your teachers talked to your class about the history, traditions, and cultures (ways of life, customs) of American Indian or Alaska Native people?
 - (Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

13. During 8th grade, have you attended any of the following activities **organized by your school**? Select **one** answer choice on each row.

	Yes	No	
a. Presentations by American Indian or Alaska Native people about their traditions and cultures (ways of life, customs)	0	®	VH241523
b. American Indian or Alaska Native art and craft demonstrations	Ø	®	VH241526
c. Traditional American Indian or Alaska Native music and/or dance performances	0	®	VH241525
d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people	0	®	VH241524

14. During 8th grade, have you participated in any of the following activities organized by your school? Select one answer choice on each row.

	Yes	No	
a. Sports team	A	®	VH241528
b. Music club, orchestra, or band	A	®	VH241532
c. Cultural dances or other American Indian or Alaska Native activities (for example, drum groups)	0	®	VH241531
d. Academic club (for example, math club)	A	®	VH241530

VH240160

- **15.** During 8th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **in school**?
 - Ses, once or twice
 - [®] Yes, three or more times
 - © No

382

VH240161

- **16.** During 8th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **outside of school**?
 - (Yes, once or twice
 - [®] Yes, three or more times
 - © No

17. In school, do you have access to a **library**, **media center**, **or resource center** with books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people?

- (D) Yes
- B No
- **18.** Here are some sentences about reading. Fill in **one** oval on each line to show whether the sentence describes a person like you.

		This is not like me.	This is a little like me.	This is a lot like me.	
a.	When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it.	0	®	O	VH241536
b.	I enjoy reading about American Indian or Alaska Native people.	$\textcircled{\ }$	ഀ	O	VH241538
c.	I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have.	0	®	O	VH241537

VH241539

VH241544

VH240156

19. Here are some sentences about your school. Fill in **one** oval on each line to show whether the sentence describes a person like you.

	This is not like me.	This is a little like me.	This is a lot like me.	
a. I put a lot of effort into my schoolwork.	Ø	®	©	VH241540
b. I want to be one of the best students in my class.	Ø	®	©	VH241543
c. I enjoy being challenged in my classes.	Ø	®	C	VH241542
d. I feel that I belong at school.	Ø	®	©	VH241541

20. How much do you agree with each of the following statements? Select **one** answer choice on each row.

	Strongly disagree	Disagree	Agree	Strongly agree	
a. If I put in enough effort, I will succeed in school.	B	ß	O	Ø	VH241545
b. If I put in enough effort in school, I will get into college.	Ø	ß	Ø	Ø	VH241547
c. If I put in enough effort in school, I will get a good job.	8	®	O	Ø	VH241546

- **21.** How much do you like school?
 - Not at all
 - A little
 - © Somewhat
 - O Very much

VH240162

- **22.** How much are the things you are learning in school preparing you for the life you want to lead?
 - Not at all
 - A little
 - © A fair amount
 - O Very much

VH240163

- **23.** During 8th grade, how often have you talked with any of your teachers outside of regular class periods? For example, to get extra help with your assignments, to talk about issues that matter to you, or just to visit.
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day
- **24.** How often do **you** help other students from your school with their schoolwork? For example, you might help other students to study for a test, help them with a school project, or go over their homework with them.
 - Never or hardly ever
 - [®] Once or twice a month
 - © Once or twice a week
 - D Every day or almost every day

25. How often do any of the following people help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you. Select **one** answer choice on each row.

	Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day	
a. A parent or someone else from my family	A	B	O	Ø	VH241549
b. A teacher or another adult from my school	A	®	O	Ð	VH241550
c. Another student	A	®	Ô	O	VH241553
d. A tribal representative or elder	A	®	©	Ð	VH241551

26. During 8th grade, how many times have you talked to each of the following people about the classes you should take in high school or about what you want to do after high school? Select **one** answer choice on each row.

	Never	One time	Two or three times	Four or more times	
a. A family member	A	®	Ô	D	VH241555
b. A teacher	A	®	O	D	VH241556
c. A school counselor	A	®	O	D	VH241557
d. Another student	A	®	O	D	VH241561
e. A tribal representative or elder	A	®	©	Ø	VH241560
f. Someone else who lives in my community or is a friend of my family	0	®	Ø	Ø	VH241558

VH241548

	Yes	No	
a. Go to college full time	Ø	®	VH241563
b. Go to college part time	Ø	®	VH241564
c. Go to another school (for example, career training, technical, or trade/vocational) full time	۵	(6)	VH241565
d. Go to another school (for example, career training, technical, or trade/vocational) part time	۵	(6)	VH241566
e. Join the military	Ø	®	VH241572
f. Work full time	۵	®	VH241568
g. Work part time	Ø	®	VH241569
h. Travel	Ø	®	VH241570
i. Care for family	Ø	®	VH241571
j. I don't know.	Ø	₿	VH241567

27. Do you plan to do any of the following in your first year after high school? Select **one** answer choice on each row.

	Not at all	Small extent	Moderate extent	Large extent	
a. Student tardiness	۲	®	Ô	D	VH241574
b. Student health problems	۸	®	Ô	D	VH241575
c. Student misbehavior in class	A	®	O	Ø	VH241576
d. Physical conflicts among students	A	®	O	Ø	VH241580
e. Bullying	۸	®	O	D	VH241578
f. Low student motivation	A	B	Ő	D	VH241579

28. To what extent is each of the following a problem in your school? Select **one** answer choice on each row.

VH240157

- **29.** Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in?
 - (D) Yes
 - B No
 - © I'm not sure.

- 30. If you know the name of the American Indian tribe or Alaska Native group that you belong to or are enrolled in, or if you think you know it, please print it on the line below. Do not worry about spelling. If you belong to more than one American Indian tribe or Alaska Native group, write the names of as many as you know.

- 31. What else would you like to say about yourself, your school, or about American Indian or Alaska Native people? Use these lines to write your ideas.
- VH242882

Appendix K-1aw: Summary of Changes Operational Grade 4 CAFS

Previous item				2019 item				D/A/ R/NC+	Rationale
1. At home, do you have any of the following? Se	lect one answer choi	ce on each row.	V11270138	1. At home, do you have any of the following? Se	lect one answer cho	ice on each row.	VH270138	NC	N/A
	Yes	No			Yes	No			
a. A laptop or desktop computer that is only for your use	Ø	Ø	VH270341	a. A laptop or desktop computer that is only for your use	٩	۵	VH270141		
b. A laptop or desktop computer that is shared between you and others	Ø	Ð	VH270142	b. A laptop or desktop computer that is	Ø	æ	VH270142		
e. A tablet that is only for your use	Ø	Ð	V16270339	shared between you and others c. A tablet that is only for your use	Ø	0	VH270159		
d. A tablet that is shared between you and others	Ø	0	V£3270240	d. A tablet that is shared between you and	0	Ø	V11270140		
e. Wi-Fi or some other Internet connection you can use	Ø	Ð	VH270342	e. Wi-Fi or some other Internet connection			VH270143		
f. A smartphone that is only for your use	ø	Ð	VH270144	you can use f. A smartphone that is only for your use	Ø	© ©	VH270143		
(2017 Grade 4)									
			V1/270100				¥10270100	NC	N/A
2. When did you first use a laptop or desktop comp	puter?			2. When did you first use a laptop or desktop com	puter?			NC	N/A
I have never used one.				© 1 have never used one.					
D Before I was in kindergarten				D Before I was in kindergarten					
© When I was in kindergarten				© When I was in kindergarten					
The When I was in first, second, or third grade				When I was in first, second, or third grade					
When I was in fourth grade				D When I was in fourth grade					
(2017 Grade 4)									
3. When did you first use a tablet?			VII235092	3. When did you first use a tablet?			V11270092	NC	N/A
Never until this assessment				 Never until this assessment 					
Before I was in kindergarten				 Before I was in kindergarten 					
© When I was in kindergarten				© When I was in kindergarten					
When I was in first, second, or third grade				 When I was in first, second, or third grade 					
D When I was in fourth grade				 When I was in fourth grade 					
(2017 Grade 4)			<u>_</u>						
4. When did you first use a smartphone?			V1270101	4. When did you first use a smartphone?			VH220101	NC	N/A
I have never used one.				③ I have never used one.					
D Before I was in kindergarten				Before I was in kindergarten					
© When I was in kindergarten				© When I was in kindergarten					
D When I was in first, second, or third grade				When I was in first, second, or third grade					
© When I was in fourth grade				© When I was in fourth grade					
(2017 Grade 4)									

Previous item	2019 item							D/A/ R/NC+	Rationale		
 5. On a weekday, about how many hours do you doing schoolwork, including homework? Some Less than an hour 1 to 2 hours 2 to 3 hours 3 to 4 hours More than 4 hours 	use a laptop or deskt	op computer for	911210443	 5. On a weekday, about how many hours do you u doing schoolwork, including homework? None Less than an hour 1 to 2 hours 2 to 3 hours 3 to 4 hours More than 4 hours 	NC	N/A					
 2017 Grade 4) On a weekday, about how many hours do you including homework? None Less than an hour 1 to 2 hours 2 to 3 hours 3 to 4 hours More than 4 hours 2017 Grade 4) 	use a tablet for doing	schoolwork,	VH220668	 6. On a weekday, about how many hours do you u including homework? O None D Less than an hour 1 to 2 hours 2 to 3 hours 3 to 4 hours More than 4 hours 	V36270348	NC	N/A				
 Were you taught any of the following at school 	ool? Select one answer Yes	choice on each row.	¥113971637	7. Were you taught any of the following at school	l? Select one answer Yes	choice on each row. No	V18597651	NC	N/A		
a. How to type on a computer keyboard using	0	D.	VH270150	a. How to type on a computer keyboard using	Ø	0	VH270150				
the correct fingers b. How to write sentences and paragraphs	0	œ	VH270351	the correct fingers b. How to write sentences and paragraphs			-				
using a computer c. How to edit text using a computer	60	Ð	VFI270864	using a computer	۲	Ð	VH270151 VH270164				
d. How to search for information on the Internet	0	O	¥H270152	c. How to edit text using a computer d. How to search for information on the	0	0	VH270154 VH270152				
e. How to use a tablet	٩	œ	171270156	Internet c. How to use a tablet	Ø	0	VH270156				
f. How to look up the meaning of a word using a computer	8	Ð	9112/01/52	f. How to look up the meaning of a word using a computer Φ Φ Ψ Ψ							

				2019 item	D/A/ R/NC+	Rationale			
8. Which of the following are true about the way school? Select one answer choice on each row		our teachers use co	mputers at	 Which of the following are true about the way school? Select one answer choice on each row. 	NC	N/A			
	Yes	No			Yes	No			
 In most of my classes there are laptop or desktop computers that I can use for schoolwork. 	۹	Ð	VH270166	a. In most of my classes there are laptop or desktop computers that I can use for schoolwork.	Ø	Ø	VH220166		
b. In most of my classes there are tablets that I can use for schoolwork.	Ø	œ	121270167	b. In most of my classes there are tablets that I can use for schoolwork.	۲	Ø	VH270167		
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	Ø	Đ	V21270170	c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	Ø	Ð	VH270170		
 Most of my teachers use computers when teaching my classes. 	۹	O	VH2703.69	d. Most of my teachers use computers when teaching my classes.	Ø	œ	¥11270169		
 Most of my teachers require us to use computers in the classroom. 	Ø	Ð	VH270168	 Most of my teachers require us to use computers in the classroom. 	Ø	œ	VH270168		
 9. Has your school assigned you a laptop or deskt D No D Yes, but I cannot take it home with me. C Yes, and I can take it home with me (laptop 		y you can use?	VH270816.	 9. Has your school assigned you a laptop or deskto 		ly you can use?	911270116	NC	N/A
 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop 		y you can use?	VIENIE	 No Yes, but I cannot take it home with me. 		ly you can use?	VH23016		
 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) (2017 Grade 4) 	p only).	y you can use?		 No Yes, but I cannot take it home with me. 	only).	ly you can use?		NC NC	N/A N/A
 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) (2017 Grade 4) Has your school assigned you a tablet that onl No 	p only).	y you can use?		 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop Has your school assigned you a tablet that only No 	only).	ly you can use?			
 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) (2017 Grade 4) Has your school assigned you a tablet that onl No Yes, but I cannot take it home with me. 	p only).	y you can use?		 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) Has your school assigned you a tablet that only No Yes, but I cannot take it home with me. 	only).	ly you can use?			
 P Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) (2017 Grade 4) 10. Has your school assigned you a tablet that onl No 	p only).	y you can use?		 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop Has your school assigned you a tablet that only No 	only).	ly you can use?			

Previous item							2019 item							D/A/ R/NC+	Rationale
11. This school year, how following? Select one a			op or desktop c	omputer to d	o each of the	VIB97710.	11. This school year, how following? Select one a				omputer to d	o each of the	¥3897710	NC	N/A
	Never	A few times	Once every few weeks	About once a week	More than once a week	1		Never	A few times	Once every few weeks	About once a week	More than once a week			
 a. Write a short paper (less than a page) for school 	۵	٩	Ø	Ø	Φ	VH270172	 a. Write a short paper (less than a page) for school 	۹	Φ	0	θ	Ø	1710173		
 Write a paper for school that was longer than a page 	۲	Φ	Q	9	Φ	VH270175	b. Write a paper for school that was longer than a page	Ø	Ð	Ø	Ð	Φ	VH270173		
 Search the Internet for a school project 	Ø	ø	0	0	Φ	V91270174	 c. Search the Internet for a school project 	۲	٢	0	9	Ø	V21270174		
d. Practice things in mathematics that you were having trouble learning	۵	©	Ø	θ	θ	VH27018)	d. Practice things in mathematics that you were having trouble learning	٩	0	Ø	Φ	Ð	VH270181		
 Practice things in reading that you were having trouble learning 	Ø	0	0	θ	Φ	NH270177	e. Practice things in reading that you were having trouble learning	0	ø	0	θ	θ	VIG20077		
f. Take a test	٩	٢	Ø	٩	Φ	¥H270125	f. Take a test	ø	Ð	O	0	Ð	V81270175		
2017 Grade 4)															
 This school year, how choice on each row. 	often have y Never	ou used a table A few times	t to do each of Once every few weeks	f the followin About once a week	g? Select one : More than once a week	inswer	12. This school year, how choice on each row.	often have Never	A few times	once every few weeks	f the followin About once a week	g? Select one More than once a week	answer	NC	N/A
a. Write a short paper							a. Write a short paper			ICW WEEKS	a week	once a week	-		
(less than a page) for school	0	۲	0	Ð	θ	VH270183	(less than a page) for school	⊕	Φ	0	Φ	θ	VH220183		
b. Write a paper for school that was longer than a page	0	Ø	Ø	Ø	θ	VIIZ70164	b. Write a paper for school that was longer than a page	Ø	œ	0	ø	θ	VH270188		
 c. Search the Internet for a school project 	0	٢	Ø	Ð	Φ	VER270164	 c. Search the Internet for a school project 	۲	٩	O	٩	Ð	V18270154		
 d. Practice things in mathematics that you were having trouble learning 	۲	Φ	0	Φ	Φ	V8270145	d. Practice things in mathematics that you were having trouble learning	Ø	œ	0	۵	Ð	VHQ/0185		
 Practice things in reading that you were having trouble learning 	۵	۵	Φ	₽	Θ	VH270186	 e. Practice things in reading that you were having trouble 	θ	Ð	0	θ	θ	V11270186		
f. Take a test	Ø	¢	Ø	Ø	Ð	VH2/01/2	learning f. Take a test	ø	0	0	Ø	Ð	VH2/UN2		
(2017 Grade 4) 13. Which best describes th	ie way you t	ype on a comp	uter keyboard	1		V1(230130	13. Which best describes th						Vi8220130	NC	N/A
◎ I don't know how to	o type using or two finge	a computer ke rs. but I have t	yboard. o search for w				 I don't know how to I can type with one I can type with one 	o type using or two fing	a computer ke ers. but I have t	eyboard. to search for w	here the lette				

Previous item						2019 item					D/A/ R/NC+	Rationale	
 Would you rather take a tes Paper and pencil Computer 2017 Grade 4)	st at school using	; paper and penc	il or using a com	iputer?	14. Would you rather take a test at school using paper and pencil or using a computer? © Paper and pencil © Computer						NC	N/A	
 Do you think you would b row. 	e able to do each	of the followin	g? Select one ans	wer choice on (yii997769 each	 Do you think you would l row. 	e able to do each	of the followin	g? Select one ans	swer choice on e	yusama ach	NC	N/A
	I definitely can't.	I probably can't.	I probably can.	I definitely can.			I definitely can't.	I probably can't.	I probably can.	I definitely can.			
 Write sentences and paragraphs using a computer 	æ	θ	θ	Ð	V18270229	a. Write sentences and paragraphs using a computer	ø	Ð	Ø	Ø	VH270220		
b. Edit text using a computer	Ø	6	0	0	¥11270218	b. Edit text using a computer	٩	Ð	Ø	0	V14270218		
c. Use a touchscreen on a computer, tablet, or smartphone	۲	8	Q	Ø	VH270230	c. Use a touchscreen on a computer, tablet, or smartphone	Ø	Ð	Ø	Ø	\$712702.48		
d. Look up the meaning of a word using a computer	Ø	٩	0	Ø	VH270215	d. Look up the meaning of a word using a computer	ø	Ø	Ø	۵	VTI270225		
 Draw a picture using a computer 	۵	٢	Ø	٩	VH270216	e. Draw a picture using a computer	Θ	Ð	0	θ	V14270226		
2017 Grade 4) 16. How familiar are you with a. Wi-Fi	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VE0977942	16. How familiar are you with	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH9778	NC	N/A
a. wi-ri b. Firewall	۲	0	0	Ø	VH270198 VH270197	a. Wi-Fi	۲	0	Ô	.0	¥10701%i		
Neuro-digital computing	00 00	@ @	0 0	0	V10270199	b. Firewall	Ø	00	0	0	NH270197		
l. Instant messaging	8	(D)	0	۵ ۵	VH270200	c. Neuro-digital computing	٨	Ð	Ø	0	21070194	1	
. Cut and paste	0	Ð	0	0	VH270203	d. Instant messaging	0	0	0	0	VH270200 VH270203		
. Pyramidal browser	Ø	0	0		V11270204	e. Cut and paste	٨	0	0	0			
. Spreadsheet	0	Ð	0	0	VE1270006	f. Pyramidal browser	Ø	Ð	0	Ø	111270204		
1. Limbic wire	0	8	0	0	VH270207	g. Spreadsheet	۲	٢	Ø	0	VH279206		
Spinalbyte	0	0	0	0	VH2/0205	h. Limbic wire	۵	0	Ø	Ð	VH270207		
i. Server	0	0	0	0	VH270210	i. Spinalbyte	۲	۵	¢	0	\$11275206		
k. Callosum board	Ø	۲	0	0	VH270214								
						j. Server k. Callosum board	@ @	© ©	0	0	VH270210 VH270214		

Appendix K-1ax: Operational Grade 4 CAFS

	Yes	No	
a. A laptop or desktop computer that is only for your use	۲	®	VH270141
b. A laptop or desktop computer that is shared between you and others	۵	®	VH270142
c. A tablet that is only for your use	۵	®	VH270139
d. A tablet that is shared between you and others	۲	®	VH270140
e. Wi-Fi or some other Internet connection you can use	Ø	®	VH270143
f. A smartphone that is only for your use	۵	®	VH270144

1. At home, do you have any of the following? Select one answer choice on each row.

VH270100

VH270138

- 2. When did you first use a laptop or desktop computer?

 - [®] Before I was in kindergarten
 - © When I was in kindergarten
 - ^(D) When I was in first, second, or third grade
 - © When I was in fourth grade
- **3.** When did you first use a **tablet**?
 - Never until this assessment
 - [®] Before I was in kindergarten
 - © When I was in kindergarten
 - When I was in first, second, or third grade
 - © When I was in fourth grade

396

4. When did you first use a smartphone?

- ℬ I have never used one.
- [®] Before I was in kindergarten
- © When I was in kindergarten
- ^(D) When I was in first, second, or third grade
- © When I was in fourth grade

VH270101

5. On a weekday, about how many hours do you use a laptop or desktop computer for doing schoolwork, including homework?

- le None
- Less than an hour
- © 1 to 2 hours
- ② 2 to 3 hours
- © 3 to 4 hours
- More than 4 hours

- **6. On a weekday**, about **how many hours** do you use a **tablet** for doing schoolwork, including homework?
 - Mone
 None
 - Less than an hour
 - © 1 to 2 hours
 - \bigcirc 2 to 3 hours
 - © 3 to 4 hours
 - © More than 4 hours

	Yes	No	
a. How to type on a computer keyboard using the correct fingers	۵	®	VH270150
b. How to write sentences and paragraphs using a computer	۲	®	VH270151
c. How to edit text using a computer	A	®	VH270164
d. How to search for information on the Internet	۲	®	VH270152
e. How to use a tablet	Ø	®	VH270156
f. How to look up the meaning of a word using a computer	æ	®	VH270157

7. Were you taught any of the following at school? Select one answer choice on each row.

8. Which of the following are true about the ways in which you and your teachers use computers **at** school? Select one answer choice on each row.

	Yes	No	
a. In most of my classes there are laptop or desktop computers that I can use for schoolwork.	۵	®	VH270166
b. In most of my classes there are tablets that I can use for schoolwork.	t 💿	®	VH270167
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	۵	®	VH270170
d. Most of my teachers use computers when teaching my classes.	۲	®	VH270169
e. Most of my teachers require us to use computers in the classroom.	۲	®	VH270168

- 9. Has your school assigned you a **laptop or desktop computer** that only you can use?
 - (D) No
 - [®] Yes, but I cannot take it home with me.
 - © Yes, and I can take it home with me (laptop only).

10. Has your school assigned you a **tablet** that only you can use?

- No
- [®] Yes, but I cannot take it home with me.
- © Yes, and I can take it home with me.

VH597710

11. This school year, how often have you used a laptop or desktop computer to do each of the following? Select one answer choice on each row.

		Never	A few times	Once every few weeks	About once a week	More than once a week	
a.	Write a short paper (less than a page) for school	Ø	ß	Ø	Ø	Ē	VH270172
b.	Write a paper for school that was longer than a page	(3)	ß	0	0	Ē	VH270173
c.	Search the Internet for a school project	A	B	0	Ø	Ē	VH270174
d.	Practice things in mathematics that you were having trouble learning	Ø	®	O	Ø	¢	VH270181
e.	Practice things in reading that you were having trouble learning	0	®	Ø	Ø	¢	VH270177
f.	Take a test	A	®	O	O	Ē	VH270175

VH597752

	Never	A few times	Once every few weeks	About once a week	More than once a week	
a. Write a short paper (less than a page) for school	Ø	ß	Ø	Θ	©	VH270183
b. Write a paper for school that was longer than a page	Ø	ß	0	0	Θ	VH270188
c. Search the Internet for a school project	Ø	B	0	Ø	Ē	VH270184
d. Practice things in mathematics that you were having trouble learning	(3)	ß	Ø	Ø	©	VH270185
e. Practice things in reading that you were having trouble learning	æ	®	Q	Ø	©	VH270186
f. Take a test	A	B	Ő	Ø	Ē	VH270192

12. This school year, how often have you used a tablet to do each of the following? Select one answer choice on each row.

VH270130

- 13. Which best describes the way you type on a computer keyboard?
 - I don't know how to type using a computer keyboard.
 - [®] I can type with one or two fingers, but I have to search for where the letter keys are.
 - © I can type with one or two fingers, and I know where most of the letter keys are.
 - ◎ I can type with all ten fingers when I look at the keyboard.
 - © I can type with all ten fingers without looking at the keyboard.

- 14. Would you rather take a test at school using paper and pencil or using a computer?
 - Paper and pencil
 - Computer

	I definitely can't.	I probably can't.	I probably can.	I definitely can.	
a. Write sentences and paragraphs using a computer	۵	®	O	Ø	VH270229
b. Edit text using a compute	er 🛛 🔿	®	O	Ð	VH270218
c. Use a touchscreen on a computer, tablet, or smartphone	۵	®	Ø	Ø	VH270230
d. Look up the meaning of a word using a computer		®	0	0	VH270225
e. Draw a picture using a computer	A	B	C	D	VH270226

15. Do you think you would be able to do each of the following? Select **one** answer choice on each row row.

	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	
a. Wi-Fi	A	®	O	D	VH270196
b. Firewall	A	®	O	D	VH270197
c. Neuro-digital computing	A	®	Ô	D	VH270199
d. Instant messaging	A	®	O	D	VH270200
e. Cut and paste	A	®	O	D	VH270203
f. Pyramidal browser	A	®	O	D	VH270204
g. Spreadsheet	A	®	O	D	VH270206
h. Limbic wire	A	®	O	D	VH270207
i. Spinalbyte	A	®	O	D	VH270208
j. Server	A	®	O	D	VH270210
k. Callosum board	A	B	Ő	D	VH270214

16. How familiar are you with each of the following? Select **one** answer choice on each row.

Appendix K-1ay: Summary of Changes Operational Grade 8 CAFS

Previous item				2019 item				D/A/ R/NC+	Rationale
1. At home, do you have any of the following? Se	lect one answer choi	ce on each row.	VH270138	1. At home, do you have any of the following? Sel	ect one answer cho	ice on each row.	VH270138	NC	N/A
	Yes	No			Yes	No			
a. A laptop or desktop computer that is only for your use	Ø	Ð	V14270141	a. A laptop or desktop computer that is only	٩	۵	V71270241		
b. A laptop or desktop computer that is shared between you and others	Ø	Ð	¥H270142	b. A laptop or desktop computer that is	Ø	æ	VH270142		
c. A tablet that is only for your use	Ð	Ø	VH270139	shared between you and others c. A tablet that is only for your use	0	0	VH270139		
d. A tablet that is shared between you and others	۵	Ø	VH270140	d. A tablet that is shared between you and	0	0	VII270140		
e. Wi-Fi or some other Internet connection you can use	۹	Ø	VH270143	e. Wi-Fi or some other Internet connection		-	VH270143		
f. A smartphone that is only for your use	٩	Ð	V11270144	you can use f. A smartphone that is only for your use	0	0	VH270143		
(2017 Grade 8) 2. When did you first use a laptop or desktop com	puter?		VH270145	 When did you first use a laptop or desktop comp 	outer?		YH270145	NC	N/A
I have never used one.				D I have never used one.					
Before I was in kindergarten				 D Before I was in kindergarten 					
© When I was in kindergarten				© When I was in kindergarten					
${\scriptstyle \textcircled{O}}$ ${\scriptstyle \textcircled{O}}$ When I was in first, second, or third grade				When I was in first, second, or third grade					
D When I was in fourth or fifth grade				When I was in fourth or fifth grade					
O When I was in sixth, seventh, or eighth grad	le			⊕ When I was in sixth, seventh, or eighth grade ■	2				
(2017 Grade 8)			VH220090				¥1270090	NC	N/A
3. When did you first use a tablet?				3. When did you first use a tablet?				inc.	
Never until this assessment				D Never until this assessment					
D Before I was in kindergarten				Before I was in kindergarten					
When I was in kindergarten				© When I was in kindergarten					
When I was in first, second, or third grade				When I was in first, second, or third grade					
When I was in fourth or fifth grade				Φ $$ When I was in fourth or fifth grade					
D When I was in sixth, seventh, or eighth grad	e			When I was in sixth, seventh, or eighth grad in the seventh of the seventholde of the seventholde of the seventh o	6				
(2017 Grade 8)			VH270146	-			\$14270146		
4. When did you first use a smartphone?				4. When did you first use a smartphone?				NC	N/A
⊕ 1 have never used one.				I have never used one.					
D Before I was in kindergarten				Before I was in kindergarten					
© When I was in kindergarten				When I was in kindergarten					
When I was in first, second, or third grade				When I was in first, second, or third grade					
© When I was in fourth or fifth grade				D When I was in fourth or fifth grade					
© When I was in sixth, seventh, or eighth grad	e			When I was in sixth, seventh, or eighth grade I was in sixth. Seventh, or eighth grade Seventh, or eighth grad Seventh, or eighth grade Seventh, or eighth grade	6				
(2017 Grade 8)									

Previous item				2019 item	D/A/ R/NC+	Rationale			
5. On a weekday, about how many hours do you u doing schoolwork, including homework?	se a laptop or desktop	computer for	VH220147	 On a weekday, about how many hours do you us doing schoolwork, including homework? 	se a laptop or deskto	p computer for	-131210342	NC	N/A
Ø None				 None 					
D Less than an hour				Less than an hour					
© 1 to 2 hours				© 1 to 2 hours					
© 2 to 3 hours									
© 3 to 4 hours				D 2 to 3 hours					
O More than 4 hours				© 3 to 4 hours					
Col Trans There is				D More than 4 hours					
2017 Grade 8)									
6. On a weekday, about how many hours do you u including homework?	use a tablet for doing s	schoolwork,	VH270148	6. On a weekday, about how many hours do you u including homework?	se a tablet for doing	schoolwork,	V11270148	NC	N/A
(D) None				None None					
Less than an hour				D Less than an hour					
				© 1 to 2 hours					
© 1 to 2 hours									
© 1 to 2 hours © 2 to 3 hours				D 2 to 3 hours					
D 2 to 3 hours				© 2 to 3 hours					
 ① 2 to 3 hours ① 3 to 4 hours ② More than 4 hours 			VII270140	 D 2 to 3 hours D 3 to 4 hours 			9112201049	NC	N/A
 2 to 3 hours 3 to 4 hours More than 4 hours 2017 Grade 8) 7. Were you taught any of the following at school	l? Select one answer o Yes	hoice on each row. No	VIETOLIO	 ① 2 to 3 hours ① 3 to 4 hours ① More than 4 hours 7. Were you taught any of the following at school 	l? Select one answer Yes	choice on each row,	91020109	NC	N/A
① 2 to 3 hours ① 3 to 4 hours ② More than 4 hours ② More than 4 hours ② More than 4 hours ② More than 4 hours ② More than 4 hours ③ More than 4 hours ③ More than 4 hours ④ More than 4 hours ④ More to taught any of the following at school ④ ④ More to type on a computer keyboard using the correct fingers			V1020040	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers 			V112201.09	NC	N/A
	Yes	No		 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs 	Yes	No		NC	N/A
2 to 3 hours 2 to 3 hours 3 to 4 hours More than 4 hours 2017 Grade 8) 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer	Yes ©	No ©	VH1270150	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers 	Yes Ø	No D	VH220150	NC	N/A
2 to 3 hours 3 to 4 hours 3 to 4 hours More than 4 hours 2017 Grade 8) 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer	Yes ©	No D	VH270150 VH270156	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the 	Yes ©	No D D	VH220150 VH220151	NC	N/A
 2 to 3 hours 3 to 4 hours 3 to 4 hours More than 4 hours 2017 Grade 8) 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to use a tablet 	Yes © ©	N0 (D) (D) (D)	V11270150 V11270156 V11270156	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to vrite sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet 	Yes © © © ©	No (D) (D) (D) (D) (D)	VH220150 VH220151 VH220164	NC	N/A
 2 to 3 hours 3 to 4 hours More than 4 hours 2017 Grade 8) 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to dit text using a computer d. How to search for information on the Internet e. How to use a tablet f. How to look up the meaning of a word using a computer 	Yes Ø Ø Ø Ø	<u>No</u> (D) (D) (D) (D) (D) (D) (D) (D)	VE2270150 VE2270150 VE2270164 VE2270162	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to use a tablet f. How to look up the meaning of a word 	Yes © ©	No D D D	VH270150 VH270151 VH270164 VH270152	NC	N/A
2 to 3 hours 2 to 3 hours 3 to 4 hours More than 4 hours More than 4 hours 2017 Grade 8) 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to use a tablet f. How to look up the meaning of a word	Yes © © © © © © ©	No (b) (c) (c) (c) (c) (c) (c) (c) (c	VEI270150 VEI270151 VEI270154 VEI270154 VEI270155	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to vrite sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to use a tablet f. How to create a spreadsheet using a 	Yes D D D D D D D D	No (D) (D) (D) (D) (D) (D) (D) (D)	VH220150 VH220150 VH220164 VH220164 VH220155	NC	N/A
	Yes © © © © © © ©	N0 (D) (D) (D) (D) (D) (D) (D) (D)	VER270130 VER270154 VER270164 VER270164 VER270164 VER270156	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to use a tablet f. How to look up the meaning of a word using a computer g. How to create a spreadsheet using a computer h. How to create a presentation using a 	Yes © © © © © © ©	No (D) (D) (D) (D) (D) (D) (D) (D)	VH270150 VH270150 VH270151 VH270152 VH270152 VH270155 VH270155	NC	N/A
① 2 to 3 hours ① 3 to 4 hours ① More than 4 hours ② More than 4 hours ② 2017 Grade 8) 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers how to write sentences and paragraphs using a computer How to odit text using a computer How to oearch for information on the Internet How to use a tablet How to create a spreadsheet using a computer How to create a presentation using a computer How to run simulations using a computer	Yes © © © © © © © © © © © © ©	No (D) (D) (D) (D) (D) (D) (D) (D)	VER270130 VER270131 VER270132 VER270134 VER270134 VER270135 VER270135	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to look up the meaning of a word using a computer g. How to create a spreadsheet using a computer h. How to create a presentation using a computer 	Yes Ø Ø Ø Ø Ø Ø Ø Ø	No (D) (D) (D) (D) (D) (D) (D) (D)	VIE20150 VIE20151 VIE20164 VIE20165 VIE20165 VIE20166 VIE20167 VIE20168 VIE20168 VIE20168	NC	N/A
2 to 3 hours 3 to 4 hours 3 to 4 hours More than 4 hours 2017 Grade 8) 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet c. How to use a tablet f. How to use a tablet f. How to create a spreadsheet using a computer g. How to create a presentation using a computer h. How to run simulations using a computer i. How to run simulations using a computer	Yes © © © © © © © © © © © © ©	No (D) (D) (D) (D) (D) (D) (D) (D)	VEI270130 VEI270130 VEI270164 VEI270164 VEI270165 VEI270166	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to use a tablet f. How to look up the meaning of a word using a computer g. How to create a spreadsheet using a computer h. How to create a presentation using a 	Yes © © © © © © © ©	No (D) (D) (D) (D) (D) (D) (D) (D)	VIA20150 VIA20151 VIA20164 VIA20164 VIA20165 VIA20165 VIA20166 VIA20167 VIA20167 VIA20168 VIA20167 VIA20168	NC	N/A
	Yes © © © © © © © © © © © © ©	No (D) (D) (D) (D) (D) (D) (D) (D)	VER270130 VER270131 VER270132 VER270134 VER270134 VER270135 VER270135	 © 2 to 3 hours © 3 to 4 hours © More than 4 hours 7. Were you taught any of the following at school a. How to type on a computer keyboard using the correct fingers b. How to write sentences and paragraphs using a computer c. How to edit text using a computer d. How to search for information on the Internet e. How to look up the meaning of a word using a computer g. How to create a spreadsheet using a computer h. How to create a presentation using a computer i. How to run simulations using a computer 	Yes Ø Ø Ø Ø Ø Ø Ø	No (D) (D) (D) (D) (D) (D) (D) (D)	VIE20150 VIE20151 VIE20161 VIE20164 VIE20165 VIE20165 VIE20167 VIE20168 VIE20169 VIE20169 VIE20165 VIE20155 VIE20155	NC	N/A

				2019 item		D/A/ R/NC+	Rationale		
8. Which of the following are true about the was school? Select one answer choice on each row	iys in which you and yo w.	our teachers use cor	nputers at	 Which of the following are true about the way school? Select one answer choice on each row. 	s in which you and y	our teachers use co	mputers at	NC	N/A
	Yes	No			Yes	No			
 a. In most of my classes there are laptop or desktop computers that I can use for schoolwork. 	Ø	₿	V11270166	 a. In most of my classes there are laptop or desktop computers that I can use for schoolwork. 	۵	Ø	911270166		
b. In most of my classes there are tablets that I can use for schoolwork.	0	Θ	VH270167	b. In most of my classes there are tablets that I can use for schoolwork.	Ø	Ð	¥H270167		
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	Ø	Ð	VH270(70	c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	۹	θ	V312270170		
 Most of my teachers use computers when teaching my classes. 	۵	©	V11270169	d. Most of my teachers use computers when teaching my classes.	٩	Φ	VH270169		
 Most of my teachers require us to use computers in the classroom. 	0	Ð	V1027016#	 Most of my teachers require us to use computers in the classroom. 	Φ	0	VII270166		
2017 Grade 8)									
2017 Grade 8) 9. Has your school assigned you a laptop or desk © No © Yes, but I cannot take it home with me. © Yes, and I can take it home with me (lapto		y you can use?	VIENUI	 9. Has your school assigned you a laptop or deskto O No O Yes, but I cannot take it home with me. O Yes, and I can take it home with me (laptop 		y you can use?	VH27016	NC	N/A
 9. Has your school assigned you a laptop or desk O No O Yes, but I cannot take it home with me. 		y you can use?		NoP Yes, but I cannot take it home with me.		y you can use?			
 9. Has your school assigned you a laptop or desk O No D Yes, but I cannot take it home with me. O Yes, and I can take it home with me (lapto) 	op only).	y you can use?	VH270116 VH270117	NoP Yes, but I cannot take it home with me.	only).	y you can use?	VH270116 VH270117	NC NC	N/A N/A
 9. Has your school assigned you a laptop or desk (D) No (D) Yes, but I cannot take it home with me. (D) Yes, and I can take it home with me (lapto 2017 Grade 8) 	op only).	y you can use?		 No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) 	only).	y you can use?			

Previous item							2019 item							D/A/ R/NC+	Rationale
11. This school year, how following? Select one	often have y answer choic	ou used a lapto e on each row.	p or desktop o	computer to d	o each of the	V8320178	11. This school year, how often have you used a laptop or desktop computer to do each of the following? Select one answer choice on each row.						NC	N/A	
	Never	A few times	Once every few weeks	About once a week	More than once a week			Never	A few times	Once every few weeks	About once a week	More than once a week			
 a. Write a short paper (less than a page) for school 	θ	۹	0	Φ	θ	VH276172	 a. Write a short paper (less than a page) for school 	Ø	θ	0	₿	Θ	VH270172		
b. Write a paper for school that was longer than a page	٩	Ð	θ	Φ	Φ	vəta71078	b. Write a paper for school that was longer than a page	Ø	Φ	Ø	Φ	Φ	V11279173		
 c. Search the Internet for a school project 	٢	Ð	Θ	Φ	۵	VH270174	c. Search the Internet for a school project	Φ	0	Θ	θ	θ	V24220174		
 d. Practice things in mathematics that you were having trouble learning 	θ	θ	θ	Θ	θ	Variations	d. Practice things in mathematics that you were having trouble learning	۵	æ	Φ	Ø	Ð	VEDTOINI		
 Practice things in reading that you were having trouble learning 	9	θ	0	⊕	θ	VH270177	e. Practice things in reading that you were having trouble	٩	Φ	Φ	Ø	æ	VH270177		
í. Take a test	0	0	0	Ø	Φ	\$H170179	learning (. Take a test	Ø	Ð	O	Ð	Ð	VH2/0175		
g. Create a map	Ø	Ø	Ø	Ø	Ø	VH270178	g. Create a map	0	0	0	0	0	VH270178		
h. Work on a website or blog that you maintain	Ø	۲	0	ø	Ð	VH270179	 h. Work on a website or blog that you maintain 	0	9	0	9	0	VH270179		
 Create a multimedia presentation on your own 	0	۲	Ø	Ø	θ	VH270180	 Create a multimedia presentation on your own 	٩	Ð	Ø	0	Ð	V11270180		
 Work collaboratively with a team of students to create a multimedia presentation 	۲	æ	Ø	Φ	θ	VH270176-	 Work collaboratively with a team of students to create a multimedia presentation 	۵	Ð	Θ	Ð	æ	VH270176		

Previous item							2019 item							D/A/ R/NC+	Rationale
 This school year, how o choice on each row. 	often have y	ou used a table	t to do each of	f the following	Select one	vii23082: answer	12. This school year. how choice on each row.	often have y	ou used a table	et to do each of	the followin	g? Select one a	answer	NC	N/A
	Never	A few times	Once every few weeks	About once a week	More than once a week			Never	A few times	Once every few weeks	About once a week	More than once a week			
 a. Write a short paper (less than a page) for school 	Ð	Ð	Ø	٩	Φ	VH270163	 a. Write a short paper (less than a page) for school 	Ø	9	θ	Ø	θ	V11270163		
b. Write a paper for school that was longer than a page	0	Ð	0	0	θ	VT127/1888	b. Write a paper for school that was longer than a page	۲	Ð	0	Φ	θ	V21270184		
 Search the Internet for a school project 	Θ	Ð	0	0	Φ	VH270184	c. Search the Internet for a school project	Ø	Ø	Ø	Ø	Ð	VH270184		
d. Practice things in mathematics that you were having trouble learning	9	0	0	θ	Ø	VH270185	d. Practice things in mathematics that you were having trouble learning	٩	٩	Ø	Φ	Ð	V11270185		
e. Practice things in reading that you were having trouble learning	Ø	Φ	Ø	0	Ð	911270186	e. Practice things in reading that you were having trouble learning	Ø	٩	Q	Ø	Ð	VH270166		
f. Take a test	٩	Ø	Ø	0	Φ	VH270192	f. Take a test	Ð	٩	O	Ø	O	Va1270192		
g. Create a map	۲	Ð	Ø	Ø	Ð	\$11270189	g. Create a map	0	0	0	0	Ð	V11270169		
 Work on a website or blog that you maintain 	۲	۹	Ø	0	Φ	VH270190	h. Work on a website or	Ø	Ø	Ø	Ð	Ð	VH270190		
 Create a multimedia presentation on your own 	θ	₿	θ	Ø	Φ	VH278191	blog that you maintain i. Create a multimedia presentation <i>on your</i>	0	0	0	ø	Θ	V21270191		
 Work collaboratively with a team of students to create a multimedia presentation 	Ð	œ	0	Ø	Φ	VH2/0187	j. Work collaboratively with a team of students to create a multimedia presentation	٩	Ø	Ø	Ø	Ð	VH270187		
2017 Grade 8) 13. Which best describes th © I don't know how to © I can type with one of © I can type with all to © I can type with all to 2017 Grade 8)	o type using or two finge or two finge en fingers w	a computer key rs. but I have to rs. and I know hen I look at th	/board.) search for w where most o e keyboard.	here the letter f the letter key		VH21h130	 13. Which best describes the Idon't know how to I can type with one of I can type with one of I can type with all to C I can type with all to 	type using or two finge or two finge on fingers w	a computer key ers, but I have to ers, and I know hen I look at th	yboard. o search for wh where most of ne keyboard.	nere the lette the letter ke		¥4070030	NC	N/A
 Would you rather take a Paper and pencil Computer 	test at scho	ol using paper	and pencil or	using a compt	iter?	VII220132	 14. Would you rather take a D Paper and pencil D Computer 	test at sch	ool using paper	and pencil or	using a comp	uter?	VH270132	NC	N/A

Previous item						2019 item									
15. Do you think you would be row.	e able to do each	ı of the followin	g? Select one ans	wer choice on	vu270215 each	15. Do you think you would be able to do each of the following? Select one answer choice on each row.						NC	N/A		
	I definitely can't.	I probably can't.	I probably can.	I definitely can.			I definitely can't.	I probably can't.	I probably can.	I definitely can.					
 Write sentences and paragraphs using a computer 	0	⊛	0	۵	VH270229	a. Write sentences and paragraphs using a computer	0	Θ	Ø	θ	VH270229				
b. Edit text using a computer	0	8	O	0	VH270218	b. Edit text using a computer	0	®	O	Ø	VH270218				
c. Use a touchscreen on a computer, tablet, or smartphone	۵	۲	Ø	۵	VH270230	 c. Use a touchscreen on a computer, tablet, or smartphone 	0	®	Ø	0	VH270230				
d. Look up the meaning of a word using a computer	0	⊛	Ø	Ø	VH270225	d. Look up the meaning of a word using a computer	Ø	®	Ø	Φ	VH270225				
e. Draw a picture using a computer	۵	٢	©	Ø	VH270226	e. Draw a picture using a computer	0	®	©	θ	VH270226				
f. View or download digital media	0	Θ	Ø	۵	VH270216	f. View or download digital media	0	®	O	Θ	VH270216				
g. Create a presentation using a computer	Ø	®	Ø	Ø	VH270228	g. Create a presentation using a computer	0	®	O	Ø	VH270228				
h. Create a spreadsheet using a computer	0	۲	©	۵	VH270231	h. Create a spreadsheet using a computer	۵	®	O	Θ	VH270231				
 Install new software or apps 	0	۲	O	۵	VH270219	i. Install new software or	Ø	®	O	Φ	VH270219				
 Participate in online discussions, forums, social networking sites, or virtual communities 	0	⊕	Ø	Φ	VH270220	 apps j. Participate in online discussions, forums, social networking sites, or virtual 	0	®	©	۵	VH270220				
k. Maintain a website or blog	۵	(1)	O	Ø	VH270221	communities k. Maintain a website or blog	-	-	-	-	VH270221				
1. Search for information on the Internet	۵	٩	©	Φ	VH270222	1. Search for information on	0	®	0	0	VH2/0221 VH270222				
m. Run simulations using a computer	۵	۲	Ø	Φ	VH270223	the Internet m. Run simulations using a	0	®	0	0	VH270223				
n. Create a graph or chart using a computer	۲	۲	©	Ø	VH270224	n. Create a graph or chart	0	®	0	0	VH270224				
 Write a computer program or app 	0	•	©	Φ	VH270227	using a computer o. Write a computer program	9		0	9	VH270227				
 p. Troubleshoot a problem with a computer 	۲	۲	©	Ø	VH270232	or app p. Troubleshoot a problem		®							
 Figure out how to use new functions of a digital device 	Θ	(1)	O	Φ	VH270217	 g. Figure out how to use new 	0	®	Q	Φ	VH270232				
that I am not yet familiar with	•	9	9	~		q. Figure out now to use new functions of a digital device that I am not yet familiar with	0	⊕	Ø	۵	VH270217				

Previous item	2019 item		D/A/ R/NC+	Rationale
 NUTREN 16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices are you? 0 1 2 3 4 5 6 7 8 9 10 	 16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices are you? 0 0 1 2 3 4 5 6 7 8 9 10 	11071021	NC	N/A
(2017 Grade 8) 17. Please read the descriptions of the following four eighth-grade students. After you read each description, you will be asked to answer a question about each student based on the information provided. Linda often uses apps to talk to her friends or to play games. She does some of her homework on her laptop and knows how to write and create tables using a computer. Linda cannot type with 10 fingers but is pretty fast with two fingers and mostly finds the right keys.	 17. Please read the descriptions of the following four eighth-grade students. After you read each description, you will be asked to answer a question about each student based on the information provided. Linda often uses apps to talk to her friends or to play games. She does some of her homework on her laptop and knows how to write and create tables using a computer. Linda cannot type with 10 fingers but is pretty fast with two fingers and mostly finds the right keys. 	VH270256	NC	N/A
On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Linda is? © 0 © 1 © 2 © 3 © 4 © 5 © 6 © 7 © 8 © 9 © 10	On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar. how familiar with using computers and other digital devices do you think Linda is? © 0 © 1 © 2 © 3 © 4 © 5 © 6 © 7 © 8 © 9 © 10			
(2017 Grade 8)	© 10			

2019 item	D/A/ R/NC	Rationale
 18. Tom often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and edit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type pretty accurately using ten fingers when looking at the computer keyboard. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Tom</u> is: 0 1 2 3 4 5 6 7 8 9 10 	VIEZZEZAT NC	N/A
 19. Susan often uses apps on a smartphone or tablet and does most of her homework on a laptop. She is good at writing and editing papers on her computer and has experience with creating complex tables and charts. Susan can type fast and accurately with 10 fingers without looking at the computer keyboard. She also knows a couple of programming languages. This school year, she built her first app. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Susan is? © 0 © 1 © 2 © 3 © 4 © 5 © 6 © 7 © 8 © 9 © 10 	VH270E2N NC	N/A
	event 18. Tom often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and elit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type pretty accurately using ten fingers when looking at the computer keyboard. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Tom</u> is: 0 1 2 3 4 5 6 7 8 9 10 erse erse 19. Susan often uses apps on a smartphone or tablet and does most of her homework on a laptor. She is good at writing and celting papers on her computer and has excurately with 10 fingers without looking at the computer stales and charts. Susan on the reating complex tables and charts. Susan on the reating complex tables and charts. Susan and the reating complex tables and charts. Susan on the reating complex tables and charts. Susan on the pretine with reating complex tables and charts. Susan one may the also knows a couple of programming languages. This school year, she built her first app. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Susan</u> is? 0 1 2 3 4 5 6 7 8 9 	twee Is. Tom often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and edit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type perty accurately using ten fingers when looking at the computer keyboard. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Tom is: 0 0 0 1 1 0 2 3 0 4 5 0 0 10 Vuewer NC

does not use a computer for his hon to write a paper but never used a co- presentations. Kevin can type with correct keys on the computer keybo On a scale from 0 to 10, where 0 is a	omework. He omputer to c o one or two board.	e used a comp create tables, o fingers but ha amiliar and 10	uter a couple of charts, or as to search to f) is very familia	f times ind the r. how	VH231219	does not use a computer for to write a paper but never u presentations. Kevin can ty correct keys on the comput On a scale from 0 to 10, wh	his homework. Ised a computer pe with one or tw er keyboard.	He used a compu- to create tables, o	ater a couple of charts, or	times	V81270239	R/NC+	N/A			
familiar with using computers and a ① 0 ① 1 ① 2 ③ 3 ① 4						On a scale from 0 to 10, wh		 20. Kevin sometimes plays games on his smartphone or a computer, but he usually does not use a computer for his homework. He used a computer a couple of times to write a paper but never used a computer to create tables, charts, or presentations. Kevin can type with one or two fingers but has to search to find the correct keys on the computer keyboard. 20. Kevin sometimes plays games on his smartphone or a computer, but he usually does not use a computer for his homework. He used a computer a couple of times to write a paper but never used a computer to create tables, charts, or presentations. Kevin can type with one or two fingers but has to search to find the correct keys on the computer keyboard. 								
 Φ 1 Φ 2 Φ 3 Φ 4 						On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Kevin is? On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Kevin is?										
© 2 © 3 © 4			(D) 1													
© 3 © 4			© 1													
© 3 © 4																
⊕ 4		© 2														
						© 3										
						© 4										
						© 5										
© 6						© 6										
⊕ 7						69 7										
Φ 8						08										
Φ 9																
© 10						© 9 © 10										
Never h	heard of 1	1	e answer choice Heard of it often	ar are you with each of the following? Select one answer choice on each row. Vittime 21. How familiar are you with each of the following? Select one answer choice on each row. Never heard of Heard of it Heard of it Never heard of Heard of it Never heard of Heard of it						VIENIBA	NC	N/A				
				the concert			Never heard of	Heard of it once or twice	Heard of it	understand						
a E-reader	<i>a</i>	0	2.5	the concept	144770105	i Tarrilan	it	once or twice	often	understand the concept						
	@ @	0	Ø	the concept	ANIS20100	a. E-reader	it ©	once or twice D	often ©	understand the concept ©	VH270195					
b. Wi-Fi a	® Ø	0	2.5	the concept		b. Wi-Fi	it ©	once or twice D	often ©	understand the concept ©	VH270195 V31270196 V31270197					
b. Wi-Fi @	0	œ	0	the concept © ©	V71270196	b. Wi-Fi c. Firewall	it © ©	once or twice	often © ©	understand the concept © ©	YH270196					
b. Wi-Fi da 2. Firewall da d. Hyperlink da 2. Neuro-digital computing da	Ø	@ @	0 0 0	the concept Ø Ø Ø	VH270196 VH270197	b. Wi-Fi	it ©	once or twice D	often ©	understand the concept ©	¥11270196 ¥11270197					
b. Wi-Fi de c. Firewall de d. Hyperlink de e. Neuro-digital computing de f. Instant messaging de	8 9 9	0 0 0 0	0 0 0 0 0 0	the concept © © © © © © © ©	VH270195 VH270197 VH270198 VH270199 VH270199	b. Wi-Fi c. Firewall d. Hyperlink	it © © ©	once or twice	often O O O O	understand the concept © © © ©	A31220186 A31220185 A31220186					
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b. Wi-Fi a c. Firewall a d. Hyperlink a e. Neuro-digital computing a f. Instant messaging a g. CPU a h. Cut and paste a	8 9 9 9 9 9 9 9	0 0 0 0 0 0	0 0 0 0 0 0 0 0	the concept	VH270195 VH270197 VH270198 VH270199 VH270199 VH270201 VH270201 VH270209	b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging	it (4) (4) (5) (5) (6) (6) (6) (6) (6) (6) (6) (6	once or twice © © © © © © © © © ©	often O O O O O O O O O O O O O O O O O O O	understand the concept © © © © © ©	Y31270196 Y31270197 Y31270197 Y31270199 Y31270199 Y31270199					
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b. Wi-Fi d c. Firewall d d. Hyperlink d e. Neuro-digital computing d f. Instant messaging d g. CPU d h. Cut and paste d i. Pyramidal browser d f. Spreadsheet d	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	the concept	V18270196 V18270197 V82270199 V18270199 V18270290 V18270200 V18270200 V18270200 V18270200	b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste	it () () () () () () () () () ()	0nce or twice 0 0 0 0 0 0 0 0 0 0 0 0 0	0ften 0 0 0 0 0 0 0 0 0 0 0 0 0	understand the concept © © © © © © © © © © © © © © © © © © ©	Y31270196 Y31270197 V31270199 V31270199 Y31270199 V31270200 V31270200					
b. Wi-Fi d c. Firewall d d. Hyperlink d e. Neuro-digiral computing d f. Instant messaging d g. CPU d h. Cut and paste d i. Pyramidal browset d k. Spreadsheet d k. Limbic wire d	Ø Ø		0 0 0 0 0 0 0 0 0 0 0 0 0 0	the concept	VH270196 VH270197 VH270199 VH270199 VH270199 VH270201 VH270209 VH270209 VH270204 VH270206 VH270207	b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste i. Pytamidal browser j. Spreadsheet k. Limbic wire	it () () () () () () () () () ()	0nce or twice 0 0 0 0 0 0 0 0 0 0 0 0 0	0ften 0 0 0 0 0 0 0 0 0 0 0 0 0	understand the concept @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @	Y31270196 Y31270197 Y31270197 Y31270199 Y31270199 Y31270200 Y31270200 Y31270200 Y31270200					
b. Wi-Fi a c. Firewall a d. Hyperlink a e. Neuro-digital computing a f. Instant messaging a g. CPU a h. Cut and paste a i. Pyramidal browser a f. Spreadsheet a k. Limbic wire a I. Spinalbyte a	Ø 0 Ø 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	the concept	V18270196 V18270197 V82270199 V18270199 V18270290 V18270200 V18270200 V18270200 V18270200	b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste i. Pyramidal browser j. Spreadsheet k. Limbic wire I. Spinalbyte	it () () () () () () () () () ()	0nce or twice 0 0 0 0 0 0 0 0 0 0 0 0 0	0ften 0 0 0 0 0 0 0 0 0 0 0 0 0	understand the concept	VH270196 VH270197 VH270197 VH270199 VH270199 VH270203 VH270203 VH270203 VH270204 VH270206					
b. Wi-Fi d c. Firewall d d. Hyperlink d e. Neuro-digital computing d f. Instant messaging d g. CPU d h. Cut and paste d i. Pyramidal browser d i. Spradsheet d k. Limbic wire d t. Spinalbyte d m. Cloud computing d	Ø Ø		0 0 0 0 0 0 0 0 0 0 0 0 0 0	the concept	VH270196 VH270197 VH270197 VH270199 VH270199 VH270201 VH270201 VH270201 VH270201 VH270201 VH270206 VH270206	b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste i. Pyramidal browser j. Spreadsheet k. Limbic wire I. Spinalbyte m. Cloud computing	it () () () () () () () () () ()	0nce or twice 0 0 0 0 0 0 0 0 0 0 0 0 0	0ften 0 0 0 0 0 0 0 0 0 0 0 0 0	understand the concept	VH270196 VH270197 VH270197 VH270197 VH27030 VH27030 VH27030 VH270306 VH270306 VH270306 VH270306 VH270306					
b. Wi-Fi de c. Firewall de d. Hyperlink de e. Neuro-digital computing de f. Instant messaging de f. CPU de h. Cut and paste de i. Pyramidal browser de i. Spradsheet de k. Limbic wire de t. Spinalbyte de m. Cloud computing de n. Server de			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	the concept	V98270196 V98270197 V98270199 V98270199 V98270299 V98270290 V98270290 V98270290 V98270296 V98270296 V98270296 V98270296 V98270296	b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste i. Pyramidal browser j. Spreadsheet k. Limbic wire I. Spinalbyte	it () () () () () () () () () ()	0nce or twice 0 0 0 0 0 0 0 0 0 0 0 0 0	0ften 0 0 0 0 0 0 0 0 0 0 0 0 0	understand the concept	V91220196 V91220197 V91220199 V91220199 V91220201 V91220201 V91220205 V91220205 V91220205 V91220205 V91220205					

Appendix K-1az: Operational Grade 8 CAFS

	Yes	No	
a. A laptop or desktop computer that is only for your use	٨	®	VH270141
b. A laptop or desktop computer that is shared between you and others	۲	®	VH270142
c. A tablet that is only for your use	Ø	®	VH270139
d. A tablet that is shared between you and others	٨	®	VH270140
e. Wi-Fi or some other Internet connection you can use	٨	(6)	VH270143
f. A smartphone that is only for your use	(A)	®	VH270144

1. At home, do you have any of the following? Select one answer choice on each row.

VH270145

VH270138

- 2. When did you first use a laptop or desktop computer?
 - ℬ I have never used one.
 - [®] Before I was in kindergarten
 - © When I was in kindergarten
 - ^(D) When I was in first, second, or third grade
 - © When I was in fourth or fifth grade
 - © When I was in sixth, seventh, or eighth grade
- 3. When did you first use a tablet?
 - Never until this assessment
 - [®] Before I was in kindergarten
 - © When I was in kindergarten
 - When I was in first, second, or third grade
 - © When I was in fourth or fifth grade
 - © When I was in sixth, seventh, or eighth grade

4. When did you first use a smartphone?

- [®] Before I was in kindergarten
- © When I was in kindergarten
- ^(D) When I was in first, second, or third grade
- © When I was in fourth or fifth grade
- © When I was in sixth, seventh, or eighth grade

VH270146

- **5.** On a weekday, about how many hours do you use a laptop or desktop computer for doing schoolwork, including homework?
 - None
 None
 - [®] Less than an hour
 - © 1 to 2 hours
 - \bigcirc 2 to 3 hours
 - © 3 to 4 hours
 - More than 4 hours

- **6. On a weekday**, about **how many hours** do you use a **tablet** for doing schoolwork, including homework?
 - None
 None
 - Less than an hour
 - © 1 to 2 hours
 - ① 2 to 3 hours
 - © 3 to 4 hours
 - © More than 4 hours

		Yes	No	
a.	How to type on a computer keyboard using the correct fingers	@	®	VH270150
b.	How to write sentences and paragraphs using a computer	Ø	®	VH270151
c.	How to edit text using a computer	A	®	VH270164
d.	How to search for information on the Internet	Ø	®	VH270152
e.	How to use a tablet	A	®	VH270156
f.	How to look up the meaning of a word using a computer	Ø	®	VH270157
g.	How to create a spreadsheet using a computer	Ø	®	VH270154
h.	How to create a presentation using a computer	Ø	®	VH270155
i.	How to run simulations using a computer	A	®	VH270159
j.	How to write a computer program or app	A	®	VH270160
k.	How to create a graph or chart using a computer	Ø	®	VH270161
1.	How to troubleshoot problems with a computer	۵	®	VH270158

7. Were you taught any of the following **at school**? Select **one** answer choice on each row.

VH270165

8. Which of the following are true about the ways in which you and your teachers use computers at school? Select one answer choice on each row.

	Yes	No	
a. In most of my classes there are laptop or desktop computers that I can use for schoolwork.	۵	8	VH270166
b. In most of my classes there are tablets the I can use for schoolwork.	at 🛞	®	VH270167
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork	(®	®	VH270170
d. Most of my teachers use computers when teaching my classes.	n 💿	®	VH270169
e. Most of my teachers require us to use computers in the classroom.	(A)	®	VH270168

VH270116

- 9. Has your school assigned you a laptop or desktop computer that only you can use?
 - No
 - [®] Yes, but I cannot take it home with me.
 - © Yes, and I can take it home with me (laptop only).

- **10.** Has your school assigned you a **tablet** that only you can use?
 - (D) No
 - [®] Yes, but I cannot take it home with me.
 - ◎ Yes, and I can take it home with me.

Once every About once More than Never A few times few weeks a week once a week a. Write a short paper (less than a page) for VH270172 A O D Ð B school b. Write a paper for school that was longer VH270173 A B \odot \odot Ð than a page c. Search the Internet for VH270174 A B \odot \odot Ð a school project d. Practice things in mathematics that you VH270181 A O Ð B \odot were having trouble learning e. Practice things in reading that you were VH270177 A B O \bigcirc Ð having trouble learning f. Take a test VH270175 A B \bigcirc \bigcirc Ð g. Create a map VH270178 A B \odot \odot Ð h. Work on a website or VH270179 A Ð B \odot \bigcirc blog that you maintain i. Create a multimedia presentation on your VH270180 A B O \odot Ð own j. Work collaboratively with a team of students to create a VH270176 A B O \odot Đ multimedia presentation

11. This school year, how often have you used a laptop or desktop computer to do each of the following? Select one answer choice on each row.

VH270182

		Never	A few times	Once every few weeks	About once a week	More than once a week	
a.	Write a short paper (less than a page) for school	Ø	®	Q	Ø	Ē	VH270183
b.	Write a paper for school that was longer than a page	Ø	ß	Ø	0	¢	VH270188
c.	Search the Internet for a school project	A	B	0	Ø	Ē	VH270184
d.	Practice things in mathematics that you were having trouble learning	Ø	®	Ø	Ø	C	VH270185
e.	Practice things in reading that you were having trouble learning	(3)	ß	Ø	Ø	©	VH270186
f.	Take a test	A	®	O	O	Ē	VH270192
g.	Create a map	A	®	0	O	Ē	VH270189
h.	Work on a website or blog that you maintain	A	B	0	Ø	Ē	VH270190
i.	Create a multimedia presentation <i>on your</i> <i>own</i>	Ø	ß	O	Ø	Ē	VH270191
j.	Work collaboratively with a team of students to create a multimedia presentation	Ø	®	Ø	Ø	¢	VH270187

12. This school year, how often have you used a **tablet** to do each of the following? Select **one** answer choice on each row.

VH270130

13. Which best describes the way you type on a computer keyboard?

- I don't know how to type using a computer keyboard.
- [®] I can type with one or two fingers, but I have to search for where the letter keys are.
- © I can type with one or two fingers, and I know where most of the letter keys are.
- ◎ I can type with all ten fingers when I look at the keyboard.
- © I can type with all ten fingers without looking at the keyboard.

14. Would you rather take a test at school using paper and pencil or using a computer?

- Paper and pencil
- [®] Computer

15.	Do you think you would be able to do each of the following? Select one answer choice on each
	row.

	I definitely can't.	I probably can't.	I probably can.	I definitely can.	
a. Write sentences and paragraphs using a computer	Ø	®	Ø	Ø	VH270229
b. Edit text using a computer	æ	®	O	0	VH270218
c. Use a touchscreen on a computer, tablet, or smartphone	۵	®	©	©	VH270230
d. Look up the meaning of a word using a computer	Ø	®	©	Ø	VH270225
e. Draw a picture using a computer	æ	®	0	0	VH270226
f. View or download digital media	æ	®	O	Ø	VH270216
g. Create a presentation using a computer	æ	®	0	0	VH270228
h. Create a spreadsheet using a computer	æ	®	0	0	VH270231
i. Install new software or apps	æ	®	0	0	VH270219
j. Participate in online discussions, forums, social networking sites, or virtual communities	۵	®	Ø	Ø	VH270220
k. Maintain a website or blog	æ	®	©	0	VH270221
1. Search for information on the Internet	Ø	®	©	Ø	VH270222
m. Run simulations using a computer	æ	®	0	0	VH270223
n. Create a graph or chart using a computer	æ	®	O	D	VH270224
o. Write a computer program or app	æ	®	C	D	VH270227
p. Troubleshoot a problem with a computer	®	®	©	D	VH270232
q. Figure out how to use new functions of a digital device that I am not yet familiar with	۵	®	©	©	VH270217

- **16.** On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how** familiar with using computers and other digital devices are you?
 - **(A)** 0
 - **B** 1
 - © 2
 - © 3
 - © 4
 - © 5
 - **G** 6
 - ⊕ 7
 - **D** 8
 - **D** 9
 - © 10

17. Please read the descriptions of the following four eighth-grade students. After you read each description, you will be asked to answer a question about each student based on the information provided.

Linda often uses apps to talk to her friends or to play games. She does some of her homework on her laptop and knows how to write and create tables using a computer. Linda cannot type with 10 fingers but is pretty fast with two fingers and mostly finds the right keys.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Linda is?

- ® 1
- © 2
- © 3
- © 4
- © 5
- © 6
- ⊕ 7
- O 8
- O 9
- © 10

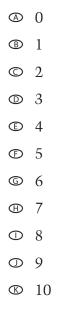
18. Tom often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and edit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type pretty accurately using ten fingers when looking at the computer keyboard.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how** familiar with using computers and other digital devices do you think Tom is?

- ④ 0
- ® 1
- © 2
- **D** 3
- © 4
- © 5
- © 6
- ⊕ 7
- **O** 8
- **D** 9
- © 10

19. Susan often uses apps on a smartphone or tablet and does most of her homework on a laptop. She is good at writing and editing papers on her computer and has experience with creating complex tables and charts. Susan can type fast and accurately with 10 fingers without looking at the computer keyboard. She also knows a couple of programming languages. This school year, she built her first app.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Susan</u> is?



20. Kevin sometimes plays games on his smartphone or a computer, but he usually does not use a computer for his homework. He used a computer a couple of times to write a paper but never used a computer to create tables, charts, or presentations. Kevin can type with one or two fingers but has to search to find the correct keys on the computer keyboard.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Kevin</u> is?

- **B** 1
- © 2
- © 3
- © 4
- © 5
- **6**
- ⊕ 7
- O 8
- O 9
- © 10

	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	
a. E-reader	8	B	Ô	D	VH270195
b. Wi-Fi	A	®	Ô	D	VH270196
c. Firewall	A	®	Ô	D	VH270197
d. Hyperlink	Ø	B	©	D	VH270198
e. Neuro-digital computing	Ø	B	©	D	VH270199
f. Instant messaging	A	®	O	D	VH270200
g. CPU	Ø	B	©	D	VH270201
h. Cut and paste	Ø	B	O	D	VH270203
i. Pyramidal browser	Ø	B	©	D	VH270204
j. Spreadsheet	Ø	B	O	D	VH270206
k. Limbic wire	Ø	B	©	D	VH270207
1. Spinalbyte	Ø	B	O	D	VH270208
m. Cloud computing	Ø	B	O	D	VH270209
n. Server	Ø	B	©	D	VH270210
o. Compiler	Ø	B	©	D	VH270212
p. Callosum board	Ø	B	©	D	VH270214

21. How familiar are you with each of the following? Select **one** answer choice on each row.

Appendix K-1ba: Summary of Changes Operational Grade 12 CAFS

	2019 item					D/A/ R/NC+	Rationale		
 WHISSAID How much do you know about using computers and other digital devices? I hardly know anything at all. I know something. I know quite a bit. I know a lot. 				N/A				D	This item was dropped because it was not correlated with achievement, and was not conceptually central to the
. At home, do you have any of the following? F	ill in one ov	al on each line.	VH155275	1. At home, do you have any of the following? Se	lect one answer choi	ce on each row.	VH270438	NC	study. The in-line
	Yes	No			Yes	No			direction was
a. A laptop or desktop computer that is only for your use	0	œ	VH155283	a. A laptop or desktop computer that is only for your use b. A laptop or desktop computer that is	۲	Ð	V94270141		adapted from PBA to DBA:
b. A laptop or desktop computer that is shared between you and others	0	•	VH155284	c. A tablet that is only for your use	0	0	V11270142 V91270139		"Fill in one
c. A tablet that is only for your use	®	®	VH155280	 A tablet that is shared between you and others 	Ð	Φ	VII270140		oval on each
d. A tablet that is shared between you and others	0	•	VH155281	e. Wi-Fi or some other Internet connection you can use f. A smartphone that is only for your use	0	0	VEE270143		line." was adapted to
e. Wi-Fi or some other Internet connection you can use	Θ	Θ	VH155285	La contra de la cont					"Select one
f. A smartphone that is only for your use	Ø	Ð	V21155287						answer choice on

Previous item	2019 item		D/A/ R/NC+	Rationale
 When did you first use a laptop or desktop computer? I have never used one. Before I was in kindergarten When I was in kindergarten When I was in first, second, or third grade When I was in fourth or fifth grade When I was in sixth, seventh, or eighth grade When I was in high school 	 2. When did you first use a laptop or desktop computer? ③ I have never used one. ④ Before I was in kindergarten ◎ When I was in kindergarten ◎ When I was in first, second, or third grade ◎ When I was in fourth or fifth grade ◎ When I was in sixth, seventh, or eighth grade ◎ When I was in high school 	VIEREM	NC	N/A
 (2015 Grade 12) 4. When did you first use a tablet? I have never used one. Before I was in kindergarten When I was in kindergarten When I was in first, second, or third grade When I was in fourth or fifth grade When I was in sixth, seventh, or eighth grade When I was in high school 	 3. When did you first use a tablet? Never until this assessment Before I was in kindergarten When I was in kindergarten When I was in first, second, or third grade When I was in fourth or fifth grade When I was in sixth, seventh, or eighth grade When I was in high school 	¥42/IX69	R	For DBA response option "A" is adapted to "Never until this assessment" to account for the fact that students are taking the eNAEP
(2015 Grade 12)				assessment on the tablet.

4. When did you first use a smartphone? Ø I have never used one. 	VH270235	NC	1
 Before I was in kindergarten When I was in kindergarten When I was in first, second, or third grade When I was in fourth or fifth grade When I was in sixth, seventh, or eighth grade When I was in high school 		NC	N/A
 5. On a weekday, about how many hours do you use a laptop or desktop computer for doing schoolwork, including homework? None Less than an hour 1 to 2 hours 2 to 3 hours 3 to 4 hours More than 4 hours 	V81270147	NC	N/A
	 When I was in first, second, or third grade When I was in fourth or fifth grade When I was in sixth, seventh, or eighth grade When I was in high school 5. On a weekday, about how many hours do you use a laptop or desktop computer for doing schoolwork, including homework? None Less than an hour 1 to 2 hours 2 to 3 hours 3 to 4 hours 	 When I was in first, second, or third grade When I was in fourth or fifth grade When I was in sixth, seventh, or eighth grade When I was in high school 	 When I was in first, second, or third grade When I was in fourth or fifth grade When I was in sixth, seventh, or eighth grade When I was in high school

Previous item	2019 item	D/A/ R/NC+	Rationale
 7. On a weekday, about how many hours do you use a tablet for doing schoolwork, including homework? ③ None ④ Less than an hour ① 1 to 2 hours ④ 2 to 3 hours ⑥ 3 to 4 hours ⑥ More than 4 hours 	 6. On a weekday, about how many hours do you use a tablet for doing schoolwork, including homework? O None D Less than an hour 1 to 2 hours 2 to 3 hours 3 to 4 hours More than 4 hours 	NC	N/A
(2015 Grade 12)			

Previous item				2019 item		D/A/ R/NC+	Rationale		
8. Were you taught any of the following at scho	ool? Fill in on	e oval on each line.	VH155373	7. Were you taught any of the following at school	VII270149	R	Previous sub-		
	Yes	No			Yes	No			items "f",
a. How to type on a computer keyboard using the correct fingers	Ø	ഀ	VH155375	 a. How to type on a computer keyboard using the correct fingers 	Ø	۵	VH270150		"m", "n" were
b. How to write sentences and	Ø	(6)	VH155376	 How to write sentences and paragraphs using a computer 	٢	Ð	VH270L91		dropped.
paragraphs using a computer				c. How to edit text using a computer	Ø	Ø	VH270164		
c. How to edit text using a computer	\odot	ഀ	VH176918	d. How to search for information on the Internet	Ø	Φ	VT12701.52		The in-line
d. How to search for information on	æ	ഀ	VH155377	e. How to use a tablet	0	œ	\$142,501.56		direction was
the Internet	0	9		 How to look up the meaning of a word using a computer 	Φ	œ	VH220157		adapted from
e. How to use a tablet	\otimes	B	VH155378	g. How to create a spreadsheet using a computer	Ø	œ	VH27015a		PBA to DBA:
f. How to draw a picture using a computer	0	₿	VH155379	h. How to create a presentation using a computer	Ø	9	\$74270155		"Fill in one
	-		VH155380	i. How to run simulations using a computer	Ø	Ð	VH270159		oval on each
g. How to look up the meaning of a word using a computer		₿	11133000	j. How to write a computer program or app	Ø	Ð	VH2/0160		line." was
h. How to create a spreadsheet using a	Ø	ഀ	VH155381	k. How to create a graph or chart using a computer	Ø	۵	VH270161		adapted to
computer		-		 How to troubleshoot problems with a computer 	Ø	G	VH270158		"Select one
i. How to create a presentation using a computer	0	₿	VH155382						answer
j. How to run simulations using a computer	0	ـ	VH155384						choice on each row."
k. How to write a computer program or app	0	ⓑ	VH155385						each row.
 How to create a graph or chart using a computer 	0	ഀ	VH155386						
m. How to maintain a website or blog	Ø	®	VH155387						
n. How to install new software or apps	۵	ⓑ	VH155388						
o. How to troubleshoot problems with a computer	(A)	ـ	VH155383						

Previous item				2019 item				D/A/ R/NC+	Rationale
9. Which of the following are true about the way computers at school? Fill in one oval on each 1		you and your te	vinissi77 achers use	 Which of the following are true about the way school? Select one answer choice on each row. 	s in which you and	your teachers use cor	nputers at	NC	The in-line direction was
	Yes	No			Yes	No			adapted from
a. In most of my classes there are laptop or desktop computers that I can use for schoolwork.	(8)	•	VH155479	 a. In most of my classes there are laptop or desktop computers that I can use for schoolwork. 	۵	٢	¥H270146		PBA to DBA: "Fill in one
b. In most of my classes there are	0	•	VH155482	b. In most of my classes there are tablets that I can use for schoolwork.	Ø	٩	V1:1270167		oval on each
tablets that I can use for schoolwork.	•	•		c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	Θ	Ð	VH270170		line." was
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	0	Φ	VH182383	 d. Most of my teachers use computers when teaching my classes. e. Most of my teachers require us to use 	۵	Ø	VH270169		adapted to
d. Most of my teachers use computers when teaching my classes.	Θ	Ð	VIIISS484	computers in the classroom.	۵	٢	VH270168		"Select one answer
e. Most of my teachers require us to use computers in the classroom.	Θ	٩	VH155485						choice on each row."
(2015 Grade 12)									
vH196393 10. Has your school assigned you a laptop or desktop computer that only you can use?				 9. Has your school assigned you a laptop or deskto Ø No 	op computer that or	nly you can use?	VH220116	NC	N/A
No No				 Yes, but I cannot take it home with me. 	welco.				
Yes, but I cannot take it home with me.				© Yes, and I can take it home with me (laptop	only).				
© Yes, and I can take it home with me (laptop only).									
(2015 Grade 12)									
vH196403 11. Has your school assigned you a tablet that only you can use?				10. Has your school assigned you a tablet that only	you can use?		9H230117	NC	N/A
No No				NoYes, but I cannot take it home with me.					
S Yes, but I cannot take it home with me.				© Yes, and I can take it home with me.					
© Yes, and I can take it home with me.									
(2015 Grade 12)									

Previous item							2019 item							D/A/ R/NC+	Rationale
12. This school year, how often have following? Fill in one oval on eac		a laptop o	or desktop cor	nputer to		vitissies of the	11. This school year, how often have you used a laptop or desktop computer to do each of the following? Select one answer choice on each row.							NC	The in-line direction was
	Never	A few times	Once every few weeks	About once a week	More tha once a week			Never	A few times	Once every few weeks	About once a week	More than once a week			adapted from
a. Write a short paper (less than a page) for school	(3)	⊕	0	0	0	VH155496	 Write a short paper (less than a page) for school 	۹	θ	θ	Φ	θ	VH270372		PBA to DBA: "Fill in one
b. Write a paper for school that was longer than a page	0	9	0	0	Ð	VH155497	b. Write a paper for school that was longer than a page	⊗	₿	0	Θ	θ	VH270175		oval on each
c. Search the Internet for a school project	0	•	0	0	Ð	VH155498	 Search the Internet for a school project 	۲	\$	0	Φ	Φ	V1827017#		line." was
d. Practice things in mathematics that you were	0	θ	0	0	Ð	VH176943	 d. Practice things in mathematics that you were having trouble learning 	Ø	Ð	0	Ø	Ð	VH270181		adapted to "Select one
having trouble learning e. Practice things in reading that you were having trouble learning	8	⊕	Ø	Ø	Ð	VH176945	c. Practice things in reading that you were having trouble learning	0	θ	0	0	Φ	V11270577		answer choice on each row."
rearning							f. Take a test	ø	Ð	Q	Ø	Φ	VH270175		caciniow.
f. Take a test	(⊕	0	0	Ð	VH176946	g. Create a map	٩	Ø	0	Θ	Θ	111270176		
g. Create a map	⊗	⊕	0	0	Ð	V#1224684	h. Work on a website or blog that you maintain	æ	۵	0	Φ	Φ	VH270179		
h. Work on a website or blog that you maintain	0	•	0	0	0	VH224685	i. Create a multimedia presentation on your own	θ	Φ	0	θ	Θ	VH270160		
i. Create a multimedia presentation on your own	0	•	©	0	Ð	VH224686	j. Work collaboratively with a team of students to create a	Ð	Ð	0	Φ	Ð	YHL/0176-		
 Work collaboratively with a team of students to create a multimedia presentation 	(8)	1	0	Θ	Θ	VH224690	multimedia presentation								

Previous item						2019 item							D/A/ R/NC+	Rationale
 This school year, how often have yo oval on each line. 	ou used a	tablet to	viewer slet to do each of the following? Fill in one choice on each row.								NC	The in-line direction was		
,	Never	A few times	Once every few weeks	About once a week	More than once a week		Never	A few times	Once every few weeks	About once a week	More than once a week			adapted from
a. Write a short paper (less than a page) for school	(3)	٢	O	0	(D) VH155524	 Write a short paper (less than a page) for school 	θ	₿	0	θ	θ	VH270185		PBA to DBA: "Fill in one
b. Write a paper for school that was longer than a page	٩	⊕	0	0	D VHISSS28	b. Write a paper for school that was longer than a page	9	θ	0	θ	θ	¥11270188		oval on each
c. Search the Internet for a school project	0	θ	Θ	Θ	© VH155527	 c. Search the Internet for a school project d. Practice things in 	0	Ø	0	0	θ	Y11270164		line." was adapted to
d. Practice things in mathematics that you were having trouble learning	0	0	Ø	0	© VIII76938	mathematics that you were having trouble learning	٩	θ	0	Ø	Φ	V78270185		"Select one answer
e. Practice things in reading that you were having trouble learning	0	₿	0	0	WII176925	e. Practice things in reading that you were having trouble learning	٩	٩	Ø	Φ	Φ	VH270186		choice on each row."
			1.0		-	f. Take a test	Φ	۲	0	0	Φ	VH270192		cucinioni
f. Take a test	0	•	0	0	© VIII?692?	g, Create a map h. Work on a website or	٢	Ð	Ø	٩	Ф	V14320189		
g. Create a map	0	0	0	0	VII224714	blog that you maintain	0	٩	0	0	Φ	Y11270190		
h. Work on a website or blog that you maintain	6	•	O	0	© VH1224720	 Create a multimedia presentation on your own 	Φ	۵	0	Ð	Φ	VH37019)		
i. Create a multimedia presentation <i>on your own</i>	0	•	0	0	(D) VH124721	j. Work collaboratively with a team of students to create a	Ø	θ	0	Ð	θ	V11270187		
 Work collaboratively with a team of students to create a multimedia presentation 	0	•	Ø	0	© VH1224725	multimedia presentation								
(2015 Grade 12)														
14. Which best describes the way yo on a computer keyboard?	vH155541 ou type	1				13. Which best describes th				r.		V11270130	NC	N/A
I don't know how to type us computer keyboard.	sing a					 I don't know how to Can type with one 	or two finge	rs, but I have to	o search for w					
	 D I can type with one or two fingers, but I have to search for where the D I can type with one or two fingers when 1 lo 								ne keyboard.	eyboard.				
© I can type with one or two f and I know where most of t letter keys are.	ingers, he													
I can type with all ten finger I look at the keyboard.	rs when	ĩ												
I can type with all ten finge without looking at the keyb	rs board.													
(2015 Grade 12)														

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item	2019 item	D/A/ R/NC+	Rationale
 WHISSSA 15. Compared to other students in your English/language arts class, how fast do you type on a computer keyboard? ③ I am slower than most students. ④ I type about the same speed as others. ③ I am faster than most students. ④ I don't know. (2015 Grade 12)	N/A	D	This item was dropped because it was not correlated with achievement, and was not conceptually central to the study.
 Would you rather take a test at school using paper and pencil or using a computer? Paper and pencil Computer 	 4. Would you rather take a test at school using paper and pencil or using a computer? Paper and pencil Computer 	NC	N/A
(2015 Grade 12)			

Prev	vious item						2019 item						D/A/ R/NC+	Rationale
17. De	you think you would be able to do e.	ach of the	following?	Fill in one	oval on ea	vH155799 ach line.	 Do you think you would be row. 	able to do each	of the followin	ng? Select one ans	wer choice on	each	NC	The in-line direction was
		I definitely can't.	y I probably can't.	I probably can.	I definitel can.	у		I definitely can't.	I probably can't.	I probably can.	I definitely can.			adapted from
a.	Write sentences and paragraphs using a computer	•	₿	O	٢	VH176967	a. Write sentences and paragraphs using a computer	@	⊛	Ø	Φ	VH270229		PBA to DBA:
b.	Edit text using a computer	\odot	ـ	0	0	VH155803	b. Edit text using a computer	0	®	O	۵	VH270218		"Fill in one
c.	Use a touchscreen on a computer, tablet, or smartphone	(3)	₿	0	0	VH176970	c. Use a touchscreen on a computer, tablet, or smartphone	0	⊛	Ø	Φ	VH270230		oval on each line." was
d.	Look up the meaning of a word using a computer	(働	O	•	VH155810	d. Look up the meaning of a word using a computer	0	⊛	Ø	Φ	VH270225		adapted to
0	Draw a picture using a computer	(3)	®	0	0	VH155811	 e. Draw a picture using a computer 	@	ഀ	O	Ø	VH270226		"Select one
	View or download digital media	•	•	0	0	VH155800	f. View or download digital media	0	®	©	Ø	VH270216		answer
	Create a presentation using a	9	®	0	•	VH155820	g. Create a presentation using a computer	0	3	Ø	Ø	VH270228		choice on
	computer						 h. Create a spreadsheet using a computer 	⊗	⊛	O	0	VH270231		each row."
h.	Create a spreadsheet using a computer	(₿	O	0	VH155802	i. Install new software or apps	0	®	Ø	Φ	VH270219		
i.	Install new software or apps	8	ഀ	0	0	VH155804	 Participate in online discussions, forums, social networking sites, or virtual 	0	(1)	Ø	Ø	VH270220		
j.	Participate in online discussions, forums, social networking sites, or	A	₿	0	0	VH155805	communities					1		
	virtual communities						 k. Maintain a website or blog 1. Search for information on 	0	₿	O	Ø	VH270221		
k.	Maintain a website or blog	•	®	0	0	VH155806	the Internet	0	8	0	Φ	VH270222		
1.	Search for information on the	æ	®	0	0	VH155807	m. Run simulations using a computer	0	®	Ø	Ø	VH270223		
	Internet						 n. Create a graph or chart using a computer 	0	8	Ø	٢	VH270224		
m	Run simulations using a computer	۲	₿	O	0	VH155808	o. Write a computer program or app	0	8	Ø	Ø	VH270227		
n.	Create a graph or chart using a computer	3	₿	0	0	VH155809	p. Troubleshoot a problem with a computer	۵	⊕	Ø	Φ	VH270232		
0.	Write a computer program or app	۲	ـ	0	0	VH155812	 Figure out how to use new functions of a digital device 		-		1			
p.	Troubleshoot a problem with a computer	(3)	®	0	•	VH196843	that I am not yet familiar with	0	®	Ø	Ø	VH270217		
q.	Figure out how to use new functions of a digital device that I am not yet familiar with	s (B)	₿	0	٩	VH224738								

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item	2019 item		D/A/ R/NC+	Rationale
venses/ 18. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices are <u>you</u> ?	16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar. how familiar with using computers and other digital devices are you?	VI020033	NC	N/A
③ 0	© 0			
© 1	© 1			
© 2	© 2			
	© 3			
© 3	© 4			
© 4	© 5			
© 5	© 6			
© 6	@ 7			
⊕ 7				
Φ 8	© 9 © 10			
Ø 9	E 10			
© 10				
(2015 Grade 12)		VII270240	NC	N/A
Please read the descriptions of the following four twelfth-grade students. After you read each description, you will be asked to answer a question about each student based on the information provided.	 Please read the descriptions of the following four twelfth-grade students. After you read each description, you will be asked to answer a question about each student based on the information provided. 			
19. Linda often uses apps to talk to her friends or to play games. She does some of her homework on her laptop and knows how to write and create tables using a computer. Linda cannot type with 10 fingers but is pretty fast with two fingers and mostly finds the right keys.	Linda often uses apps to talk to her friends or to play games. She does some of her homework on her laptop and knows how to write and create tables using a computer. Linda cannot rype with 10 fingers but is pretty fast with two fingers and mostly finds the right keys.			
On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Linda</u> is?	On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Linda</u> is?			
© 0				
1	D 1			
© 2	© 2			
	© 3			
© 3	© 4			
© 4	© 5			
© 5	© 6 ® 7			
© 6	0.8			
(D) 7	09			
Ø 8	© 10			
Q 9				
© 10				
(2015 Grade 12)				

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

Previous item	2019 item	D/A/ R/NC+	Rationale
20. Tom often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and edit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type pretty accurately using ten fingers when looking at the computer keyboard. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar	18. Tom often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and edit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type pretty accurately using ten fingers when looking at the computer keyboard.	NC	N/A
with using computers and other digital devices do you think <u>Tom</u> is?	On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Tom</u> is?		
@ 0	© 0		
D 1	Φ 1		
© 2	© 2		
D 3	© 3		
© 4	© 4		
	© 5		
© 5	© 6		
© 6	③ 7		
(D) 7	© 8		
Φ 8	Ø 9		
09			
© 10			
(2015 Grade 12)			

2019 itom			Rationale
2019 item			Rationale
	VII270238		N1 / A
 19. Susan often uses apps on a smartphone or tablet and does most of her homework on a laptop. She is good at writing and editing papers on her computer and has experience with creating complex tables and charts. Susan can type fast and accurately with 10 fingers without looking at the computer keyboard. She also knows a couple of programming languages. This school year, she built her first app. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar. how familiar with using computers and other digital devices do you think Susan is? O 0 1 2 3 4 5 6 7 8 9 10 	NLOCA	NC	N/A
 20. Kevin sometimes plays games on his smartphone or a computer, but he usually does not use a computer for his homework. He used a computer a couple of times to write a paper but never used a computer to create tables, charts, or presentations. Kevin can type with one or two fingers but has to search to find the correct keys on the computer keyboard. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Kevin is? O 1 2 3 4 5 6 7 8 9 10 	V(E20239	NC	N/A
	 on a laptop. She is good at writing and editing papers on her computer and has experience with creating complex tables and charts. Susan can type fast and accurately with 10 fingers without looking at the computer keyboard. She also knows a couple of programming languages. This school year, she built her first app. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar. how familiar with using computers and other digital devices do you think Susan is? 0 1 2 3 4 5 6 7 8 9 10 20. Kevin sometimes plays games on his smartphone or a computer, but he usually does not use a computer for his homework. He used a computer of a paper but never used a computer keyboard. Share, Carte, Carte	19. Susan often uses apps on a smartphone or tablet and does most of her homework experience with creating complex tables and charts. Susan can type fast and accurately with 10 fingers without looking at the computer keyboard. She also knows a couple of programming languages. This school year, she built her first app. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Susan is: 0 1 2 3 4 5 6 7 8 9 10 10 20 10 21 3 4 5 6 7 8 9 10 10 21 3 9 10 10 10 9 10 11 2 3 4 5 6 9 10 10 10	

+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

revious item						2019 item						D/A/ R/NC+	Rationale
. How familiar are you with each of th	ne following? I	Fill in one	oval on eac	ch line.	VH155750	21. How familiar are you with each of the following? Select one answer choice on each row.						R	Previous sub-
	Never	Heard of it once or	Heard of				Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept			items "h", "k", "q", "s"
	heard of it		it often	the concept		a. E-reader	Ø	æ	Ø	Ø	VH270195		were
a. E-reader	Ø	B	0	0	VH155751	b. Wi-Fi	۲	٩	0	0	V12270106		
b. Wi-Fi	Ø	ـ	0	O	VH155752	c. Firewall	Ø	0	0	Ø	VH171097		dropped.
c. Firewall	Ø	ഀ	O	O	VH155753	d. Hyperlink e. Neuro-digital computing	Ø	0	0	0	VH270198 VH270199		
						f. Instant messaging	0	0	0	0	VH2/0200		The in-line
d. Hyperlink	A	ـ	0	0	VH155756	g. CPU	Ð	0	0	0	VH270201		direction wa
e. Neuro-digital computing		(16)	0	0	VH155757	h. Cut and paste	۲	Ð	Ø	0	VH270203		
f. Instant messaging		⊕	0	0	VH155758	i. Pyramidal browser	۵	®	Θ	0	VH270204		adapted fror
	9		0			j. Spreadsheet	0	٩	0	0	V18270205 V18270207		PBA to DBA:
g. CPU	A	₿	0	0	VH155759	k. Limbic wire I. Spinalbyte	0	0	0 0	0	V11270207 V11270208		"Fill in one
h. Track changes	A	₿	0	0	VH155760	m. Cloud computing	0	0	0	0	V1E270209		
i. Cut and paste	0	働	0	O	VH155761	n. Server	۲	Ø	Ø	8	ANTAGIO		oval on each
						ö. Compiler	Θ	0	0	Ø	VHEREIS		line." was
j. Pyramidal browser	\bigcirc	ـ	0	0	VH155762	p. Callosum board	٩	٢	Ø	0	AFET ARE PR		adapted to
k. Pivot table	0	•	0	0	VH155763								"Select one
1. Spreadsheet	Ø	B	0	0	VH155765								answer
m. Limbic wire	0	ـ	0	0	VH155766								choice on
n. Spinalbyte	0	⊕	0	0	VH155767								each row."
o. Cloud computing	0	₿	0	0	VH155768								cuciniow.
p. Server	\odot	₿	O	0	VH155769								
q. Root directory	\odot	ـ	O	0	VH155770								
r. Compiler	\odot	ـ	O	0	VH155771								
s. ASCII	0	(6)	O	0	VH155772								
t. Callosum board	\odot	₿	O	0	VH155779								
t. Callosum board	٨	₿	Ø	Ø	VH155779								

Appendix K-1bb: Operational Grade 12 CAFS

	Yes	No	
a. A laptop or desktop computer that is only for your use	۵	®	VH270141
b. A laptop or desktop computer that is shared between you and others	٨	®	VH270142
c. A tablet that is only for your use	Ø	®	VH270139
d. A tablet that is shared between you and others	۵	®	VH270140
e. Wi-Fi or some other Internet connection you can use	٨	(6)	VH270143
f. A smartphone that is only for your use	۵	B	VH270144

1. At home, do you have any of the following? Select one answer choice on each row.

VH270234

VH270089

VH270138

2. When did you first use a laptop or desktop computer?

- ℬ I have never used one.
- [®] Before I was in kindergarten
- © When I was in kindergarten
- When I was in first, second, or third grade
- © When I was in fourth or fifth grade
- © When I was in sixth, seventh, or eighth grade
- [©] When I was in high school

3. When did you first use a tablet?

- Never until this assessment
- Before I was in kindergarten
- © When I was in kindergarten
- ^(D) When I was in first, second, or third grade
- © When I was in fourth or fifth grade
- © When I was in sixth, seventh, or eighth grade
- © When I was in high school

444

4. When did you first use a smartphone?

- ℬ I have never used one.
- [®] Before I was in kindergarten
- © When I was in kindergarten
- ^(D) When I was in first, second, or third grade
- © When I was in fourth or fifth grade
- © When I was in sixth, seventh, or eighth grade
- © When I was in high school

VH270235

- **5.** On a weekday, about how many hours do you use a laptop or desktop computer for doing schoolwork, including homework?
 - None
 None
 - Less than an hour
 - © 1 to 2 hours
 - \square 2 to 3 hours
 - © 3 to 4 hours
 - © More than 4 hours

- **6. On a weekday**, about **how many hours** do you use a **tablet** for doing schoolwork, including homework?
 - None
 None
 - [®] Less than an hour
 - © 1 to 2 hours
 - \bigcirc 2 to 3 hours
 - © 3 to 4 hours
 - More than 4 hours

		Yes	No	
a.	How to type on a computer keyboard using the correct fingers	Ø	®	VH270150
b.	How to write sentences and paragraphs using a computer	0	(8)	VH270151
c.	How to edit text using a computer	A	®	VH270164
d.	How to search for information on the Internet	Ø	®	VH270152
e.	How to use a tablet	A	®	VH270156
f.	How to look up the meaning of a word using a computer	Ø	®	VH270157
g.	How to create a spreadsheet using a computer	Ø	®	VH270154
h.	How to create a presentation using a computer	0	(8)	VH270155
i.	How to run simulations using a computer	A	®	VH270159
j.	How to write a computer program or app	A	®	VH270160
k.	How to create a graph or chart using a computer	Ø	®	VH270161
1.	How to troubleshoot problems with a computer	Ø	®	VH270158

7. Were you taught any of the following **at school**? Select **one** answer choice on each row.

VH270165

8. Which of the following are true about the ways in which you and your teachers use computers at school? Select one answer choice on each row.

	Yes	No	
a. In most of my classes there are laptop desktop computers that I can use for schoolwork.	or (A)	6	VH270166
b. In most of my classes there are tablets I can use for schoolwork.	that 💿	®	VH270167
c. There is Wi-Fi or some other Internet connection that I can use for schoolwo	ork.	®	VH270170
d. Most of my teachers use computers wl teaching my classes.	hen 💿	®	VH270169
e. Most of my teachers require us to use computers in the classroom.	Ø	®	VH270168

VH270116

- 9. Has your school assigned you a laptop or desktop computer that only you can use?
 - No
 - [®] Yes, but I cannot take it home with me.
 - © Yes, and I can take it home with me (laptop only).

- **10.** Has your school assigned you a **tablet** that only you can use?
 - (D) No
 - [®] Yes, but I cannot take it home with me.
 - ◎ Yes, and I can take it home with me.

Once every About once More than Never A few times few weeks a week once a week a. Write a short paper (less than a page) for VH270172 A O D Ð B school b. Write a paper for school that was longer VH270173 A B \odot \odot Ð than a page c. Search the Internet for VH270174 A \odot \odot Ð B a school project d. Practice things in mathematics that you VH270181 A O Ð B \odot were having trouble learning e. Practice things in reading that you were VH270177 A B O \bigcirc Ð having trouble learning f. Take a test VH270175 A B \bigcirc \bigcirc Ð g. Create a map VH270178 A B \odot \odot Ð h. Work on a website or VH270179 A Ð B \odot \bigcirc blog that you maintain i. Create a multimedia presentation on your VH270180 A B O \odot Ð own j. Work collaboratively with a team of students to create a VH270176 A B O \odot Ð multimedia presentation

11. This school year, how often have you used a laptop or desktop computer to do each of the following? Select one answer choice on each row.

		Never	A few times	Once every few weeks	About once a week	More than once a week	
a.	Write a short paper (less than a page) for school	0	ß	O	Θ	Ē	VH270183
b.	Write a paper for school that was longer than a page	۵	6	Ø	0	Ē	VH270188
c.	Search the Internet for a school project	A	B	0	0	Ē	VH270184
d.	Practice things in mathematics that you were having trouble learning	Ø	₿	O	Ø	¢	VH270185
e.	Practice things in reading that you were having trouble learning	0	ഀ	O	Ø	¢	VH270186
f.	Take a test	A	®	0	0	Ē	VH270192
g.	Create a map	A	B	0	0	Ē	VH270189
h.	Work on a website or blog that you maintain	A	B	0	0	Ē	VH270190
i.	Create a multimedia presentation <i>on your</i> <i>own</i>	Ø	6	Ø	0	Ē	VH270191
j.	Work collaboratively with a team of students to create a multimedia presentation	Ø	®	Q	Φ	¢	VH270187

12. This school year, how often have you used a tablet to do each of the following? Select one answer choice on each row.

- 13. Which best describes the way you type on a computer keyboard?
 - I don't know how to type using a computer keyboard.
 - [®] I can type with one or two fingers, but I have to search for where the letter keys are.
 - © I can type with one or two fingers, and I know where most of the letter keys are.
 - ◎ I can type with all ten fingers when I look at the keyboard.
 - © I can type with all ten fingers without looking at the keyboard.

- 14. Would you rather take a test at school using paper and pencil or using a computer?
 - Paper and pencil
 - Computer

15. Do you think you would be able to do each of the following? Select **one** answer choice on each row.

		I definitely can't.	I probably can't.	I probably can.	I definitely can.	
a.	Write sentences and paragraphs using a computer	۵	®	©	Ø	VH270229
b.	Edit text using a computer	A	®	O	0	VH270218
c.	Use a touchscreen on a computer, tablet, or smartphone	۵	®	©	0	VH270230
d.	Look up the meaning of a word using a computer	A	₿	O	0	VH270225
e.	Draw a picture using a computer	$\textcircled{\ }$	®	0	0	VH270226
f.	View or download digital media	$\textcircled{\ }$	®	0	Ø	VH270216
g.	Create a presentation using a computer	$\textcircled{\ }$	®	O	D	VH270228
h.	Create a spreadsheet using a computer	$\textcircled{\ }$	®	©	D	VH270231
i.	Install new software or apps	A	®	C	D	VH270219
j.	Participate in online discussions, forums, social networking sites, or virtual communities	Ø	6	O	Ø	VH270220
k.	Maintain a website or blog	Ø	B	O	0	VH270221
1.	Search for information on the Internet	A	₿	©	0	VH270222
m	Run simulations using a computer	0	®	0	0	VH270223
n.	Create a graph or chart using a computer	$\textcircled{\ }$	®	O	Ø	VH270224
0.	Write a computer program or app	$\textcircled{\ }$	®	O	Ø	VH270227
p.	Troubleshoot a problem with a computer	٨	®	C	D	VH270232
q.	Figure out how to use new functions of a digital device that I am not yet familiar with	۵	6	©	Ø	VH270217

- **16.** On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices are you**?
 - **(A)** 0
 - **B** 1
 - © 2
 - © 3
 - © 4
 - © 5
 - **©** 6
 - **(B)** 7
 - **D** 8
 - **D** 9
 - © 10

17. Please read the descriptions of the following four twelfth-grade students. After you read each description, you will be asked to answer a question about each student based on the information provided.

Linda often uses apps to talk to her friends or to play games. She does some of her homework on her laptop and knows how to write and create tables using a computer. Linda cannot type with 10 fingers but is pretty fast with two fingers and mostly finds the right keys.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think Linda is?

- **B** 1
- © 2
- © 3
- © 4
- © 5
- © 6
- ⊕ 7
- O 8
- O 9
- © 10

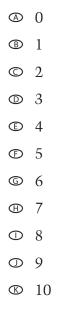
18. Tom often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and edit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type pretty accurately using ten fingers when looking at the computer keyboard.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how** familiar with using computers and other digital devices do you think Tom is?

- ④ 0
- **B** 1
- © 2
- **D** 3
- © 4
- © 5
- © 6
- ⊕ 7
- **O** 8
- **D** 9
- © 10

19. Susan often uses apps on a smartphone or tablet and does most of her homework on a laptop. She is good at writing and editing papers on her computer and has experience with creating complex tables and charts. Susan can type fast and accurately with 10 fingers without looking at the computer keyboard. She also knows a couple of programming languages. This school year, she built her first app.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Susan</u> is?



20. Kevin sometimes plays games on his smartphone or a computer, but he usually does not use a computer for his homework. He used a computer a couple of times to write a paper but never used a computer to create tables, charts, or presentations. Kevin can type with one or two fingers but has to search to find the correct keys on the computer keyboard.

On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar with using computers and other digital devices do you think <u>Kevin</u> is?

- **B** 1
- © 2
- © 3
- © 4
- © 5
- **6**
- ⊕ 7
- O 8
- O 9
- © 10

	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	
a. E-reader	8	B	0	D	VH270195
b. Wi-Fi	A	®	O	D	VH270196
c. Firewall	A	®	O	D	VH270197
d. Hyperlink	Ø	B	O	D	VH270198
e. Neuro-digital computing	Ø	B	O	D	VH270199
f. Instant messaging	A	®	O	D	VH270200
g. CPU	Ø	B	©	D	VH270201
h. Cut and paste	Ø	B	O	D	VH270203
i. Pyramidal browser	Ø	B	O	D	VH270204
j. Spreadsheet	Ø	B	O	D	VH270206
k. Limbic wire	Ø	B	O	D	VH270207
1. Spinalbyte	Ø	B	O	D	VH270208
m. Cloud computing	Ø	B	O	D	VH270209
n. Server	Ø	B	O	D	VH270210
o. Compiler	Ø	B	O	D	VH270212
p. Callosum board	Ø	B	O	D	VH270214

21. How familiar are you with each of the following? Select **one** answer choice on each row.

Appendix K-1bc: Summary of Changes Operational Grade 4 ESQ

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	VIIS In the last month, how many different homes have you been living in? (If you have moved in the last month, do not count the home where you used to live.) O Zero homes O One home Two homes Three or more homes Issue: Socioeconomic Status	A.	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you? 0 1 2 More than 2 Issue: Socioeconomic Status	A 4192	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	How many adults 18 years and older live with you? (a) 1 (b) 2 (c) More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	You said you live in more than one home. Think about all the people who live with you in one of these homes (you can tell us about up to two homes). We will call it Home #1. Not including you, how many children 17 years or younger live with you in Home #1?	4198 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	How many adults 18 years and older live with you in Home #1? 1 2 More than 2 Issue: Socioeconomic Status	18884202 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	You have told us about the people in one of your homes. Now think about all the people who live with you in your other home. We will call it Home #2. Not including you, how many children 17 years or younger live with you in Home #2? © 0 © 1 © 2 © More than 2 Issue: Socioeconomic Status	1894204 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	How many adults 18 years and older live with you in Home #2? 1 2 More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A		A8880033 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	You said one adult is taking care of you. Who is this adult? Mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Foster father Grandfather or male relative Other male adult (Please specify:)	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
	Issue: Socioeconomic Status		
N/A	 You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1? Mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Stepfather Grandfather or male relative Other male adult (Please specify:) 	²⁸¹ A	This item was added a part of the ESQ special study for enhanced measurement of socio economic status and household composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	Think about the second adult taking care of you. We will call them Adult #2. Who is Adult #2? Mother Second mother Second mother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Second father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:)	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	 WIBSOT Think about the third adult taking care of you. We will call them Adult #3. Who is Adult #3? Mother Second mother Stepmother Foster mother 	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household

Grandmother or female relative

© Grandfather or male relative

Father
Second father
Stepfather
Foster father

Other female adult (Please specify: _____)

© Other male adult (Please specify: _____)

Issue: Socioeconomic Status

composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	Think about the fourth adult taking care of you. We will call them Adult #4. Who is Adult #4? Mother Second mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:)	A .	This item was added a part of the ESQ specia study for enhanced measurement of socio economic status and household composition.

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student 2019 item D/A/ Rationale Previous item R/NC+ VH863863 N/A This item was added as А In the last month, has your mother worked for pay? part of the ESQ special (Yes study for enhanced No measurement of socio-© I don't know. economic status and

Issue: Socioeconomic Status

	caregiver title provided
	by the respondent in a
	prior item. Possible
	answers include:
	mother, second
	mother, stepmother,
	foster mother,
	grandmother or
	female relative , the
	female adult taking
	care of you, father,
	second father,
	stepfather, foster
	father, grandfather or
	male relative, the male
	adult taking care of
	you

household composition.

Please note that this item includes the

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	 In the last month, did your mother work at one job, or did this adult work at two or more jobs? One job Two or more jobs I don't know. Issue: Socioeconomic Status		This item was added as part of the ESQ special study for enhanced measurement of socio economic status and household composition.
			Please note that this item includes the caregiver title provide by the respondent in a prior item. Possible answers include: your mother, your second mother, your stepmother, your foster mother, your grandmother or female relative, the
			female adult taking care of you, your father, your second father, your stepfather, your foste father, your grandfather or male relative, the male adu taking care of you

Appendix K-1bd: Operational Grade 4 ESQ

VH863709

- 1. In the last month, how many different homes have you been living in? (If you have moved in the last month, **do not** count the home where you used to live.)
 - Zero homes
 - ③ One home
 - © Two homes
 - Three or more homes

VH894192

- 2. Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you?
 - 0
 - **B** 1
 - © 2
 - ^(D) More than 2
- **3.** How many adults 18 years and older live with you?

 - **B** 2
 - © More than 2

VH894198

- **4.** You said you live in more than one home. Think about all the people who live with you in one of these homes (you can tell us about up to two homes). We will call it Home #1. Not including you, how many children 17 years or younger live with you in Home #1?
 - ④ 0
 - **B** 1
 - © 2
 - ^(D) More than 2

468

-
- 5. How many adults 18 years and older live with you in Home #1?
 - 0 1
 - **B** 2
 - © More than 2
- 6. You have told us about the people in one of your homes. Now think about all the people who live with you in your other home. We will call it Home #2. Not including you, how many children 17 years or younger live with you in Home #2?
 - ④ 0
 - **B** 1
 - © 2
 - \bigcirc More than 2
- 7. How many adults 18 years and older live with you in Home #2?

 - **B** 2
 - © More than 2
- **8.** Now think about **all** of the adults in **all** of your homes. How many of the adults that live with you are **taking care of you**?

 - **B** 2
 - © 3
 - **D** 4
 - © More than 4

VH894204

VH894209

VH863933

- 9. You said one adult is taking care of you. Who is this adult?
 - (2) Mother
 - Stepmother
 - © Foster mother
 - Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - © Stepfather
 - Foster father
 - Grandfather or male relative
 - O Other male adult (Please specify: _____)

- **10.** You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1?
 - Mother
 Mother
 - [®] Stepmother
 - © Foster mother
 - Grandmother or female relative
 - © Other female adult (Please specify: _____)
 - © Father
 - © Stepfather
 - Foster father
 - Grandfather or male relative
 - O Other male adult (Please specify: _____)

- **11.** Think about the second adult taking care of you. We will call them Adult #2. Who is Adult #2?
 - Mother
 Mother
 - Second mother
 - © Stepmother
 - Foster mother
 - © Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - Second father
 - O Stepfather
 - ☑ Foster father
 - (b) Grandfather or male relative
 - O Other male adult (Please specify: _____)

12. Think about the third adult taking care of you. We will call them Adult #3. Who is Adult #3?

- Mother
 Mother
- Second mother
- © Stepmother
- Foster mother
- © Grandmother or female relative
- ⑦ Other female adult (Please specify: _____)
- © Father
- Second father
- O Stepfather
- ☑ Foster father
- (b) Grandfather or male relative
- O Other male adult (Please specify: _____)

- **13.** Think about the fourth adult taking care of you. We will call them Adult #4. Who is Adult #4?
 - (D) Mother
 - Second mother
 - © Stepmother
 - D Foster mother
 - © Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - Second father
 - O Stepfather
 - ☑ Foster father
 - © Grandfather or male relative
 - O Other male adult (Please specify: _____)
- 14. In the last month, has your mother worked for pay?
 - (A) Yes
 - B No
 - © I don't know.
- **15.** In the last month, has **your second mother** worked for pay?

 - B No
 No
 - © I don't know.

16. In the last month, has your stepmother worked for pay?

- (A) Yes
- B No
- © I don't know.

17. In the last month, has **your foster mother** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

18. In the last month, has your grandmother or female relative worked for pay?

- (A) Yes
- B No
 No
- © I don't know.

19. In the last month, has **the female adult taking care of you** worked for pay?

- le Yes
- B No
 No
- © I don't know.

VH863873

VH863877

VH863867

20. In the last month, has your father worked for pay?

- (A) Yes
- B No
 No
- © I don't know.

21. In the last month, has **your second father** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know

22. In the last month, has **your stepfather** worked for pay?

- Yes
 Yes
- B No
- © I don't know.

23. In the last month, has **your foster father** worked for pay?

- le Yes
- B No
- © I don't know.

VH863882

VH863898

VH863885

VH863899

VH863907

24. In the last month, has your grandfather or male relative worked for pay?

- (A) Yes
- B No
- © I don't know

25. In the last month, has the male adult taking care of you worked for pay?

- (A) Yes
- B No
- © I don't know.

26. In the last month, did **your mother** work at one job, or did this adult work at two or more jobs?

- One job
- [®] Two or more jobs
- ◎ I don't know.

- **27.** In the last month, did **your second mother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **28.** In the last month, did **your stepmother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **29.** In the last month, did **your foster mother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **30.** In the last month, did **your grandmother or female relative** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **31.** In the last month, did **the female adult taking care of you** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

VH863918

- **32.** In the last month, did **your father** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **33.** In the last month, did **your second father** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

VH863929

- **34.** In the last month, did **your stepfather** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **35.** In the last month, did **your foster father** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

VH863919

- **36.** In the last month, did **your grandfather or male relative** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **37.** In the last month, did **the male adult taking care of you** work at one job, or did this adult work at two or more jobs?
 - (One job
 - [®] Two or more jobs
 - © I don't know.

Appendix K-1be: Summary of Changes Operational Grade 8 ESQ

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	View In the last month, how many different homes have you been living in? (If you have moved in the last month, do not count the home where you used to live.) © Zero homes © One home © Two homes © Three or more homes Issue: Socioeconomic Status		This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you?	A192 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	How many adults 18 years and older live with you? (D) 1 (D) 2 (D) More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	You said you live in more than one home. Think about all the people who live with you in one of these homes (you can tell us about up to two homes). We will call it Home #1. Not including you, how many children 17 years or younger live with you in Home #1?	¹⁹⁸ A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	How many adults 18 years and older live with you in Home #1? (1) (1) (2) (2) (2) (2) (3) More than 2 Issue: Socioeconomic Status	H894202 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	You have told us about the people in one of your homes. Now think about all the people who live with you in your other home. We will call it Home #2. Not including you, how many children 17 years or younger live with you in Home #2? © 0 © 1 © 2 © More than 2 Issue: Socioeconomic Status	1894204 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	How many adults 18 years and older live with you in Home #2? 1 2 More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Now think about all of the adults in all of your homes. How many of the adults that live with you are taking care of you? (a) 1 (b) 2 (c) 3 (c) 4 (c) More than 4 Issue: Socioeconomic Status	A8849933 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

Previous item	19 Operational Grade 8 Extended Student Questionnaire (ESQ)	D/A/	Rationale
		R/NC+	
N/A	 You said one adult is taking care of you. Who is this adult? Mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:) 	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
	Issue: Socioeconomic Status		
N/A	You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1? Mother Stepmother Foster mother Other female adult (Please specify:) Father Foster father Grandfather or male relative Other male adult (Please specify:)	5781 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	 Think about the second adult taking care of you. We will call them Adult #2. Who is Adult #2? Mother Second mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:) 	A A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Issue: Socioeconomic Status Vision Think about the third adult taking care of you. We will call them Adult #3. Who is Adult #3? Mother Second mother Second mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:) 	⁹¹ A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	Think about the fourth adult taking care of you. We will call them Adult #4. Who is Adult #4? Mother Second mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:)	A	This item was added a part of the ESQ special study for enhanced measurement of socio economic status and household composition.

Previous item	2019 item		D/A/ R/NC+	Rationale
N/A	How far in school did your mother go? She did not finish high school or has a high school degree. She graduated from high school or has a high school degree. She graduated from college. I don't know. Issue: Socioeconomic Status	VIBSCS10	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother / your second mother / your stepmother / your foster mother / your grandmother or female relative / the female adult taking care of you / your father / your stepfather / your grandfather or male relative / the male adult taking care of

N/A In the last month, has your mother worked for pay? © Yes © No © I don't know.	3/119/20/2	R/NC+ A	This item was added as
Issue: Socioeconomic Status			part of the ESQ special study for enhanced measurement of socio- economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: mother, stepmother, foster mother, grandmother or female relative , the female adult taking care of you, father, stepfather, foster father, grandfather or male relative, the male

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	 In the last month, did your mother work at one job, or did this adult work at two or more jobs? One job Two or more jobs I don't know. 	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household
	Issue: Socioeconomic Status		composition.
			Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother, your second mother, your stepmother, your foster mother, your grandmother or female relative, the female adult taking care of you, your father, your second father, your stepfather, your foster father, your grandfather or male relative, the male adult taking care of you

Appendix K-1bf: Operational Grade 8 ESQ

1. In the last month, how many different homes have you been living in? (If you have moved in the last month, **do not** count the home where you used to live.)

- Zero homes
- ③ One home
- © Two homes
- Three or more homes

VH894192

- 2. Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you?
 - **(A)** 0
 - ® 1
 - © 2
 - ^(D) More than 2
- 3. How many adults 18 years and older live with you?

 - **B** 2
 - © More than 2
- **4.** You said you live in more than one home. Think about all the people who live with you in one of these homes (you can tell us about up to two homes). We will call it Home #1. Not including you, how many children 17 years or younger live with you in Home #1?
 - O
 - **B** 1
 - © 2
 - \square More than 2

VH894196

490

- 5. How many adults 18 years and older live with you in Home #1?

 - **B** 2
 - © More than 2
 - 6. You have told us about the people in one of your homes. Now think about all the people who live with you in your other home. We will call it Home #2. Not including you, how many children 17 years or younger live with you in Home #2?
 - ④ 0
 - **B** 1
 - © 2
 - \bigcirc More than 2
 - 7. How many adults 18 years and older live with you in Home #2?

 - **B** 2
 - © More than 2
 - **8.** Now think about **all** of the adults in **all** of your homes. How many of the adults that live with you are **taking care of you**?

 - **B** 2
 - © 3
 - **D** 4
 - © More than 4

VH894204

VH894209

VH863933

- 9. You said one adult is taking care of you. Who is this adult?
 - (2) Mother
 - Stepmother
 - © Foster mother
 - Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - © Stepfather
 - Foster father
 - \bigcirc Grandfather or male relative
 - O Other male adult (Please specify: _____)

- **10.** You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1?
 - Mother
 Mother
 - [®] Stepmother
 - © Foster mother
 - Grandmother or female relative
 - © Other female adult (Please specify: _____)
 - © Father
 - © Stepfather
 - Foster father
 - Grandfather or male relative
 - O Other male adult (Please specify: _____)

- **11.** Think about the second adult taking care of you. We will call them Adult #2. Who is Adult #2?
 - Mother
 Mother
 - Second mother
 - © Stepmother
 - D Foster mother
 - © Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - Second father
 - O Stepfather
 - ☑ Foster father
 - (b) Grandfather or male relative
 - O Other male adult (Please specify: _____)

12. Think about the third adult taking care of you. We will call them Adult #3. Who is Adult #3?

- Mother
 Mother
- Second mother
- © Stepmother
- Foster mother
- © Grandmother or female relative
- ⑦ Other female adult (Please specify: _____)
- © Father
- Second father
- ◻ Stepfather
- ☑ Foster father
- © Grandfather or male relative
- O Other male adult (Please specify: _____)

- **13.** Think about the fourth adult taking care of you. We will call them Adult #4. Who is Adult #4?
 - Mother
 Mother
 - Second mother
 - © Stepmother
 - Foster mother
 - © Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - Second father
 - O Stepfather
 - ☑ Foster father
 - © Grandfather or male relative
 - O Other male adult (Please specify: _____)
- 14. How far in school did your mother go?
 - (She did not finish high school.
 - (B) She graduated from high school or has a high school degree.
 - © She had some college but did not graduate.
 - ^(D) She graduated from college.
 - I don't know.

15. How far in school did your second mother go?

- She did not finish high school.
- (She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- She graduated from college.
- I don't know.

16. How far in school did **your stepmother** go?

- She did not finish high school.
- (B) She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- She graduated from college.
- I don't know.

17. How far in school did your foster mother go?

- She did not finish high school.
- (She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- ☑ She graduated from college.
- I don't know.

18. How far in school did your grandmother or female relative go?

- She did not finish high school.
- [®] She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- ^(D) She graduated from college.
- I don't know.

VH863825

VH863841

19. How far in school did the female adult taking care of you go?

- (2) She did not finish high school.
- (B) She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- She graduated from college.
- I don't know.

20. How far in school did your father go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- ^(D) He graduated from college.
- I don't know.

21. How far in school did your second father go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- He graduated from college.
- I don't know.

22. How far in school did your stepfather go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- He graduated from college.
- I don't know.

23. How far in school did your foster father go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- He graduated from college.
- I don't know.

VH863846

24. How far in school did your grandfather or male relative go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- © He had some college but did not graduate.
- He graduated from college.
- I don't know.

25. How far in school did the male adult taking care of you go?

- He did not finish high school.
- (1) He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- He graduated from college.
- I don't know.

26. In the last month, has your mother worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

27. In the last month, has **your second mother** worked for pay?

- Ses
- B No
 No
- © I don't know.

VH863863

VH863875

VH863851

28. In the last month, has your stepmother worked for pay?

- (A) Yes
- B No
 No
- © I don't know.

29. In the last month, has **your foster mother** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

30. In the last month, has your grandmother or female relative worked for pay?

- (A) Yes
- B No
 No
- © I don't know.

31. In the last month, has **the female adult taking care of you** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

VH863871

VH863873

VH863877

32. In the last month, has **your father** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

33. In the last month, has **your second father** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know

34. In the last month, has **your stepfather** worked for pay?

- Tes Yes
- B No
- © I don't know.

35. In the last month, has **your foster father** worked for pay?

- le Yes
- B No
 No
- © I don't know.

VH863882

VH863898

VH863885

VH863899

VH863907

36. In the last month, has your grandfather or male relative worked for pay?

- (D) Yes
- B No
- © I don't know

37. In the last month, has the male adult taking care of you worked for pay?

- Tes Yes
- B No
 No
- © I don't know.

38. In the last month, did **your mother** work at one job, or did this adult work at two or more jobs?

- One job
- Two or more jobs
- © I don't know.

- **39.** In the last month, did **your second mother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **40.** In the last month, did **your stepmother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **41.** In the last month, did **your foster mother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

VH863909

VH863911

- **42.** In the last month, did **your grandmother or female relative** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **43.** In the last month, did **the female adult taking care of you** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **44.** In the last month, did **your father** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **45.** In the last month, did **your second father** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **46.** In the last month, did **your stepfather** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **47.** In the last month, did **your foster father** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

VH863919

VH863929

- **48.** In the last month, did **your grandfather or male relative** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **49.** In the last month, did **the male adult taking care of you** work at one job, or did this adult work at two or more jobs?
 - (Decision) 🖉 🖉
 - [®] Two or more jobs
 - © I don't know.

Appendix K-1bg: Summary of Changes Operational Grade 12 ESQ

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	VB In the last month, how many different homes have you been living in? (If you have moved in the last month, do not count the home where you used to live.) Zero homes One home Two homes Three or more homes		This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Issue: Socioeconomic Status Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you? © 0 © 1 © 2 © More than 2 Issue: Socioeconomic Status	A A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Not including you, how many adults 18 years and older live with you?	A A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Yus You said you live in more than one home. Think about all the people who live with you in one of these homes (you can tell us about up to two homes). We will call it Home #1. Not including you, how many children 17 years or younger live with you in Home #1? © 0 © 1 © 2 © More than 2 Issue: Socioeconomic Status	4198 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	Not including you, how many adults 18 years and older live with you in Home #1? 1 2 More than 2 Issue: Socioeconomic Status	1894200 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A		A894204 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Not including you, how many adults 18 years and older live with you in Home #2? 1 2 C More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A		A855933 A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	 You said one adult is taking care of you. Who is this adult? Mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:) 	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1? Mother Stepmother	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
	 © Foster mother © Grandmother or female relative © Other female adult (Please specify:) © Father © Stepfather @ Foster father 		
	 Grandfather or male relative Other male adult (Please specify:) Issue: Socioeconomic Status 		

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	 Think about the second adult taking care of you. We will call them Adult #2. Who is Adult #2? Mother Second mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:) 	A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.
N/A	Issue: Socioeconomic Status vuest Think about the third adult taking care of you. We will call them Adult #3. Who is Adult #3? Mother Second mother Second mother Stepmother Foster mother Crandmother or female relative Other female adult (Please specify:) Father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:) 	⁷⁹⁾ A	This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition.

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	Think about the fourth adult taking care of you. We will call them Adult #4. Who is Adult #4? Mother Second mother Stepmother Foster mother Grandmother or female relative Other female adult (Please specify:) Father Second father Stepfather Foster father Grandfather or male relative Other male adult (Please specify:)	A	This item was added a part of the ESQ special study for enhanced measurement of socio economic status and household composition.

Previous item	2019 item		D/A/ R/NC+	Rationale
N/A	How far in school did your mother go? She did not finish high school or has a high school degree. She graduated from college She graduated from college. I don't know. Issue: Socioeconomic Status	VIBSUSIO	A	This item was added as part of the ESQ special study for enhanced measurement of socio economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother / your second mother / your second mother / your stepmother / your foster mother / your grandmother or female relative / the female adult taking care of you / your father / your stepfather / your grandfather or male relative / the male

Previous item	2019 item	D/A/ R/NC+	Rationale
	In the last month, has your mother worked for pay? ① Yes ① No ① I don't know. Issue: Socioeconomic Status	VIESSES A	This item was added a part of the ESQ special study for enhanced measurement of socio economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: mother, stepmother, foster mother, grandmother or female relative , the female adult taking care of you, father, stepfather, foster father, grandfather or male relative, the male adult taking care of

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	vise In the last month, did your mother work at one job, or did this adult work at two or more jobs? ① One job ① Two or more jobs ② I don't know. Issue: Socioeconomic Status		This item was added as part of the ESQ special study for enhanced measurement of socio- economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your
			mother, your second mother, your stepmother, your foster mother, your grandmother or female relative, the female adult taking care of you, your father, your stepfather, your foste father, your grandfather or male

Appendix K-1bh: Operational Grade 12 ESQ

- 1. In the last month, how many different homes have you been living in? (If you have moved in the last month, **do not** count the home where you used to live.)
 - Zero homes
 - ③ One home
 - © Two homes
 - Three or more homes

VH894192

- 2. Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you?

 - ® 1
 - © 2
 - ^(D) More than 2

VH894194

- 3. Not including you, how many adults 18 years and older live with you?

 - **B** 2
 - © More than 2
- 4. You said you live in more than one home. Think about all the people who live with you in one of these homes (you can tell us about up to two homes). We will call it Home #1. Not including you, how many children 17 years or younger live with you in Home #1?
 - ④ 0
 - **B** 1
 - © 2
 - ^(D) More than 2

516

VH894200

VH894204

- 5. Not including you, how many adults 18 years and older live with you in Home #1?

 - **B** 2
 - © More than 2
- 6. You have told us about the people in one of your homes. Now think about all the people who live with you in your other home. We will call it Home #2. Not including you, how many children 17 years or younger live with you in Home #2?
 - O
 - **B** 1
 - © 2
 - \bigcirc More than 2

VH894207

- 7. Not including you, how many adults 18 years and older live with you in Home #2?

 - **B** 2
 - © More than 2
- **8.** Now think about **all** of the adults in **all** of your homes. How many of the adults that live with you are **taking care of you**?

 - **B** 2
 - © 3
 - **D** 4
 - © More than 4

- 9. You said one adult is taking care of you. Who is this adult?
 - (2) Mother
 - Stepmother
 - © Foster mother
 - Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - © Stepfather
 - Foster father
 - \bigcirc Grandfather or male relative
 - O Other male adult (Please specify: _____)

- **10.** You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1?
 - Mother
 Mother
 - [®] Stepmother
 - © Foster mother
 - Grandmother or female relative
 - © Other female adult (Please specify: _____)
 - © Father
 - © Stepfather
 - Foster father
 - Grandfather or male relative
 - O Other male adult (Please specify: _____)

- **11.** Think about the second adult taking care of you. We will call them Adult #2. Who is Adult #2?
 - Mother
 Mother
 - Second mother
 - © Stepmother
 - Foster mother
 - © Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - Second father
 - O Stepfather
 - ☑ Foster father
 - (b) Grandfather or male relative
 - O Other male adult (Please specify: _____)

12. Think about the third adult taking care of you. We will call them Adult #3. Who is Adult #3?

- Mother
 Mother
- Second mother
- © Stepmother
- Foster mother
- © Grandmother or female relative
- Other female adult (Please specify: _____)
- © Father
- Second father
- ◻ Stepfather
- ☑ Foster father
- (b) Grandfather or male relative
- O Other male adult (Please specify: _____)

- **13.** Think about the fourth adult taking care of you. We will call them Adult #4. Who is Adult #4?
 - Mother
 Mother
 - Second mother
 - © Stepmother
 - Foster mother
 - © Grandmother or female relative
 - Other female adult (Please specify: _____)
 - © Father
 - Second father
 - O Stepfather
 - ☑ Foster father
 - © Grandfather or male relative
 - O Other male adult (Please specify: _____)
- 14. How far in school did your mother go?
 - ℬ She did not finish high school.
 - (B) She graduated from high school or has a high school degree.
 - © She had some college but did not graduate.
 - ^(D) She graduated from college.
 - I don't know.

15. How far in school did your second mother go?

- She did not finish high school.
- (She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- She graduated from college.
- I don't know.

16. How far in school did **your stepmother** go?

- She did not finish high school.
- (B) She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- She graduated from college.
- I don't know.

17. How far in school did your foster mother go?

- She did not finish high school.
- (She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- ☑ She graduated from college.
- I don't know.

18. How far in school did your grandmother or female relative go?

- She did not finish high school.
- [®] She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- ^(D) She graduated from college.
- I don't know.

VH863825

VH863841

19. How far in school did the female adult taking care of you go?

- (2) She did not finish high school.
- (B) She graduated from high school or has a high school degree.
- © She had some college but did not graduate.
- She graduated from college.
- I don't know.

20. How far in school did your father go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- He graduated from college.
- I don't know.

21. How far in school did your second father go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- He graduated from college.
- I don't know.

22. How far in school did your stepfather go?

- He did not finish high school.
- (B) He graduated from high school or has a high school degree.
- © He had some college but did not graduate.
- He graduated from college.
- I don't know.

23. How far in school did your foster father go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- © He had some college but did not graduate.
- He graduated from college.
- I don't know.

VH863846

24. How far in school did your grandfather or male relative go?

- He did not finish high school.
- [®] He graduated from high school or has a high school degree.
- © He had some college but did not graduate.
- He graduated from college.
- I don't know.

25. How far in school did the male adult taking care of you go?

- He did not finish high school.
- ^(B) He graduated from high school or has a high school degree.
- ◎ He had some college but did not graduate.
- He graduated from college.
- I don't know.

26. In the last month, has your mother worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.
- **27.** In the last month, has **your second mother** worked for pay?
 - See Yes
 - B No
 No
 - © I don't know.

VH863863

VH863875

VH863851

28. In the last month, has your stepmother worked for pay?

- (A) Yes
- B No
 No
- © I don't know.

29. In the last month, has **your foster mother** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

30. In the last month, has your grandmother or female relative worked for pay?

- (A) Yes
- B No
 No
- © I don't know.

31. In the last month, has **the female adult taking care of you** worked for pay?

- le Yes
- B No
 No
- © I don't know.

VH863873

VH863877

VH863867

32. In the last month, has **your father** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

33. In the last month, has **your second father** worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know

34. In the last month, has **your stepfather** worked for pay?

- Tes Yes
- B No
 No
- © I don't know.

35. In the last month, has **your foster father** worked for pay?

- le Yes
- B No
 No
- © I don't know.

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36. In the last month, has your grandfather or male relative worked for pay?

- (D) Yes
- B No
- O I don't know

37. In the last month, has the male adult taking care of you worked for pay?

- Yes
 Yes
- B No
 No
- © I don't know.

38. In the last month, did **your mother** work at one job, or did this adult work at two or more jobs?

- One job
- Two or more jobs
- © I don't know.

- **39.** In the last month, did **your second mother** work at one job, or did this adult work at two or more jobs?
 - 👁 One job
 - Two or more jobs
 - © I don't know.

- **40.** In the last month, did **your stepmother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **41.** In the last month, did **your foster mother** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

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- **42.** In the last month, did **your grandmother or female relative** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- **43.** In the last month, did **the female adult taking care of you** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- 44. In the last month, did your father work at one job, or did this adult work at two or more jobs?
 - One job
 - [®] Two or more jobs
 - © I don't know.
- 45. In the last month, did your second father work at one job, or did this adult work at two or more jobs?
 - One job
 One job
 - [®] Two or more jobs
 - ◎ I don't know.

- 46. In the last month, did your stepfather work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.
- 47. In the last month, did your foster father work at one job, or did this adult work at two or more jobs?
 - One job
 - [®] Two or more jobs
 - © I don't know.

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- **48.** In the last month, did **your grandfather or male relative** work at one job, or did this adult work at two or more jobs?
 - One job
 - Two or more jobs
 - © I don't know.

- **49.** In the last month, did **the male adult taking care of you** work at one job, or did this adult work at two or more jobs?
 - (One job
 - [®] Two or more jobs
 - © I don't know.