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.10



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. The student log-in screen will reflect the new confidentiality citation, as reflected 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).

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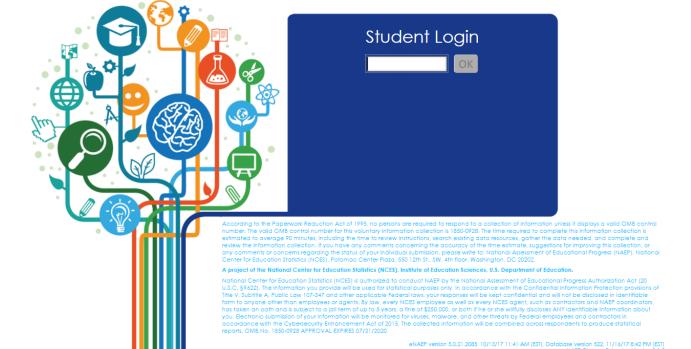
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Student Login Screen

Welcome to NAEP

Booklet Mix School: Grade 12 Pilot #1



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

Previous item		2019 item		D/A/ R/NC+	Rationale
1. How important was it to you to do well on this test? Description Somewhat important Important Very important Very important	VICENSE	N/A		D	To keep student burden low, this item was dropped.
(2018 Grade 4, 8, and 12)	VICIONI				
2. How easy or difficult was this test? © Extremely difficult © Quite difficult © Somewhat difficult © Somewhat easy © Quite easy © Extremely easy (2018 Grade 4, 8, and 12)		I. How easy or difficult Extremely difficult Quite difficult Somewhat difficult Somewhat easy Quite easy Extremely easy	VID6013	NC	N/A
3. 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 (2018 Grade 4, 8, and 12)	VIOSSASS	2. How much effort did you apply to succeed on this test? ① No effort at all ① Very little effort ② Some effort ② Quite a bit of effort ② A lot of effort	VHIDASI	NC	N/A
4. How challenging was taking this test? © Not challenging at all © A little challenging © Somewhat challenging © Quite challenging © Extremely challenging (2018 Grade 4, 8, and 12)	унтью	N/A		D	To keep student burden low, this item was dropped.

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 	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
- © 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 O	perational 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. 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.	3. 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. ① Yes, I am Cuban or Cuban American. ① Yes, I am from some other Hispanic or Latino background.	VH249387	NC	N/A	
7. 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)	Issue: Race/Ethnicity 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	VIC40388	NC	N/A	
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 100) (2018 Grade 4)	5. 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 100) Issue: Socioeconomic Status	VII240186	NC	N/A	

		2	2019 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 ch	oice on each row.	VH271104	6. Do you have any of the following in your hom	e? Select one answer c	hoice on each row.	VH271104	R	Due to
	Yes	No			Yes	No			concerns
a. Access to the Internet	Ø	(1)	VH271105	a. Access to the Internet	®	(1)	VH271105		about
b. Clothes dryer just for your family	Ø	(1)	VH336756	b. Your own bedroom	0	0	VH336762		
c. Dishwasher	Ø	(1)	VH336759	c. A desktop or laptop computer (including	•	•	VH591976		content
d. Your own bedroom e. A desktop or laptop computer (including	®	(5)	VH336762	Chromebooks) that you can use	ω	(B)	411591970		relevance and
Chromebooks) that you can use	•	(B)	VH591976	d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	®	(3)	VH271110		
f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	0	(1)	VH271110	e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can	®	•	VH271112		to keep student
g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	•	(8)	VH271112	use					burden low,
(2018 Grade 4)			VH354591	Issue: Socioeconomic Status			VH35459]		sub-items b and c were dropped.
10. How often do you use the Internet for home	work at home?		¥H334391	7. How often do you use the Internet for homew	ork at home?		¥11334391	NC	N/A
	work at nome:				ork 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					
(2018 Grade 4)				Issue: Technology Use					
11. How many days were you absent from school	in the less month?		VH240190	e H	1 : 4b - 1 4 4b 2		VH240190	NC	N/A
	in the last month:			8. How many days were you absent from school	i in the last months				
None				None					
® 1 or 2 days				® 1 or 2 days					
© 3 or 4 days				© 3 or 4 days					
© 5 to 10 days				□ 5 to 10 days					
More than 10 days				More than 10 days					
(2018 Grade 4)				Issue: School Climate					
-			VH240189	issue. School Climate			VH240189	+	1.10
12. How often do you talk about things you have your family?	studied in school with	someone in		How often do you talk about things you have s your family?	studied in school with	someone in		NC	N/A
Never or hardly ever				Never or hardly ever					
Once every few weeks				Once every few weeks					
About once a week									
Two or three times a week				About once a week					
© Every day				Two or three times a week					
- Livery way				© Every day					
(2018 Grade 4)				Issue: Socioeconomic Status					

revious item				2019 item	D/A/ R/NC+ NC	Rationale N/A			
Do any of the following people live in your he row.	ome? Select one ansv	wer choice on each	VH271144	Do any of the following people live in your he row.					
	Yes	No			Yes	No	1		
a. Mother	®	•	VH271145	a. Mother			VH271145		
b. Stepmother	®	(1)	VH271146	b. Stepmother	®	(8)	VH271145 VH271146		
c. Foster mother or other female legal guardian	0	(8)	VH271147	c. Foster mother or other female legal guardian	@	®	VH271147		
d. Father	®	(1)	VH271148	d. Father	Φ	•	VH271148		
e. Stepfather	(4)	(1)	VH271149	e. Stepfather	(3)	•	VH271149		
f. Foster father or other male legal guardian	®	•	VH271150	f. Foster father or other male legal guardian	®	®	VH271150		
In this school year, how often did you use a laptor Chromebooks) during your classes at school?	op or desktop compu	ter (including		11. In this school year, how often did you use a la Chromebooks) during your classes at school?	nptop or desktop com	puter (including	VH591969	NC	N/A
Never				Never					
In some classes				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					
① In all or almost all classes				© In all or almost all classes					
2018 Grade 4)				Issue: Technology Use					
		-1.	VH271276		ic sor site		VH271276	NC	N/A
15. In this school year, how often did you use a table Kindle Fire) during your classes at school?	t (for example, Surfac	ce Pro, iPad,		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 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 classes				In all or almost all classes					
2018 Grade 4)				Issue: Technology Use					

revious item							2019 item							D/A/ R/NC+	Rationale
6. How much does each one answer choice on		ng statements	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	answer	VH733141	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			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
. I finish whatever I begin.	Ø	(9)	0	Φ	©	VH271338	a. I finish whatever I begin.	®	(B)	0	Φ	© V	/H733142		two version
. I try very hard even after making mistakes.	0	(1)	0	Φ	(D)	VH271339	b. I try very hard even after making mistakes.	®	®	0	Φ	®	/H733143		of this item
. I keep working hard even when I feel like quitting.	0	•	0	Φ	©	VH271342	c. I keep working hard even when I feel like quitting.	®	®	0	•	© V	/H733145		that were
I keep trying to improve myself, even when it takes a long time to get there.	0	•	0	Φ	Φ.	VH271345	d. I keep trying to improve myself, even when it takes a long time to get there.	®	(1)	0	•	Φ \	/H733144		in the pilot, one version
7. How much does each choice on each row.	Not at all like me	A little bit	Somewhat like me	Quite a bit		h									of the item was droppe
I finish whatever I begin.	Φ.	@	0	0	0	VH753142									
I try very hard even after making mistakes.	@	•	0	0	Ф	VH733143									
I keep working hard even when I feel like quitting.	•	0	0	0	Φ	VII733145									
. I keep trying to improve myself, even when it takes a long time to get there.	0	0	0	0	0	VH733144									
2018 Grade 4)	6 1		fal f N - i	26.1		VH271367	Issue: Grit 15. In this school year, how choice on each row.	w often have y	vou done each	of the followi	ng? Select one	? answer	VH271367	NC	N/A
choice on each row.	Never or	Less than	About half	More than	All or			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			
	hardly ever	half of the time	of the time	half of the time	almost all of the time		a. I started working on assignments right				12.				
I started working on assignments right away rather than waiting until the last	®	®	0	Φ	©	VH271370	away rather than waiting until the last minute.	®	(8)	0	•	®	VH271370		
minute. I paid attention and	®	•	0	Φ	®	VH271372	b. I paid attention and resisted distractions.	®	•	0	Φ	•	VH271372		
resisted distractions. I stayed on task	1						c. I stayed on task without reminders from my teacher.	®	®	0	Φ	•	VH271374		
without reminders from my teacher. I paid attention in	0	(8)	0	Φ	•	VH271374	d. I paid attention in class even when I was not interested.	0	®	0	Φ	©	VH271375		
class even when I was not interested.	0	(1)	0	0	(D)	VH271375	not interested.				1				

revious item							2019 item							D/A/ R/NC+	Rationale
19. How much does each one answer choice on		ng statements	describe a per	rson like you?	Select	VH271749	 How much does each choice on each row. 	of the follow	ving statement	ts describe you	u? Select one	answer	VH733149	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			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
. I like complex problems more than easy problems.	0	®	0	Φ	(1)	VH271750	a. I like complex problems more than easy problems.	®	®	0	0	(VH733150		two versions
I like activities that challenge my thinking abilities.	0	69	0	Φ	(1)	VH271752	b. I like activities that challenge my thinking abilities.	®	(8)	0	0	•	VH733151		of this item that were
. I enjoy situations where I will have to think about something.	•	8	0	Φ	•	VH171753	c. I enjoy situations where I will have to think about something.	•	®	0	Θ	•	VH733155		administere in the pilot,
 I enjoy thinking about new solutions to problems. 	®	•	0	Φ	•	VH171756	d. I enjoy thinking about new solutions to problems.	@	(3)	0	0	Θ	VH733154		one version of the item
problems more than easy problems. b. I like activities that challenge my thinking	®	(h)	0	0	0	VH733150 VH733151 VH733155									
abilities. c. I enjoy situations where I will have to think about something. d. I enjoy thinking about	0														
abilities. c. I enjoy situations where I will have to think about something.	Ø Ø	Φ	0	•	Φ	VH733154	Issue: Desire for	Learning	g						
abilities. c. I enjoy situations where I will have to think about something. d. I enjoy thinking about new solutions to problems.	∞ ow often have	you felt any o				VH733154 VH271934	Issue: Desire for 16. In this school year, ho school? Select one ans	w often have	you felt any o	f the following	g ways about y	70ur	VH271934	NC	N/A
abilities. E. I enjoy situations where I will have to think about something. I enjoy thinking about new solutions to problems. O18 Grade 4) In this school year, he	∞ ow often have	you felt any o				VH271934	16. In this school year, ho	w often have	you felt any o	About half of the time	ways about y More than half of the time	All or almost all of the time		NC	N/A
abilities. c. I enjoy situations where I will have to think about something. d. I enjoy thinking about new solutions to problems. O18 Grade 4) 21. In this school year, he	ow often have swer choice or hardly ever	you felt any on each row. Less than half of the	of the following	g ways about y	our All or	VH271934	16. In this school year, ho	w often have wer choice of Never or	you felt any on each row. Less than half of the	About half	More than half of the	All or		NC	N/A

Appendix K-1d: Operational Grade 4 Core

2

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

VH240387

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

- No, I am not Hispanic or Latino.
- (B) Yes, I am Mexican, Mexican American, or Chicano.
- © Yes, I am Puerto Rican or Puerto Rican American.
- Tes, I am Cuban or Cuban American.
- © Yes, I am from some other Hispanic or Latino background.

- White
- ® Black or African American
- Asian
- © Native Hawaiian or other Pacific Islander

- **5.** 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 100)

6. 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)	®	VH271105
b. Your own bedroom	(A)	®	VH336762
c. A desktop or laptop computer (including Chromebooks) that you can use	(A)	®	VH591976
d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	(A)	®	VH271110
e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	(A)	®	VH271112

V	Н	13	5	4	5	9	1

- 7. 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

- **8.** How many days were you absent from school in the last month?
 - None
 - ® 1 or 2 days
 - © 3 or 4 days
 - ① 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. 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	(A)	®	VH271146
c. Foster mother or other female legal guardian	®	®	VH271147
d. Father	(A)	®	VH271148
e. Stepfather	(A)	®	VH271149
f. Foster father or other male legal guardian	(A)	®	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
 - © 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
 - In some classes
 - In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

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.	(A)	®	0	0	Œ	VH733142
b.	I try very hard even after making mistakes.	(A)	®	0	0	Œ	VH733143
c.	I keep working hard even when I feel like quitting.	(A)	®	0	0	Œ	VH733145
d.	I keep trying to improve myself, even when it takes a long time to get there.	(®	0	0	©	VH733144

14. 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 like complex problems more than easy problems.	(A)	®	0	0	Œ	VH733150
b.	I like activities that challenge my thinking abilities.	(A)	®	0	0	Œ	VH733151
c.	I enjoy situations where I will have to think about something.	®	®	0	Φ	Œ	VH733155
d.	I enjoy thinking about new solutions to problems.	®	®	©	0	Œ	VH733154

VH271367

15. 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.	®	®	0	0	©.	VH271370
b. I paid attention and resisted distractions.	(A)	B	0	0	Œ	VH271372
c. I stayed on task without reminders from my teacher.	(A)	®	0	0	©.	VH271374
d. I paid attention in class even when I was not interested.	(A)	®	0	0	Œ	VH271375

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.	A	B	0	0	©	VH271942
b. I felt happy at school.	A	®	0	0	(E)	VH271944
c. I felt that I learned something that I can use in my daily life.	(A)	®	0	0	Œ	VH336903

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

Previous item			VH240387	2019 item				D/A/ R/NC+	Rationale
 6. 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. 				13. Are you Hispanic or Latino? Select one or mo ② No, I am not Hispanic or Latino. ③ Yes, I am Mexican, Mexican American, or ② Yes, I am Puerto Rican or Puerto Rican An ⑤ Yes, I am Cuban or Cuban American. ② Yes, I am from some other Hispanic or Lat	NC	N/A			
2017 Grade 4)				Issue: Race/Ethnicity					
VH24088				14. 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					N/A
2017 Grade 4)				Issue: Race/Ethnicity					
 S. 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 than 			VH240186	 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 than 			V12201166	NC	N/A
2017 Grade 4)				Issue: Socioeconomic Status					
9. Do you have any of the following in your hom	ne? Select one answer cl	hoice on each row.	VH271104	2. Do you have any of the following in your home? Select one answer choice on each row.				R	Sub-items b
a. Access to the Internet	Yes ②	No ®	VH271105	a. Access to the Internet	Yes ③	No ®	VH271405		and c were dropped to
b. Clothes dryer just for your family c. Dishwasher	®	® ®	VH336756	b. Your own bedroom	®	•	VH336762		keep student
d. Your own bedroom	0	®	VH336762	c. Your own desktop or laptop computer (including Chromebooks)	•	•	VH853088		•
e. A desktop or laptop computer (including Chromebooks) that you can use	8	•	VH591976	d. Your own tablet (for example, Surface Pro, iPad, or Kindle Fire)	®	(5)	VH853090		burden low,
f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	0	•	VH271110	e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One)	•	®	VH853089		and sub-items
g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	⊗	•	VH271112						e, f, and g were revised to examine performance of alternative

Previous item				2019 item					Rationale	
10. How often do you use the Internet for hom	nework at home?		VH354591	3. How often do you use the Internet for homev	vork at home?		VH354591	NC	N/A	
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 scho	ool in the last month?		VH240190	4. How many days were you absent from scho	ol in the last month?		VH240190	NC	N/A	
None				None	of in the last month.					
® 1 or 2 days				① 1 or 2 days						
© 3 or 4 days				© 3 or 4 days						
© 5 to 10 days				© 5 to 10 days						
© More than 10 days										
(2017 Grade 4)				Issue: School Climate						
12. How often do you talk about things you ha your family?	ive studied in school w	ith someone in	VH240189	How often do you talk about things you har your family?	ve studied in school with	h someone in	VH240189	NC	N/A	
 Never or hardly ever 				 Never or hardly ever 						
⑤ Once every few weeks				Once every few weeks						
About once a week				 About once a week 						
Two or three times a week				Two or three times a week						
© Every day				© Every day						
(2017 Grade 4)				Issue: Socioeconomic Status						
13. Do any of the following people live in your row.	13. Do any of the following people live in your home? Select one answer choice on each row.			6. Do any of the following people live in your home? Select one answer choice on each row.				NC	N/A	
	Yes	No			Yes	No	-1-1			
a. Mother	0	(8)	VH271145	a. Mother	®	(1)	VH271145			
b. Stepmother c. Foster mother or other female legal	0	•	VH271146	b. Stepmother	0	•	VH271146			
guardian	0	•	VH271147	c. Foster mother or other female legal guardian	0	(1)	VH271147			
d. Father	0	(1)	VH271148 VH271149	d. Father	0	•	VH271148			
e. Stepfather	®	(B)	VH271149 VH271150	e. Stepfather	®	•	VH271149			

Previous item							2019 item					D/A/ R/NC+	Rationale		
4. In this school year, how Chromebooks) during y			or desktop co	omputer (inclu	iding	VH591969	7. In this school year, how often did you use a laptop or desktop computer (including Chromebooks) during your classes at school?						NC	N/A	
Never							Never								
Never In some classes						In some classes									
In about half of the	classes						© In about half of the c	lasses							
In more than half of	the classes						In more than half of t	the classes							
In all or almost all c	lasses						In all or almost all cla	asses							
2017 Grade 4)							Issue: Technology	y Use							
15. 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 (2017 Grade 4)							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 In some classes In about half of the classes In more than half of the classes In all or almost all classes Issue: Technology Use				NC R	N/A The stem of			
one answer choice on	Not at all	A little bit	Somewhat	Quite a bit	Very much	1	choice on each row.	Not at all	A little bit	Somewhat	Ouite a bit	Very much			this item wa
a. I finish whatever I	like me	like me	like me	like me	like me		1	like me	like me	like me	like me	like me			revised for
begin.	•	(1)	0	0	Θ	VH271338	 I finish whatever I begin. 	(4)	•	0	•	•	VH733142		clarity.
 I try very hard even after making mistakes. 	•	•	0	Φ	0	VH271339	b. I try very hard even	0	®	0	Φ	0	VH733143		
c. I keep working hard even when I feel like quitting.	®	(8)	0	0	(D)	VH271342	after making mistakes. c. I keep working hard even when I feel like quitting.	0	(8)	0	Φ	Œ	VH733145		
d. I keep trying to improve myself, even when it takes a long time to get there.	®	(1)	0	Φ	•	VH271345	d. I keep trying to improve myself, even when it takes a long	®	®	0	Φ	©	VH733144		

revious item							2019 item							D/A/ R/NC+	Rationale
In this school year, ho choice on each row.	w often have y	ou done each	of the following	ng? Select one	answer	VH271367	In this school year, how choice on each row.	w often have y	ou done each	of the followir	ng? Select one	e 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 o 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			
I started working on assignments right away rather than waiting until the last minute.	®	®	0	•	Ф	VH271370	a. I started working on assignments right away rather than waiting until the last minute.	0	®	0	0	•	VH271370		
 I paid attention and resisted distractions. 	(3)	(1)	0	•	0	VH271372	b. I paid attention and resisted distractions.	0	®	0	0	(D)	VH271372		
 I stayed on task without reminders 	®	®	0	Φ	Φ	VH271374	c. I stayed on task without reminders	0	®	0	0	®	VH271374		
from my teacher.	- 10							1.62							
from my teacher. d. I paid attention in class even when I was not interested.	0	₾	0	Φ	Ф	VH271375	from my teacher. d. I paid attention in class even when I was not interested.	•	(3)	0	Φ	Φ	VH271375		
d. I paid attention in class even when I was	of the followi					VH271375	d. I paid attention in class even when I was						VH271375	R	
d. I paid attention in class even when I was not interested. O17 Grade 4) 18. How much does each	of the followi						from my teacher. d. I paid attention in class even when I was not interested. Issue: Grit 11. How much does each			s describe you				R	
d. I paid attention in class even when I was not interested. O17 Grade 4) 18. How much does each one answer choice on o	of the followi each row.	ng statements	describe a pe	rson like you	? Select		from my teacher. d. I paid attention in class even when I was not interested. Issue: Grit 11. How much does each	of the follow	ing statement	s describe you	? Select one a	nnswer Very much like me		R	this item wa
d. I paid attention in class even when I was not interested. O17 Grade 4) 18. How much does each one answer choice on one answer choice on one answer choice on one problems more than	of the followi each row. Not at all like me	ng statements A little bit like me	describe a pe Somewhat like me	rson like you Quite a bit like me	? Select Very much like me	VH271749	from my teacher. d. I paid attention in class even when I was not interested. Issue: Grit 11. How much does each choice on each row. a. I like complex problems more than	of the follow Not at all like me	ing statement A little bit like me	s describe you Somewhat like me	Select one a	Very much like me	VH733149	R	
d. I paid attention in class even when I was not interested. O17 Grade 4) 18. How much does each one answer choice on one answer choice on the problems more than easy problems. I like activities that challenge my thinking	of the followi each row. Not at all like me	ng statements A little bit like me	describe a pe	Ouite a bit like me	Select Very much like me	VH271749 VH271750	from my teacher. d. I paid attention in class even when I was not interested. Issue: Grit 11. How much does each choice on each row. a. I like complex problems more than easy problems. b. I 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	Quite a bit like me	Very much like me	VH73M49 H733150	R	this item wa

						201	9 Pilot Grade 4	Core S	tuden	t					
Previous item							2019 item							D/A/ R/NC+	Rationale
19. In this school year, ho school? Select one ans		each row.	f the following			VH271934	12. 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	g ways about	your	VH27J934	R	New sub- items (d, e,
	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			and f) were
a. I felt awkward and out of place at school. b. I felt happy at school.	ØØ	® ®	0	0	Φ	VH271942 VH271944	 I felt awkward and out of place at school. 	@	®	0	0	(VH271942		added to expand
c. I felt that I learned something that I can use in my daily life.	0	•	0	0	θ	VH336903	b. I felt happy at school. c. I felt that I learned something that I can use in my daily life.	0	®	0	0	(E)	VH271944 VH336903		measurement of this
							d. I worried about crime and violence at my school.	®	®	0	Ф	Œ	VH271940		content.
							e. I felt my teachers treated me fairly.	(A)	(B)	0	0	®	ўH853117		
							f. I felt safe on my way to or from school.	®	®	0	Φ	•	VH853118		
(2017 Grade 4)						VH254028	Issue: School Clin	nate							
20. Write the ZIP code of your line of the ZIP code of t	our home add	lress in the bo	x.				N/A							D	Due to the time burden associated with completing this item and to keep student burden low,
(2017 Grade 4)															this item was dropped.

Appendix K-1f: Pilot Grade 4 Core

VH240186	
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- 1. 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 100)

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

VH880711

	Yes	No	
a. Access to the Internet	(A)	®	VH271105
b. Your own bedroom	A	®	VH336762
c. Your own desktop or laptop computer (including Chromebooks)	(A)	®	VH853088
d. Your own tablet (for example, Surface Pro, iPad, or Kindle Fire)	(A)	®	VH853090
e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One)	0	®	VH853089

- 3. 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

4.	How	many	days	were	you	absent	from	school	in	the	last	month?
----	-----	------	------	------	-----	--------	------	--------	----	-----	------	--------

- None
- ® 1 or 2 days
- © 3 or 4 days
- ① 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	(A)	®	VH271145
b. Stepmother	(A)	®	VH271146
c. Foster mother or other female legal guardian	(A)	®	VH271147
d. Father	(A)	®	VH271148
e. Stepfather	(A)	®	VH271149
f. Foster father or other male legal guardian	(A)	®	VH271150

VH591969

- **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
 - In some classes
 - In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

9. 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.	(A)	®	0	0	Ē	VH733142
b. I try very hard even after making mistakes.	(A)	®	0	0	Œ	VH733143
c. I keep working hard even when I feel like quitting.	(A)	®	0	0	©	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	(A)	®	0	•	Œ	VH733144

VH271367

10. 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	
as av wa	started working on ssignments right way rather than raiting until the last hinute.	0	®	0	0	©.	VH271370
b. I p	paid attention and esisted distractions.	A	B	0	0	Œ	VH271372
w	stayed on task ithout reminders om my teacher.	(9)	®	0	0	Œ	VH271374
cla	paid attention in ass even when I was ot interested.	(A)	®	0	0	©	VH271375

11. 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	
pre	ike complex oblems more than asy problems.	(A)	®	0	0	Œ	VH733150
ch	ike activities that nallenge my thinking pilities.	(A)	®	0	0	Œ	VH733151
wh th:	enjoy situations here I will have to ink about omething.	(9)	®	0	Φ	Œ	VH733155
ne	enjoy thinking about ew solutions to oblems.	(A)	®	0	0	Œ	VH733154

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.

	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 o of place at school.	ut 💮	®	0	0	Œ	VH271942
b. I felt happy at school	l. (A)	®	0	0	Œ	VH271944
c. I felt that I learned something that I can use in my daily life.	(A)	(8)	0	0	Œ	VH336903
d. I worried about crim and violence at my school.	e 🛭 💮	®	0	0	Œ	VH271940
e. I felt my teachers treated me fairly.	(A)	®	0	0	Œ	VH853117
f. I felt safe on my way to or from school.	(A)	®	0	0	Œ	VH853118

VH240387

- **13.** Are you Hispanic or Latino? Select **one or more** answer choices.
 - No, I am not Hispanic or Latino.
 - (3) Yes, I am Mexican, Mexican American, or Chicano.
 - © Yes, I am Puerto Rican or Puerto Rican American.
 - Yes, I am Cuban or Cuban American.
 - ① Yes, I am from some other Hispanic or Latino background.

- **14.** Which of the following best describes you? Select **one or more** answer choices.
 - White
 - Black or African American
 - © Asian

 - Native Hawaiian or other Pacific Islander

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 <u>_</u> 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

201	9 Operational 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. ⑤ No, I am not Hispanic or Latino. ⑤ Yes, I am Mexican, Mexican American, or Chicano. ⑥ Yes, I am Puerto Rican or Puerto Rican American. ⑥ Yes, I am Cuban or Cuban American. ⑥ Yes, I am from some other Hispanic or Latino background. 	3. 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. ① Yes, I am Puerto Rican or Puerto Rican American. ① Yes, I am Cuban or Cuban American. ① Yes, I am from some other Hispanic or Latino background.	VII24387	NC NC	N/A
(2018 Grade 8) 7. 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	Sue: Race/Ethnicity 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	VID4038	NC	N/A
(2018 Grade 8) 8. About how many books are there in your home?	Issue: Race/Ethnicity 5. About how many books are there in your home?	VH240186	NC	N/A
 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) 	 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) 			
(2018 Grade 8)	Issue: Socioeconomic Status			

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

9. Do you have any of the following in your home? Select one answer cho Yes 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 Calaxy, HTC One) that you can use 2018 Grade 8)	No No D D D D D D D D D D D D D	VH271104 VH271105 VH336756 VH336759 VH336762 VH391976 VH271110 VH271112	a. Access to the Internet b. Your own bedroom c. A desktop or laptop computer (including Chromebooks) that you can use d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Yes Select one answer che Yes Solution Sol	No Dice on each row.	VH271164 VH2171165 VH236762 VH2591976 VH271110 VH271112	R	Due to concerns about content relevance and to keep student burden low, 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 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	© © ©	VH336756 VH336759 VH336762 VH591976 VH271110	b. Your own bedroom c. A desktop or laptop computer (including Chromebooks) that you can use d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Φ Φ	© ©	VH336762 VH591976 VH271110		about content relevance and to keep student burden low,
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	© © ©	VH336756 VH336759 VH336762 VH591976 VH271110	b. Your own bedroom c. A desktop or laptop computer (including Chromebooks) that you can use d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	© ©	(B) (D)	VH336762 VH591976 VH271110		content relevance and to keep student burden low,
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	© ©	VH336759 VH336762 VH591976 VH271110	c. A desktop or laptop computer (including Chromebooks) that you can use d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	•	10	VH591976 VH271110		content relevance an to keep student burden low,
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	(D) (D)	VH336762 VH591976 VH271110	Chromebooks) that you can use d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Ø	•	VH271110		relevance an to keep student burden low,
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	®	VH591976 VH271110	d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Ø	•	VH271110		relevance an to keep student burden low,
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	•	VH271110	Kindle Fire) that you can use e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use					to keep student burden low,
Kindle Fire) that you can use g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use			Samsung Galaxy, HTC Öne) that you can use	Φ	•	VH27[112		student burden low,
Samsung Galaxy, HTC Óne) that you can use	Φ	VH271112	Issue: Socioeconomic Status					burden low,
2018 Grade 8)			Issue: Socioeconomic Status					and c were
			issue. Socioeconomic status					dropped.
. How often do you use the Internet for homework at home?		VH354591	7. How often do you use the Internet for homework	at home?		VH354591	NC	N/A
				at home.				
Never			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 8)			Issue: Technology Use					
How many days were you absent from school in the last month?		VH240190	8. How many days were you absent from school in the last month?					N/A
None			None					
1 or 2 days			® 1 or 2 days					
© 3 or 4 days			© 3 or 4 days					
© 5 to 10 days			© 5 to 10 days					
© More than 10 days			More than 10 days					
2018 Grade 8)			Issue: School Climate					
. How often do you talk about things you have studied in school with so your family?	omeone in	VH240189	9. How often do you talk about things you have studyour family?	lied in school with sor	neone in	VH240189	NC	N/A
Never or hardly ever			Never or hardly ever					
Once every few weeks			⑤ Once every few weeks					
About once a week			About once a week					
Two or three times a week			Two or three times a week					
© Every day			© Every day					
								1
2018 Grade 8)			Issue: Socioeconomic Status					

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

	2019 O _l	perational Grade 8 Core Student			
Previous item		2019 item		D/A/ R/NC+	Rationale
13. How far in school did your mother go?	VH240192		VH240192	NC	N/A
-		10. How far in school did your mother go?			
 She did not finish high school. She graduated from high school. 		She did not finish high school.			
She graduated from high school. She had some education after high school.		She graduated from high school.			
She had some education after high school. She graduated from college.		She had some education after high school.			
© I don't know.		She graduated from college.			
I don't know.		© I don't know.			
(2018 Grade 8)		Issue: Socioeconomic Status			
	VH240193	1-2-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	VH240193	NC	N/A
14. How far in school did your father go?		11. How far in school did your father go?			'','
The did not finish high school.		He did not finish high school.			
The graduated from high school.		He graduated from high school.			
He had some education after high school.		He had some education after high school.			
He graduated from college.		He graduated from college.			
□ I don't know.		© I don't know.			
(2018 Grade 8)		Issue: Socioeconomic Status			
TATE OF STATISTICS	VH336776	A SECOND SECOND	VH336776	NC	N/A
15. Does your mother work?		12. Does your mother work?			,
		Yes			
® No		® No			
□ I don't know.		© I don't know.			
(2018 Grade 8)					
		Issue: Socioeconomic Status	100000		
	VH336779	13. Deservous feeton and 12	VH336779	NC	N/A
16. Does your father work?		13. Does your father work?			
Yes					
® No		® No			
© I don't know.		© I don't know.			
(2018 Grade 8)		Issue: Socioeconomic Status			

⁺ 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
17. Do any of the following tow.	people live in your hom	e? Select one an	swer choice on	each	VHETITAL	14. Do any of the following row.	g people live	in your home	? Select one a	answer choice	on each	VH271144	NC	N/A
		Yes	N	0					Yes		No			
a. Mother	/-	0	0		H271145	a. Mother			0	_	•	VH271145		
b. Stepmother c. Foster mother or other fer	male legal	0	- 0		17271146	b. Stepmother			0		(B)	VH271146		
guardian	mine regin	(2)	q		H278147.	c. Foster mother or other f	emale legal		®		(1)	VH271147		
d. Father e. Stepfather		0	0		H171148 H171149	guardian d. Father			®		0	VH271148		
f. Foster father or other mal	c legal guardian	0	9		H17(160	e. Stepfather			0		®	VH271149		
,						f. Foster father or other ma	ale legal guar	dian	®		(3)	VH271150		
(2018 Grade 8)					VIISNIGG	Issue: Socioecono	mic Sta	tus				VH591960		
18. 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 (2018 Grade 8) 19. 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 about half of the classes In all or almost all classes In all or almost all classes						15. In this school year, how Chromebooks) during y Never In some classes In about half of the In all or almost all of Issue: Technology 16. In this school year, how Kindle Fire) during you Never In some classes In about half of the In more than half of In all or almost all of	classes the classes classes the classes classes defined by the classes the classes the classes the classes	u use a tablet			2.0	VH271276	NC NC	N/A N/A
					111271222	Issue: Technology	/ Use							
(2018 Grade 8)		20. How much does each of the following statements describe a person like you? Select one answer choice on each row.						ring statemen	ts describe yo	ou? Select one	answer	VH733141	R	After examining
20. How much does each of	f the following statements ach row.			***			Not at all	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me			data from th
20. How much does each of	f the following statements from the		Quite a bit like me	Very much like me			like me							
How much does each of one answer choice on each of the second secon	Not at all A little bi	t Somewhat			VH271338	a. I finish whatever I	®	®	0	0	©	VH733142		two version
20. How much does each of one answer choice on each of the answer choice on each of the answer is a second of the answer i	Not at all like me	t Somewhat like me	like me	like me	VH271338 VH271339	begin. b. I try very hard even	®					VH733142 VH733143		
20. How much does each of one answer choice on each of the same and t	Not at all like me	t Somewhat like me	like me	like me		begin.	- 1.20-1.10	(B)	0	0	© •			two version

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

evious item							2019 item							D/A/ R/NC+	Rationale
. How much does each choice on each row.	of the followi	ing statement	s describe you	? Select one a	answer	VH733141	Issue: Grit								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
I finish whatever I begin.	®	Φ	0	Φ	Ф	VH733142									
I try very hard even after making mistakes.	0	•	0	0	0	VH733143									
I keep working hard even when I feel like quitting.	8	®	0	0	Ф	VH733145									
I keep trying to improve myself, even when it takes a long time to get there.	®	ⅎ	0	Φ	Ф	VH733144									
018 Grade 8) 2. In this school year, how	v often have y	ou done each	of the followin	ng? Select one	answer	VH271367	19. In this school year, ho	w often have y	you done each	of the following	ng? Select one	answer	VB271367	NC	N/A
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 o the time	i	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	f		
I started working on assignments right away rather than waiting until the last minute.	Θ	®	0	0	Ð	VH271370	a. I started working on assignments right away rather than waiting until the last	@	•	0	0	Ф	VH271370		
I paid attention and resisted distractions.	0	®	0	Φ	•	VH271372	b. I paid attention and	Φ	®	0	•	©	VH271372		
I stayed on task without reminders from my teacher.	•	®	0	0	©	VH271374	c. I stayed on task without reminders	@	100	0	•	0	VH271374		
I paid attention in class even when I was not interested.	®	®	0	•	0	VH271375	from my teacher. d. I paid attention in class even when I was not interested.	®	•	0	0	©	VH271375		
018 Grade 8) 23. How much does each one answer choice or		ving statemen	ts describe a p	erson like you	1? Select	VH271749	Issue: Grit 18. How much does each	of the follow	ring statemen	ts describe you	u? Select one	answer	VH733149	R	After
one answer enoice of	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me		choice on each row.	Not at all	A little bit	Somewhat	Quite a bit	Very much			examining data from th
a. I like complex problems more than easy problems.	®	(3)	0	Φ	(D)	VH271750	a. I like complex problems more than	like me	like me	like me	like me	like me	VH733150		two versions
 I like activities that challenge my thinking 	(a)	•	0	Φ	0	VH271752	b. I like activities that challenge my thinking	⊗	@	0	•	0	VH733151		of this item that were
abilities.				Φ	•	VH2.71753	abilities. c. I enjoy situations								administere
abilities. c. I enjoy situations where I will have to think about something.	@	(8)	0	0		VHL/1/53	where I will have to think about	®	■	0	0	0	VH733155		in the pilot,

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

					20)19 O	perational Grad	e 8 Co	re Stu	dent					
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	a? Select one	answer	VH733149	Issue: Desire for I	earning							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 uropped.
I like complex problems more than easy problems.	®	(8)	0	0	®	VH733150									
 I like activities that challenge my thinking abilities. 	®	•	0	0	©	VH733151									
c. I enjoy situations where I will have to think about something.	@	•	0	0	Θ	VH733155									
d. I enjoy thinking about new solutions to problems.	®	•	0	0	Θ	VH733154									
(2018 Grade 8)															
25. In this school year, h	ow often have swer choice o	you felt any o on each row.	of the following	g ways about y	rour	VII27104	20. In this school year, hos school? Select one ans			of the following	ways about	your	VH271934	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			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	f		
a. I felt awkward and out of place at school. b. I felt happy at school.	Ø	0	0 0	(B)	0	VH271942	I felt awkward and out of place at school.	@	®	0	Ф	©	VH27(942		
c. I felt that I learned something that I can use in my daily life.	60	00	0	0	0	VIETNOSTI	b. I felt happy at school. c. I felt that I learned something that I can	Θ Θ	® ®	0	0	D	VH271944 VH336903		
(2010 Crede 0)							use in my daily life.	9	9		9	•	V11330903		
(2018 Grade 8)							Issue: School Clin	nate							
26. Write the ZIP code of you	our home add	cress in the box	х.			V1(254028	N/A							D	Due to the time burden associated with completing this item and
(2018 Grade 8)															to keep student burden low, this item was dropped.

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

2019 Op	erational 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)? Yes No 	A	This item was adapted from the arts questionnaire to assess student participation in arts
(2016 Grade 8)	Issue: Educational Experiences		coursework.

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

Appendix K-1i: Operational Grade 8 Core

2

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

VH240387

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

- No, I am not Hispanic or Latino.
- (B) Yes, I am Mexican, Mexican American, or Chicano.
- © Yes, I am Puerto Rican or Puerto Rican American.
- Tes, I am Cuban or Cuban American.
- © Yes, I am from some other Hispanic or Latino background.

VILIDA	0200

- **4.** Which of the following best describes you? Select **one or more** answer choices.
 - White
 - ® Black or African American
 - © Asian

 - © Native Hawaiian or other Pacific Islander

- **5.** 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 100)

6. 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)	®	VH271105
b. Your own bedroom	(A)	®	VH336762
c. A desktop or laptop computer (including Chromebooks) that you can use	®	®	VH591976
d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	®	®	VH271110
e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	®	®	VH271112

VH354591

- 7. 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

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

1.7	ITO	40	1	00

9.	How often	do you	talk ab	out thi	ings you	ı have	studied	in	school	with	someo	ne in
	your famil	y?										

- 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?

- 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.

VH240193

11. How far in school did your father go?

- He did not finish high school.
- He graduated from high school.
- He graduated from college.
- © I don't know.

17	U2	22	67	7

12. Does your mother work?

- A Yes
- ® No
- © I don't know.

VH336779

13. Does your father work?

- A Yes
- ® 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	(A)	®	VH271146
c. Foster mother or other female legal guardian	(A)	®	VH271147
d. Father	(A)	®	VH271148
e. Stepfather	(A)	®	VH271149
f. Foster father or other male legal guardian	(A)	®	VH271150

VH591969

- **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
 - In some classes
 - O In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

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.	(A)	®	0	0	Œ	VH733142
b. I try very hard even after making mistakes.	(A)	®	0	0	Œ	VH733143
c. I keep working hard even when I feel like quitting.	(A)	®	0	0	©.	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	(A)	®	0	•	Œ	VH733144

VH733149

18. 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 like complex problems more than easy problems.	®	®	0	0	Œ	VH733150
b. I like activities that challenge my thinking abilities.	®	®	0	0	Œ	VH733151
c. I enjoy situations where I will have to think about something.	®	®	0	0	Œ	VH733155
d. I enjoy thinking about new solutions to problems.	(A)	®	0	0	Œ	VH733154

19. 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.	(4)	®	0	0	©.	VH271370
b.	I paid attention and resisted distractions.	(A)	B	0	0	Œ	VH271372
c.	I stayed on task without reminders from my teacher.	(A)	®	0	0	Œ	VH271374
d.	I paid attention in class even when I was not interested.	®	®	0	0	Œ	VH271375

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.

VH271934

	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)	®	0	0	©	VH271942
b. I felt happy at school.	(A)	®	0	0	(E)	VH271944
c. I felt that I learned something that I can use in my daily life.	(A)	®	0	0	Œ	VH336903

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

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

			201	9 Pilot Grade 8 Core Stud	lent				
Previous item				2019 item					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. ① Yes, I am from some other Hispanic or Latino background.			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.				NC	N/A	
(2017 Grade 8)				Issue: Race/Ethnicity					
7. Which of the following best describes you? Sele	ect one or more answer	choices.	VH240358	21. Which of the following best describes you? White Black or African American Asian American Indian or Alaska Native Native Hawaiian or other Pacific Island		nswer choices.	VH240388	NC	N/A
(2017 Grade 8)				Issue: Race/Ethnicity					
8. 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 than			VH240186	 About how many books are there in your hor Few (0-10) Enough to fill one shelf (11-25) Enough to fill one bookcase (26-100) Enough to fill several bookcases (more the 			VH240186	NC	N/A
(2017 Grade 8)				Issue: Socioeconomic Status					
9. Do you have any of the following in your hom	Yes	noice on each row.	VH271104.	2. Do you have any of the following in your hon		_	VH880711	R	Sub-items b
a. Access to the Internet	1es	(B)	VH271105	a. Access to the Internet	Yes	No	VH271105		
b. Clothes dryer just for your family	®	•	VH336756	b. Your own bedroom	Ø	(B)	VH271103 VH336762		dropped to
c. Dishwasher	•	(1)	VH336759	c. Your own desktop or laptop computer	®	(1)	VH853088		keep student
d. Your own bedroom e. A desktop or laptop computer (including	®	(8)	VH336762	(including Chromebooks) d. Your own tablet (for example, Surface Pro,					burden low,
Chromebooks) that you can use	(3)	(1)	VH591976	iPad, or Kindle Fire)	0	•	VH853090		and sub-items
f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	(•	VH271110	e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One)	0	•	VH853089		e, f, and g
g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Φ	(5)	VH271112						were revised to examine performance of alternative
(2017 Grade 8)				Issue: Socioeconomic Status					item wording

⁺ 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. 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? Never About once or twice a month About once or twice a week Almost every day Every day Issue: Technology Use	V1E54591	NC	N/A
(2017 Grade 8) 11. How many days were you absent from school in the last month? © None © 1 or 2 days © 3 or 4 days © 5 to 10 days © More than 10 days (2017 Grade 8)	4. How many days were you absent from school in the last month? None 1 or 2 days 3 or 4 days 5 to 10 days More than 10 days Issue: School Climate	VHZXIJVO	NC	N/A
	5. How often do you talk about things you have studied in school with someone in your family? ① Never or hardly ever ① Once every few weeks ② About once a week ① Two or three times a week ① Every day Issue: Socioeconomic Status	V12-6189	NC	N/A
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.	6. How far in school did your mother go? ⑤ She did not finish high school. ⑤ She graduated from high school. ⑥ She had some education after high school. ⑥ She graduated from college. ⑥ I don't know.	V11240192	NC	N/A

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

			2019	9 Pilot Grade 8 Core Stude	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
He did not finish high school.				He did not finish high school.					
He graduated from high school.				He graduated from high school.					
© He had some education after high school	I.			He had some education after high school.					
He graduated from college.				 He graduated from college. I don't know. 					
© I don't know.				© I don't know.					
(2017 Grade 8)				Issue: Socioeconomic Status					
			VH336776	2000.1			VH336776	NC	N/A
5. Does your mother work?				8. Does your mother work?					',' '
Yes				Yes					
® No				® No					
◎ I don't know.				○ I don't know.					
(2017 Grade 8)									
			VH336779	Issue: Socioeconomic Status			VH336779	1	
16. Does your father work?				9. Does your father work?				NC	N/A
® No				® No					
© I don't know.				© I don't know.					
(2017 Grade 8)				Issue: Socioeconomic Status					
17. 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.					N/A	
 Do any of the following people live in your frow. 				row.				NC	
	Yes	No		row,	Yes	No			
	Yes 🐵	No	VH271145	a. Mother	Yes	No ®	VH27[145		
a. Mother b. Stepmother	1,157		VH271145 VH271146	a. Mother b. Stepmother			VH271145 VH271146		
a. Mother	@	•		a. Mother b. Stepmother c. Foster mother or other female legal	®	®			
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father	3	® ®	VH271146	a. Mother b. Stepmother c. Foster mother or other female legal guardian	Φ Φ	© ©	VH271146		
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather	© © ©	© 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	VH271146 VH271147 VH271148 VH271149	a. Mother b. Stepmother c. Foster mother or other female legal	®	(B)	VH271146 VH271147		
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father	© © ©	(I)	VH271146 VH271147 VH271148	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father	© © ©	(b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	VH271146 VH271147 VH271148		
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian	© © ©	© 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	VH271146 VH271147 VH271148 VH271149	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather	© © ©	(D)	VH271146 VH271147 VH271148 VH271149 VH271150		
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian (2017 Grade 8)	© © © © © © © © o	(b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	VH271146 VH271147 VH271148 VH271149	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian	©	©	VH271146 VH271147 VH271148 VH271149	NC	N/A
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian (2017 Grade 8)	© © © © © © © © o	(b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	VH271146 VH271147 VH271148 VH271149 VH271150	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian Issue: Socioeconomic Status	©	©	VH271146 VH271147 VH271148 VH271149 VH271150		N/A
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian (2017 Grade 8)	© © © © © © © © o	(b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	VH271146 VH271147 VH271148 VH271149 VH271150	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian Issue: Socioeconomic Status 11. In this school year, how often did you use a lapt Chromebooks) during your classes at school?	©	©	VH271146 VH271147 VH271148 VH271149 VH271150		N/A
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian (2017 Grade 8)	© © © © © © © © o	(b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	VH271146 VH271147 VH271148 VH271149 VH271150	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian Issue: Socioeconomic Status 11. In this school year, how often did you use a lapt Chromebooks) during your classes at school? © Never	©	©	VH271146 VH271147 VH271148 VH271149 VH271150		N/A
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian (2017 Grade 8) 18. In this school year, how often did you use a lay Chromebooks) during your classes at school? © Never © In some classes	© © © © © © © © o	(b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	VH271146 VH271147 VH271148 VH271149 VH271150	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian Issue: Socioeconomic Status 11. In this school year, how often did you use a lapt Chromebooks) during your classes at school? © Never © In some classes	©	©	VH271146 VH271147 VH271148 VH271149 VH271150		N/A
a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian (2017 Grade 8) 18. In this school year, how often did you use a lay Chromebooks) during your classes at school? • Never • In some classes • In about half of the classes	© © © © © © © © o	(b) (c) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	VH271146 VH271147 VH271148 VH271149 VH271150	a. Mother b. Stepmother c. Foster mother or other female legal guardian d. Father e. Stepfather f. Foster father or other male legal guardian Issue: Socioeconomic Status 11. In this school year, how often did you use a lapt Chromebooks) during your classes at school? © Never © In some classes © In about half of the classes	©	©	VH271146 VH271147 VH271148 VH271149 VH271150		N/A

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

Previous item 19. 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 all or almost all classes					2019 item					D/A/ R/NC+	Rationale				
					12. In this school year, how often did you use a tablet (for example, Surface Pro, iPad, Kindle Fire) during your classes at school? ② Never ③ In some classes ③ In about half of the classes ⑤ In more than half of the classes ⑤ In all or almost all classes					NC	N/A				
2017 Grade 8) 20. How much does each		ng statements	s describe a pe	rson like you	? Select	VH271337	Issue: Technology		ing statement	s describe you	? Select one a	nswer	VH733141	R	The stem of
one answer choice on	Not at all	A little bit	Somewhat	Quite a bit	Very much	H	choice on each row.	Not at all	A little bit	Somewhat		Very much			this item wa
a. I finish whatever I	like me	like me	like me	like me	like me	VH271338	a. I finish whatever I	like me	like me	like me	like me	like me	20.00		revised for
begin. b. I try very hard even	@	0	0	0	©	VH271339	begin. b. I try very hard even	®	(1)	0	Φ	•	VH733142		clarity.
after making mistakes. c. I keep working hard even when I feel like quitting.	®	0	0	0	©	VH271842	after making mistakes. c. I keep working hard even when I feel like quitting.	9	® ®	0	Φ	© ©	VH733143 VH733145		
d. I keep trying to improve myself, even when it takes a long time to get there.	®	®	0	•	•	VH271345	d. I keep trying to improve myself, even when it takes a long time to get there.	®	®	0	•	•	VH733144		
2017 Grade 8) 21. In this school year, ho choice on each row.	w often have y Never or hardly ever	Less than half of the time	of the followin	ng? Select one More than half of the time	All or almost all of the time	VH271367	Issue: Grit 14. In this school year, ho choice on each row.	w often have 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 the time		NC	N/A
I started working on assignments right away rather than waiting until the last minute.	8	•	0	0	•	VH271370	a. I started working on assignments right away rather than waiting until the last	(4)	•	0	Φ	•	VH271370		
 I paid attention and resisted distractions. 	@	•	0	•	•	VH271372	b. I paid attention and	®	(D)				VH271372		
c. I stayed on task without reminders from my teacher.	0	(8)	0	Φ	©	VH271374	resisted distractions. c. I stayed on task without reminders	(A)	® ®	0	0	(B)	VH2/13/2		
d. I paid attention in class even when I was not interested.	0	•	0	Φ	©	VH271375	d. I paid attention in class even when I was	®	0	0	0	©	VH271375		

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

						201	Pilot Grade 8	Core S	tudent	:					
Previous item					2019 item							D/A/ R/NC+	Rationale		
22. How much does each one answer choice or	n of the follow n each row.	ing statement	ts describe a p	erson like yo	u? Select	VH271749	15. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? Select one	answer	VH733149	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
I like complex problems more than easy problems.	0	®	0	•	Œ	VH271750	a. I like complex problems more than easy problems.	®	•	0	Φ	Φ	VH733150		clarity.
 I like activities that challenge my thinking abilities. 	0	•	0	•	©.	VH271752	b. I like activities that challenge my thinking	0	0	0	0	(E)	VH733151		
c. I enjoy situations where I will have to think about something.	0	•	0	0	©	VH271753	abilities. c. I enjoy situations where I will have to think about	0	®	0	0	Φ	VH733155		
d. I enjoy thinking about new solutions to problems.	0	•	0	•	©	VH271756	d. I enjoy thinking about new solutions to problems.	®	0	0	0	©	VH733154		
a. I felt awkward and out of place at school. b. I felt happy at school. c. I felt that I learned something that I can use in my daily life. (2017 Grade 8)	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	VH271942 VH271944 VH336903	a. I felt awkward and out of place at school. b. I felt happy at school. c. I felt that I learned something that I can use in my daily life. d. I worried about crime and violence at my school.	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	VH271942 VH271944 VH336903 VH271940		items (d, e, and f) were added to expand measurement of this content.
(2017 Grade 8)							e. I felt my teachers treated me fairly.	®	•	0	•	•	VH853117		
							f. I felt safe on my way to or from school.	0	•	0	0	•	VH853118		
24. Write the ZIP code of y	your home add	dress in the bo	х.			VH254028	N/A	iate						D	Due to the time burden associated with completing this item and to keep student burden low.

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

2019	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)? ① Yes ① No Issue: Educational Experiences	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? The Yes No	18. Are you taking an art course this school year (for example, drawing, painting, or studio art)? ① Yes ③ No Issue: Educational Experiences	A	This item was added to assess student involvement in art
(2016 grade 8) N/A	19. Are you taking a music course this school year (for example, choir, band, or orchestra)? ② Yes ③ No Issue: Educational Experiences	A	coursework. This item was added to assess student involvement in music coursework.

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

Appendix K-1k: Pilot Grade 8 Core

- 1. 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 100)

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

VH880711

	Yes	No	
a. Access to the Internet	(A)	®	VH271105
b. Your own bedroom	(A)	®	VH336762
c. Your own desktop or laptop computer (including Chromebooks)	(4)	®	VH853088
d. Your own tablet (for example, Surface Pro, iPad, or Kindle Fire)	(A)	®	VH853090
e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One)	(A)	®	VH853089

- 3. 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

			VH240190
4.	Ho	w many days were you absent from school in the last month?	
	\bigcirc	None	
	B	1 or 2 days	
	0	3 or 4 days	
	0	5 to 10 days	
	(E)	More than 10 days	
			VH240189
5.		w often do you talk about things you have studied in school with someone in ur family?	
	\bigcirc	Never or hardly ever	
	®	Once every few weeks	
	0	About once a week	
	(Two or three times a week	
	(E)	Every day	
			VH240192
6.	Ho	w far in school did your mother go?	
	(A)	She did not finish high school.	
	B	She graduated from high school.	
	0	She had some education after high school.	
	(She graduated from college.	
	(E)	I don't know.	

7.	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.	
		VH336776
8.	Ooes your mother work?	
	> Yes	
	D No	
	I don't know.	

9. Does your father work?

- A Yes
- ® No
- © I don't know.

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	(A)	®	VH271146
c. Foster mother or other female legal guardian	(9)	®	VH271147
d. Father	(A)	®	VH271148
e. Stepfather	(A)	®	VH271149
f. Foster father or other male legal guardian	(A)	®	VH271150

VH591969

- **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
 - 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
 - In some classes
 - O In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

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.	(A)	®	0	0	Œ	VH733142
b. I try very hard even after making mistakes.	(A)	®	0	0	Œ	VH733143
c. I keep working hard even when I feel like quitting.	(A)	®	0	0	©.	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	(A)	®	0	Φ	©.	VH733144

VH271367

14. 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 a w	started working on assignments right way rather than waiting until the last ninute.	0	®	0	0	©	VH271370
b. I	paid attention and esisted distractions.	A	B	0	0	Œ	VH271372
l w	stayed on task vithout reminders rom my teacher.	(9)	®	0	0	Œ	VH271374
c	paid attention in class even when I was not interested.	(A)	®	0	0	Œ	VH271375

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	Very much like me	
a.	I like complex problems more than easy problems.	(A)	®	0	0	Œ	VH733150
b.	I like activities that challenge my thinking abilities.	(4)	®	0	0	Œ	VH733151
c.	I enjoy situations where I will have to think about something.	0	®	0	0	Œ	VH733155
d.	I enjoy thinking about new solutions to problems.	(A)	(8)	0	0	Œ	VH733154

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.	(A)	B	0	0	Œ	VH271942
b.	I felt happy at school.	(A)	®	0	0	Œ	VH271944
c.	I felt that I learned something that I can use in my daily life.	(A)	®	0	0	Œ	VH336903
d.	I worried about crime and violence at my school.	(A)	®	0	0	Œ	VH271940
e.	I felt my teachers treated me fairly.	(A)	B	0	0	Œ	VH853117
f.	I felt safe on my way to or from school.	(A)	B	0	0	Œ	VH853118

VH852895

17.	Are you taking a l	language course	other than	English	this schoo	l year (f	or examp	ole,
	Spanish, French, o	or Chinese)?						

- A Yes
- ® No

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

V	H	Q	5	20	U.

19.	Are you taking a music course this school year (for example, choir, band, or
	orchestra)?

- A Yes
- 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.
 - White
 - Black or African American
 - © Asian

 - © 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 <u>_</u> 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		1	3
VH271372	4, 8, 12		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

	Operational Grade 12 Core Student		T	
Previous item	2019 item		D/A/ R/NC+	Rationale
5. 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.	3. 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. ① Yes, I am Cuban or Cuban American. ① Yes, I am from some other Hispanic or Latino background.	VID-20387	NC	N/A
(2018 Grade 12) 6. 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	VH240388	NC	N/A
(2018 Grade 12) 7. 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 100)	Issue: Race/Ethnicity 5. 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 100)	VII240186	NC	N/A
(2018 Grade 12)	Issue: Socioeconomic Status			

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⁺ 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
8. Do you have any of the following in your home	7 Select one answer ch	noice on each row.	VHIZTEIDA	6. Do you have any of the following in your home	e? Select one answer ch	noice on each row.	VH271104	R	Due to
	Yes	No			Yes	No			concerns
a. Access to the Internet	•	0	VH271108	a. Access to the Internet	®	•	VH271105		about
h. Clothes dryer just for your family	(3)	0	VR336756	b. Your own bedroom	•	0	VH336762		
c. Dishwasher	®	0	VB336763	c. A desktop or laptop computer (including Chromebooks) that you can use	®	•	VH591976		content
d. Your own bedroom e. A desktop or laptop computer (including Chromebooks) that you can use	0	0	VH5/71976	d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	•	•	VH271110		relevance ar
f, A tablet (for example, Surface Pro, iPad. Kindle Fire) that you can use	Ø	Ф	Varietra	e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	•	(b)	VH27[112		to keep student
g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	•	•	ÝRI71111						burden low,
(2018 Grade 12)				Issue: Socioeconomic Status					sub-items b and c were dropped.
(2010 Grade 12)			VH354591	125 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	.5		VH354591	NC	N/A
9. How often do you use the Internet for homework	ork at home?			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					
About once or twice a week				About once or twice a week					
Almost every day				Almost every day					
© Every day				© Every day					
(2018 Grade 12)				Issue: Technology Use					
10. How many days were you absent from school	in the last month?		VH240190	8. How many days were you absent from school in	the last month?		VH240190	NC	N/A
None				None					
									1
1 or 2 days				® 1 or 2 days					
© 3 or 4 days				© 3 or 4 days					
© 5 to 10 days				© 5 to 10 days					1
© More than 10 days				More than 10 days					
(2018 Grade 12)				Issue: School Climate					
(1-0-0 0.000 12)			VH240189	+			VH240189	NC.	N1 / A
11. How often do you talk about things you have your family?	e studied in school w	vith someone in		How often do you talk about things you have stud your family?	lied in school with so	omeone in		NC	N/A
Never or hardly ever				Never or hardly ever					
Once every few weeks				Once every few weeks					
About once a week				About once a week					1
Two or three times a week				Two or three times a week					
				The second of th					
© Every day				© Every day					
				Issue: Socioeconomic Status					1

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

	2019 Op	erational Grade 12 Core Student			
Previous item		2019 item		D/A/ R/NC+	Rationale
	VH240192	Land of Care Care Care Control of Care Care Care Care Care Care Care Care	VH240192	NC	N/A
12. How far in school did your mother go?		10. How far in school did your mother go?			
She did not finish high school.		She did not finish high school.			
She graduated from high school.		She graduated from high school.			
She had some education after high school.		She had some education after high school.			
She graduated from college.		She graduated from college.			
⊕ I don't know.		© I don't know.			
(2018 Grade 12)		Issue: Socioeconomic Status			
13. How far in school did your father go?	VH240193	11. How far in school did your father go?	VH240193	NC	N/A
He did not finish high school.					
He did not thisn high school. He graduated from high school.		He did not finish high school.			
He had some education after high school.		He graduated from high school.			
		© He had some education after high school.			
He graduated from college.		He graduated from college.			
© I don't know.		© I don't know.			
(2018 Grade 12)		Issue: Socioeconomic Status			
	VH336776	72.200.000.000.0007.	VH336776	NC	N/A
14. Does your mother work?		12. Does your mother work?			
® No		® No			
© I don't know.		© I don't know.			
T WOIL CARDON.					
(2018 Grade 12)		Issue: Socioeconomic Status			

		2019 Op	erational Grade 12 Core Student			
Previous item			2019 item		D/A/ R/NC+	Rationale
15. What does your mother do what she does at work.	o for work? Select the choice	e that most closely describes B Religious worker	N/A		D	Due to the substantial time burden
Artist	Firefighter	Repair technician				associated
Athlete	@ Grounds worker	Salesperson				with
Carpenter	Health aide	Scientist				completing
Cashier	Helper	Secretary				this item and
	Housekeeper	Security guard				to keep
© Clerk	@ Janitor	Server				student
College professor	Lawyer	Social worker				burden low,
@ Construction worker	Librarian	Software developer				-
@ Cook	Manager	Stocker				this item was
Customer service	Marketing	Supervisor				dropped.
Day care worker	Mechanic	Surgeon				
Dental hygienist	Medical technician	Surveyor				
@ Dentist	Military	Taxi driver				
Designer	Miner	Teacher				
Doctor	Nurse	Therapist				
 Education administrator 	Office supportPainter	TransportationTruck driver				
Electrician	Pharmacist	Veterinarian				
Engineer	Police	Writer				
ExecutiveFactory worker	Receptionist	Other (Please specify):				
(2018 Grade 12)						
16. Does your father work?		VH336779	13. Does your father work?	VH336779	NC	N/A
			Yes			
® No			® No			
◎ I don't know.			© I don't know.			
(2018 Grade 12)			Issue: Socioeconomic Status			

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

evious item				2019 item				D/A/ R/NC+	Rationale
 What does your father do what he does at work. 	for work? Select the choice	that most closely des	vH336885 cribes	N/A				D	Due to the substantial
@ Accountant	@ Farmer	Religious worke	er						time burde
@ Artist	Firefighter	Repair technicia	an						associated
Athlete	Grounds worker	Salesperson							with
Carpenter	Health aide	Scientist							_
Cashier	Helper	Secretary							completing
© Cleaner	1 Housekeeper	Security guard							this item a
@ Clerk	@ Janitor	Server							to keep
College professor	Lawyer	Social worker							student
Construction worker	Librarian	Software develo	per						burden lov
@ Cook	Manager	Stocker							this item w
Customer service	Marketing	Supervisor							
Day care worker	Mechanic Mecha	Surgeon							dropped.
Dental hygienist	Medical technician	Surveyor							
Dentist	Military	Taxi driver							
Designer	Miner	Teacher							
Doctor	① Nurse	Therapist							
© Education	Office support	Transportation							
administrator	Painter	Truck driver							
@ Electrician	Pharmacist	Veterinarian							
Engineer		Writer							
Executive	Police								
Factory worker	@ Receptionist	Other (Please sp —	Sectify):						
)18 Grade 12)									
Do any of the following peo row.	ple live in your home? Selec	t one answer choice or	n each	 Do any of the following people live in your h row. 	ome? Select one answ	ver choice on each	VH271144	NC	N/A
	Yes	s P	No		Yes	No			
Mother Stepmother	(4)			a. Mother	®	(1)	VH271145		
Foster mother or other female	e legal 🐵		© VH271146 © VH271147	b. Stepmother	(A)	(8)	VH271146		
guardian Father	(4)		(3) VH271147 (3) VH271148	c. Foster mother or other female legal guardian	⊗	•	VH271147		
Stepfather	0		3 VH271149	d. Father	(4)	(1)	VH271148		
Foster father or other male le			® VH271150	e. Stepfather f. Foster father or other male legal guardian	Ø	(B)	VH271149 VH271150		1

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

	s item						2019 item							D/A/ R/NC+	Rationale
19. In this school year, he Chromebooks) during			or desktop c	omputer (inclu	ıding	VH591969	15. In this school year, how Chromebooks) during y			or desktop co	mputer (inclu	ding	VH591969	NC	N/A
							Never								
In some classes	- 10.1						In some classes								
In about half of the state of the st							In about half of the	classes							
In more than half							In more than half of	the classes							
In all or almost al	classes						In all or almost all co	lasses							
(2018 Grade 12)						Issue: Technology	<i>u</i> Use							
20. In this school year, h Kindle Fire) during ye Never In some classes In about half of th In more than half In all or almost al	our classes at s the classes of the classes I classes	chool?				VHE71276	16. In this school year, how Kindle Fire) during your ⑤ Never ⑤ In some classes ⑥ In about half of the c ⑥ In more than half of ⑥ In all or almost all c Issue: Technology	classes at sci classes the classes lasses	nool?				VH271276	NC R	N/A After
21 How much does each							choice on each row.								examining
21. How much does each one answer choice or		A little bit	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
one answer choice or	Not at all like me	like me	$\overline{}$												two versions
a. I finish whatever I begin.			0	Φ	Φ	VH271338	a. I finish whatever I begin.	(4)	•	0	0	(D)	VH733142		two versions
a. I finish whatever I begin. b. I try very hard even after making mistakes.	like me	like me		0	Φ	VH271338 VH271339	begin. b. I try very hard even	0	® ®	0	0	© •	VH733142 VH733143		of this item
a. I finish whatever I begin. b. I try very hard even	like me	like me	0				begin.								

⁺ 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
22. How much does each choice on each row.	of the follow	ving statemen	ts describe ye	ou? 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.	00	•	0	0	0	VH733142									
b. I try very hard even after making mistakes.	®	⊕	0	Φ	(0)	VH735143									
c. I keep working hard even when I feel like quitting.	0	Ф	0	Φ	0	VH7.69148									
d. I keep trying to improve myself, even when it takes a long time to get there.	0	Ф	0	Θ	60	VHZ:tras									
2018 Grade 12)						VIETINO	- 100 N to 100 N to 100 N to 100 N				oktoria o ovo		VH271367		21/2
In this school year, ho choice on each row.	w often have y	ou done each	of the followin	ng? Select one	answer		In this school year, how choice on each row.	w often have y	ou done each	of the followir	ig? Select one	answer		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			
I started working on assignments right away rather than waiting until the last minute.	0	O D	0	9	Ф	vátt/szá	a. I started working on assignments right away rather than waiting until the last	0	®	0	•	©	VH271370		
 b. I paid attention and resisted distractions. 	Ø	Ф	0	0	Ф	VH371372	minute. b. I paid attention and	0	•	0			VH271372		
e. I stayed on task without reminders from my teacher.	Ø	OD!	0	Ф	Ф	vierare	resisted distractions. c. I stayed on task without reminders	9	B	0	0	© ©	VH271372		
d. I paid attention in class even when I was not interested.	0	0	0	0	Φ	VHQ71875	from my teacher. d. I paid attention in			0		13	VH271375		
2018 Grade 12)							class even when I was not interested.	Φ	•	0	0	0			
4. How much does each one answer choice on o	of the following ach row.	ng statements	describe a per	rson like you?	Select	VH271749	18. How much does each choice on each row.	of the follow	ring 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
I like complex problems more than easy problems.	®	③	0	•	Θ	VH271750	a. I like complex problems more than easy problems.	0	®	0	0	0	VH733150		two version
I like activities that challenge my thinking abilities. I enjoy situations	0	(3)	0	•	Θ	VH271752	b. I like activities that challenge my thinking abilities.	0	(18)	0	0	0	VH733151		that were
where I will have to think about something.	®	18	0	0	(VH271753	c. I enjoy situations where I will have to think about	0	®	0	0	Φ	VH733155		administe in the pilo
. I enjoy thinking about	0	(5)	0	0	•	VH271756	something. d. I enjoy thinking about								one versio

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

Previous	item											D/A/ R/NC+	Rationale
How much does each choice on each row.	of the follow	ving statemen	its describe yo	u? Select one	answer	VII733149							
	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 easy problems.	.00	0	0	0	Ф	Y11733150							
 I like activities that challenge my thinking abilities. 	Φ	(3)	0	0	Ф	VH733(5)							
. I enjoy situations where I will have to think about something.	Φ	0	0	Ф	Ф	VHZanas							
I enjoy thinking about new solutions to problems.	0	0	0	0	Φ	V11733154							
2018 Grade 12)					A								
26. In this school year, how school? Select one ans	w often have wer choice or	you felt any of n each row.	the following	ways about yo	ur	VH271934	ear, how often have you fel ne answer choice on each i	lt any of the following row.	ways about y	our	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		hardly ever half	s than of the ime About half of the time	More than half of the time	All or almost all o	of		
 I felt awkward and out of place at school. 	0	•	0	Φ	0	VH271942	d out	® ©	(D)	•	VH271942		
o. I felt happy at school.	0	•	0	0	0	VH271944		® ©	0	0	VH271944		
c. I felt that I learned something that I can use in my daily life.	®	®	0	Φ	©	VH336903	d	0 0	0	Φ	VH336903		
2018 Grade 12)	ar, which of th	ne following ha	ive you done? S	select one answ	ver on	VH740697	Climate ool year, which of the follow	owing have you done? S	elect one answ	er on	VH740697	NC	N/A
each row.					******								14/71
T-l Al- CAT ACT	Callana Forto		Yes	N	Vo			Yes	N	lo			
a. Taken the SAT or ACT Exams			®		Ð	VH740702	r ACT College Entrance	0		Ð	VH740702		
 Submitted the Free App Student Aid (FAFSA) 	olication for F	ederal	•		B	VH740703	ee Application for Federal	0	(Ð	VH740703		
c. Applied to a 2-year colle			0	_	D	VH740704	ar college	®		D	VH740704		1
d. Been accepted to a 2-year		11	®	_	D	VH740705	a 2-year college	0		B	VH740705		1
e. Applied to a 4-year colle	0		0	_	D	VH740706	ar college	®		D	VH740706		
 f. Been accepted to a 4-ye. g. Applied to a certificate 		ogram	®	-	B	VH740708	a 4-year college	0		D	VH740708		1
at a school that provide training (such as electri mechanic, computer pro	s occupationa ician, beautici ogrammer, et	an, e.)	®		D	VH740709	ificate or diploma program provides occupational electrician, beautician, ater programmer, etc.)	⊗		D	VH740709		
 Been accepted to a tech program 	nical training		®		D	VH740710	a technical training	0		D	VH740710		
i. Talked with a military	recruiter		®		D	VH740711					Y		1
j. Enlisted in the military			0		D	VH740712	litary recruiter	•		Ð	VH740711		
j. Limsted in the immuny	- 1		(A)		B	VH740713	ilitary	∅		D	VH740712	1	
k. Applied for a full-time j						VH740714	-time job	®		D	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)	 Which of the following best describes your high school program? General Academic or college preparatory Vocational or technical 	NC	N/A				
29. Write the ZIP code of your home address in the box. [2018 Grade 12]	Issue: Post High School Preparation N/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? ① Yes ① No	21. Are you taking an art course this school year (for example, drawing, painting, or studio art)? ② Yes ① No	A A	This item was adapted from the arts questionnaire to assess student participation in arts				
(2016 Grade 8)	Issue: Educational Experiences		coursework.				

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

Appendix K-1n: Operational Grade 12 Core

VL	260	121	2

- Extremely 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

VH240387

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

- No, I am not Hispanic or Latino.
- (B) Yes, I am Mexican, Mexican American, or Chicano.
- © Yes, I am Puerto Rican or Puerto Rican American.
- Tes, I am Cuban or Cuban American.
- © Yes, I am from some other Hispanic or Latino background.

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

- White
- ® Black or African American
- Asian
- © Native Hawaiian or other Pacific Islander

- **5.** 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 100)

6. 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)	®	VH271105
b. Your own bedroom	(A)	®	VH336762
c. A desktop or laptop computer (including Chromebooks) that you can use	(9)	®	VH591976
d. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	(4)	®	VH271110
e. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	®	®	VH271112

V	Н	3	54	15	9	

- 7. 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

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

VI	H24	10	189

9.	How	often o	do you	talk	about	things	you	have	studied	in	school	with	some	one in
	your f	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?

- 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.

VH240193

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.

17	U2	22	67	7

12. Does your mother work?

- A Yes
- ® No
- © I don't know.

VH336779

13. Does your father work?

- A Yes
- ® 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	(A)	®	VH271146
c. Foster mother or other female legal guardian	(A)	®	VH271147
d. Father	(A)	®	VH271148
e. Stepfather	(A)	®	VH271149
f. Foster father or other male legal guardian	(A)	®	VH271150

VH591969

- **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
 - In some classes
 - O In about half of the classes
 - In more than half of the classes
 - © In all or almost all classes

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	®	0	0	Œ	VH733142
b.	I try very hard even after making mistakes.	(A)	®	0	0	Œ	VH733143
c.	I keep working hard even when I feel like quitting.	(A)	®	0	0	©.	VH733145
d.	I keep trying to improve myself, even when it takes a long time to get there.	(A)	®	0	0	Œ	VH733144

VH733149

18. 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 like complex problems more than easy problems.	®	®	0	0	Œ	VH733150
b. I like activities that challenge my thinking abilities.	®	®	0	0	Œ	VH733151
c. I enjoy situations where I will have to think about something.	®	®	0	0	Œ	VH733155
d. I enjoy thinking about new solutions to problems.	(A)	®	0	0	Œ	VH733154

19. 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.	(®	0	•	©.	VH271370
b.	I paid attention and resisted distractions.	(A)	B	0	0	Œ	VH271372
c.	I stayed on task without reminders from my teacher.	(A)	®	0	0	Œ	VH271374
d.	I paid attention in class even when I was not interested.	®	®	O	0	©.	VH271375

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.

VH271934

	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)	®	0	0	©	VH271942
b. I felt happy at school.	A	®	0	0	(E)	VH271944
c. I felt that I learned something that I can use in my daily life.	(A)	®	0	0	Œ	VH336903

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

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

	Yes	No	
a. Taken the SAT or ACT College Entrance Exams	0	®	VH740702
b. Submitted the Free Application for Federal Student Aid (FAFSA)	(A)	®	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	®	®	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

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

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

2019 Ope	rational Grade 4 Reading Student			
Previous item	2019 item		D/A/ R/NC+	Rationale
I. How often does your teacher ask you to read a book you have chosen yourself! Description Never About once or twice a year About once or twice a month Description About once or twice a week Description Year of Year	N/A		D	This item was dropped to keep student burden low and create opportunity for future development.
2. 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 (2017 Grade 4)	17. How often does your teacher ask you to discuss new or difficult vocabulary? ① Never ① About once or twice a year ① About once or twice a month ① About once or twice a week ① Every day or almost every day	VENTAGE	NC	N/A
3. 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 (2017 Grade 4)	Issue: Organization of Instruction 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 Issue: Organization of Instruction	VH3282	NC	N/A
4. For school this year, how often do you have a class discussion about something that the class has read? © Never D About once or twice a year C About once or twice a month D About once or twice a week D Every day or almost every day (2017 Grade 4)	19. For school this year, how often do you have a class discussion about something that the class has read? ① Never ① About once or twice a year ② About once or twice a month ② About once or twice a week ① Every day or almost every day Issue: Organization of Instruction	VIEWSTI	NC	N/A

2019 Ope	rational Grade 4 Reading Student			
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? Never Once Two or three times Four or five times More than five 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? Never Once Two or three times Four or five times More than five times 	VIES8774	NC	N/A
(2017 Grade 4) Vicese72 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	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? Dess than 30 minutes About 30 minutes About 1 hour About 2 hours About 3 hours About 3 hours One Armonia Minutes About 3 hours One Armonia Minutes About 3 hours One Armonia Minutes One Armoni	VES98636	R	The word "homework" was removed.
(2017 Grade 4) 7. 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 (2017 Grade 4)	Issue: Resources for Learning and Instruction 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 Issue: Resources for Learning and Instruction	Y3866301	R	The phrase "classroom library" was added.

Previous item							2019 item							D/A/ R/NC+	Rationale
8. Do you think you wou answer choice on each		lo each of the	following whe	en reading? Se	lect one	VHIITHON	23. Do you think you wou answer choice on each		do each of the	following who	en reading? Se	lect one	VH017050	NC	N/A
1	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			1 definitely	I probably	Maybe	I probably	I definitely			
a. Figure out the meaning of a word you don't know by using other words in the text	3	•	9	0	Φ	VI1260848	a. Figure out the meaning of a word you don't know by using other words in the text	0	3	0	Φ	Φ	V#1260848		
b. Explain the meaning of something you have read	@	0	0	0	0	VHZ80849	b. Explain the meaning of something you have read	0	0	0	0	Φ	VH260849		
c. Figure out the main idea of a text	00	Ф	0	0	Φ	VH260851	c. Figure out the main idea of a text	•	•	0	0	0	VH260631		
d. Find text in a reading passage to help you answer a question on a test	Φ	0	Θ	@	Φ	V112600/19	d. Find text in a reading passage to help you answer a question on a test	•	00	0	0	0	VPI260839		
e. Recognize when you don't understand something you are	•	•	0	0	Φ	V14260861	e. Recognize when you don't understand something you are	Φ	Φ	0	6	0	VPIZMIRAL		
reading															
Recognize the difference between fact and opinion in a text	۵	Φ	0	0	Ф	Vitzauna	f. Recognize the difference between fact and opinion in a text	ctors	(D)	0	0	Ф	VHIMONU		
Recognize the difference between fact and opinion in a	of the follow each row,	ing statements	s describe a po	rson like you	? Select	V1050926	f. Recognize the difference between fact and opinion in a text	ctors of the follow	ving statemen	ts describe yo	ou? Select one	answer	VH280663	R	The phrase person like"
Recognize the difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on	of the follow			1 10 22 11			f. Recognize the difference between fact and opinion in a text Issue: Student Fact 24. How much does each choice on each row.	ctors				answer		R	person like" was remove
f. Recognize the difference between fact and opinion in a text 2017 Grade 4)	of the follow each row,	ing statements	s describe a po	erson like you	? Select		i. Recognize the difference between fact and opinion in a text Issue: Student Fact 24. How much does each choice on each row. a. I want other students to think I am good at	of the follow	ving statemen	ts describe yo	ou? Select one	answer Exactly lik		R	person like" was remove and two sub
Recognize the difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on a law to ther students to think I am good at reading.	of the follow each row, Not at all like me	ing statements A little bit like me	s describe a po Somewhat like me	erson like you Quite a bit like me	F Select Exactly like		f. Recognize the difference between fact and opinion in a text Issue: Student Face 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	of the follow Not at all like me	ving statemen A little bit like me	somewhat like me	Quite a bit like me	answer Exactly like	e	R	person like" was remove
f. Recognize the difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on answer choice on think I am good at reading. b. I want to show others that my English/language arts schoolwork is easy for	of the followiesch row, Not at all like me	A little bit like me	s describe a pe Somewhat like me	Quite a bit like me	F Select Exactly like me	V1526092+	i. Recognize the difference between fact and opinion in a text Issue: Student Fact 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	ving statemen A little bit like me	somewhat like me	Quite a bit like me	Exactly like me	e VHs44065	R	person like" was remove and two sub items were
Recognize the difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on answer choice on 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 arrs class. d. I want to learn as much as possible in my English/language arts class.	of the follows each row. Not at all like me	A little bit like me	s describe a po Somewhat like me	Quite a bit like me	Exactly like me	V1124092# V11240929	i. Recognize the difference between fact and opinion in a text Issue: Student Face 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	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH844065	R	person like" was remove and two sub items were
f. Recognize the difference between fact and opinion in a text 2017 Grade 4) 9. How much does each one answer choice on the control of the	of the followieach row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	V1124092# V11240929	i. Recognize the difference between fact and opinion in a text Issue: Student Fact 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	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	P V28644065 V33644066 V33644068	R	person like" was remove and two sub 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	VHSHACKI		
								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	0	0	Ф	0	V18534096		
							b. I want to become a better reader this year.	0	(B)	0	0	0	VH844097		
							 c. I want to understand as much as I can in my English/language arts class. 	0	®	0	0	Φ	V14844093		
							d. I want to master a lot of new English/ language arts skills in my class.	•	®	0	Φ	0	VIISHIDD		
10. How much does each one answer choice on	of the followi	ng statements	s describe a pe	erson like you	? Select	VIESSIUS	Issue: Student Fac 26. How much does each choice on each row.	272.7	ving statemen	ts describe yo	u? Select one	answer	Villatation	R	
10. How much does each one answer choice on	each row.	A little bit	Somewhat	Quite a bit	Exactly like	VIESOIDE	26. How much does each	of the follow	A little bit	Somewhat	Quite a bit	Exactly like	VIBSIALES	R	The phrase " person like" was remove
one answer choice on a. Reading is one of my	each row.					VIIS80132 VII260271	26. How much does each choice on each row. a. Reading is one of my	of the follow					V1844168	R	person like"
one answer choice on	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. 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"
a. Reading is one of my favorite activities. b. I like talking about books with other	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271	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	VH543169	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	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VH260272	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	VH54416W VH5644170	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	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH2x0271 VH2x0272 VH2x0275	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	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VP154416W VP5544170 VP5544172	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 important. d. Lenjoy going to a bookstore or a library. 2017 Grade 4) 1. Besides doing homewo Less than 30 minum	Cach row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH2x0271 VH2x0272 VH2x0275	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 Fac. 27. Besides doing homewor	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VP154416W VP5544170 VP5544172	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 important. d. Lenjoy going to a bookstore or a library. 2017 Grade 4) 1. Besides doing homewo	Cach row. Nor at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VH260272 VH260275 VH260277	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 Factor of the series of	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VP154416W VP5544170 VP5544172		person like" was remove
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. Lenjoy going to a bookstore or a library. 2017 Grade 4) 1. Besides doing homewo Less than 30 minum	Cach row. Nor at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VH260272 VH260275 VH260277	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 Fac. 27. Besides doing homewor	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VP154416W VP5544170 VP5544172		person like" was remove
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. 2017 Grade 4) 1. Besides doing homewo Less than 30 minutes About 1 hour a day	Cach row. Nor at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VH260272 VH260275 VH260277	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 Factor of the state of t	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VP154416W VP5544170 VP5544172		person like" was remove

revious item							2019 item							D/A/ R/NC+	Rationale
2. How often do you recei English/language arts o				riend with		ViB332820	28. How often do you receiv English/language arts ou				friend with		VIE32820	NC	N/A
							Never								
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						About once or twice	a week							
Every day or almost	every day						© Every day or almost	every day							
2017 Grade 4)							Issue: Resources f	or Lear	ning and	Instructi	on				
C 00 1 1 2 2 7 1 1 1		About once or twice a	About once or twice a	About once or twice a	Every day or almost	Villandis	Issue: Resources f 29. How often do you typic one answer choice on e	cally do eacl	About once or twice a	About once or twice a	About once or twice a	Every day or almost	VIICESSON.	NC	N/A
	each row.	About once	About once	About once	Every day or	VICIANOS.	29. How often do you typic one answer choice on e.	cally do eacl ach row.	About once	About once	side of school	Every day or	VIIZEROGE.	NC	N/A
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	VHIZERNIE. VHIZERNOT	29. How often do you typic	cally do eacl ach row.	About once or twice a	About once or twice a	About once or twice a	Every day or almost	VII269004	NC	N/A
How often do you typi one answer choice on a answer choice on a Talk about books (print or online) with	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 b. Go to my local library to borrow books (print)	cally do each 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		NC	N/A
a. Talk about books (print or online) b. Go to my local library to borrow books (print or online) c. Read blogs	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	VHDN007	a. Talk about books (print or online) with other people b. Go to my local library	cally do each 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	V10260907	NC	N/A
a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print or online)	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	VH280911	a. Talk about books (print or online) with other people b. Go to my local library to borrow books (print or online)	cally do 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	VIII260907	NC	N/A

Appendix K-1p: Operational Grade 4 Reading

			VH332853
17	ΙΙο	ry often does were to about all were to discuss many on difficult weekly laws?	11002000
1/.	ПО	w often does your teacher ask you to discuss new or difficult vocabulary?	
	lack	Never	
	$^{\mathbb{B}}$	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	Œ	Every day or almost every day	

- **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.		school this year, how often do you have a class discussion about something	VH332871
	tha	t the class has read?	
	lack	Never	
	$^{\odot}$	About once or twice a year	
	0	About once or twice a month	
	(About once or twice a week	
	(Ē)	Every day or almost every day	
			VH588774
20.	ser	e school this year, how often have you been asked to write long answers (several attences or paragraphs) to questions on tests or assignments that involved ding?	
	(A)	Never	
	₿	Once	
	0	Two or three times	
	(Four or five times	
	(E)	More than five times	
			VH598636
21.		a typical school day, how much time do you use a computer or other digital vice to do your English/language arts schoolwork?	
	(A)	Less than 30 minutes	
	$^{ ext{ B}}$	About 30 minutes	
	0	About 1 hour	
	(About 2 hours	
	(E)	About 3 hours	
	(Ē)	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	(9)	®	0	0	©	VH260848
b.	Explain the meaning of something you have read	(4)	®	0	0	Œ	VH260849
c.	Figure out the main idea of a text	(A)	®	0	0	Œ	VH260851
d.	Find text in a reading passage to help you answer a question on a test	(9)	®	0	0	©.	VH260859
e.	Recognize when you don't understand something you are reading	(4)	®	0	0	(VH260861
f.	Recognize the difference between fact and opinion in a text	0	®	0	0	Œ	VH260863

24. 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	I want other students to think I am good at reading.	(A)	®	0	0	Œ	VH844065
1 1 3 s	I want to show others that my English/ language arts schoolwork is easy for me.	(®	0	•	©.	VH844066
(I want to look smart in comparison to the other students in my English/language arts class.	(4)	®	0	0	©	VH844068
1 1	I want to get better English/language arts grades than most other students in my class.	(®	0	0	©.	VH844070

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.	®	®	0	0	©.	VH844096
b.	I want to become a better reader this year.	A	B	0	0	Œ	VH844097
c.	I want to understand as much as I can in my English/language arts class.	®	®	0	0	©.	VH844098
d.	I want to master a lot of new English/ language arts skills in my class.	®	®	©	•	©	VH844100

26. 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	®	0	0	Œ	VH844169
b. I like talking about books with other people.	(A)	®	0	0	©.	VH844170
c. I think reading is important.	A	®	0	0	Œ	VH844172
d. I enjoy going to a bookstore or a library	. A	₿	0	0	Œ	VH844171

VH598686

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

- **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
 - 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	(A)	®	0	0	©.	VH260907
b.	Go to my local library to borrow books (print or online)	(A)	®	0	0	Œ	VH260911
c.	Read blogs	A	®	©	0	(Ē)	VH260913
d.	Use social media (for example, Facebook, Twitter, Instagram)	Ø	®	0	0	Œ	VH333261
e.	Help friends with reading homework	A	®	0	0	Œ	VH260917

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

2019	Pilot Grade 4 Reading Student			
Previous item	2019 item		D/A/ R/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? 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	VHD2853	NC	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? Description 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	VHISZNI	NC	N/A
(2017 Grade 4)	Issue: Organization of Instruction			
24. 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 (2017 Grade 4)	 3. 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 	VHSDSTI	NC	N/A

2019	Pilot Grade 4 Reading Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
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 Four or five times More than five times (2017 Grade 4)	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 Four or five times More than five times Issue: Organization of Instruction	NC	N/A
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)		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? Never About once or twice a year About once or twice a month Every day or almost every day (2017 Grade 4)		R R	The phrase "classroom library" was added and "classroom library, school library, media center" was bolded.

revious item							2019 item							D/A/ R/NC+	Rationale
 Do you think you wou answer choice on each 		do each of the	following who	en reading? Se	lect one	VII337080	 Do you think you wou answer choice on each 		do each of the	following who	en reading? Se	lect one	VREETON	R	A sub-item was added.
	I definitely can't	I probably can't	Maybe	I probably	I definitely can			I definitely	I probably can't	Maybe	I probably	I definitely			was auueu.
Figure out the meaning of a word you don't know by using other words in the text	⊕	0	0	Ф	θ	¥94260848	Figure out the meaning of a word you don't know by using other words in the text	0	(5)	0	0	0	VEQ:60848		
Explain the meaning of something you have read	•	•	0	0	0	V11260549	b. Explain the meaning of something you have	@	®	Ø	0	Φ	VH260849		
Figure out the main idea of a text	®	Ф	0	0	Φ	VH280851	c. Figure out the main idea of a text	0	Φ.	0	0	Θ	VH280851		
Find text in a reading passage to help you answer a question on a test	0	Φ	0	Φ	Θ	VH260659	d. Find text in a reading passage to help you answer a question on a	Φ	®	0	0	Φ	V 1260 159		
Recognize when you don't understand something you are reading	3	•	9	0	Ф	VHZeGRAT	e. Recognize when you don't understand something you are	•	0	0	0	Φ	VH260861		
							reading								
Recognize the difference between fact and opinion in a text	Φ	Φ	0	Ф	Ф	VH260863	f. Recognize the difference between fact and opinion in a	0	®	0	0	Ф	VH260663		
Recognize the difference between fact and opinion in a	Φ	•	0	Φ	Đ	VH260863	difference between	Φ	© ©	0	0	0	VH260663 VH51(215		
Recognize the difference between fact and opinion in a rext	of the follow					VH260863	difference between fact and opinion in a text g. Use evidence from a text to support your	• actors	•	0	(6)	Φ		R	
Recognize the difference between fact and opinion in a rext	of the follow				3 Select		difference between 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	•	0	(6)	Φ	VEH (1215	R	The phrase " person like" was remove
Recognize the difference between fact and opinion in a text O17 Grade 4) 9. How much does each	of the follow each row.	ing statements	s describe a po	erson like you Quite a bit	3 Select		difference between 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 of the follow Not at all		© ts describe yo	u? Select one Quite a bit	answer Exactly like	VEH (1215	R	person like" was remove and two sub
Recognize the difference between fact and opinion in a text O17 Grade 4) 9. How much does each one answer choice on I want other students to think I am good at reading.	of the follow each row. Not at all like me	ing statements A little bit like me	s describe a po Somewhat like me	Quite a bit like me	3 Select Exactly like me	VIDMO	difference between 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	Octors of the follow Not at all like me	ing statemen	ts describe yo	u? Select one Quite a bit like me	answer Exactly like me	VER(1215	R	person like"
Recognize the difference between fact and opinion in a text O17 Grade 4) 9. 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 follow each row. Not at all like me	A little bit like me	s describe a po Somewhat like me	Quite a bit like me	? Select Exactly like me	V108906 V11260928	difference between 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 arrs schoolwork is easy for me. c. I want to look smart in comparison to the other students in my English/language arrs	Octors of the follow Not at all like me	ing statement	© s describe yo Somewhat like me	u? Select one Quite a bit like me	answer Exactly like me	VEHILI235	R	person like" was remove and two sub items were
Recognize the difference between fact and opinion in a text O17 Grade 4) P. 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 me. 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	A little bit like me	s describe a possible somewhat like me	Quite a bit like me	Select Exactly like me	VILDANDS VILDANDS VILDANDS	difference between 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	© Actors of the follow Not at all like me	Ting statements A little bit like me	© state describe your somewhat like me ©	u'i Select one Quite a bit like me	answer Exactly like me	VERVL(215) VERVL(215) VERVL(215) VERVL(215) VERVL(215)	R	person like" was remove and two sub items were
Recognize the difference between fact and opinion in a text O17 Grade 4) 9. How much does each one answer choice on the control of the cont	of the follow each row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Select Exactly like the	VILISMON VILISMON VILISMON VILISMON VILISMON VILISMON VILISMON VILISMON VILISMON	difference between 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	Octors of the follow Not at all like me	A little bit like me	© Somewhat like me ©	Quite a bit like me	answer Exactly like me	VERUL235 VERUL235 VERUL235 VERUL235 VERUL235 VERUL235	R	person like" was remove and two sub items were

Previous item							2019 item							D/A/ R/NC+	Rationale
							14. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	ou? Select one	answer	VIR53763		
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			
							I want to learn as much as possible in my English/language arts class.	0	®	0	0	Φ	VJ1853767		
							b. I want to become a better reader this year.	®	Ф	0	0	Ф	VH033177		
							c. I want to understand as much as I can in my English/language arts class.	®	o	0	0	Φ	VH953774		
							d. I want to master a lot of new English/ language arts skills in my class.	0	•	0	0	Φ	VH854770		
30. How much does each	of the followi	ng statement	s describe a pe	erson like you	i? Select	VIJ589132	Issue: Student Fa	7 V V 7 0	ing statemen	ts describe yo	u? Select one	answer	VID-1168	R	The phrase
one answer choice on	each row.				I a cons		choice on each row.								person like"
one answer choice on	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like	e	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			person like" was remove
one answer choice on a. Reading is one of my favorite activities.	each row.	A little bit	Somewhat like me			V14260271	a. Reading is one of my favorite activities.	Not at all	A little bit	Somewhat	Quite a bit		VH844169		person like" was remove and a sub-
one answer choice on Reading is one of my favorite activities. I like talking about books with other people.	Not at all like me	A little bit like me	like me	like me	me	-	choice on each tow. a. Reading is one of my	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	me			person like" was remove and a sub- item was
one answer choice on a. Reading is one of my havorite activities. b. I like talking about books with other people, c. I think reading is important.	Not at all like me	A little bit like me	like me	like me	Ф	VH260271	a. Reading is one of my favorite activities. b. I like talking about books with other	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Ф	V76841169		person like" was remove and a sub-
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	Not at all like me	A little bit like me	like me	Tike me	me	VH260271 VH260272	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	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Ф	VH844169 VH844170		person like" was remove and a sub- item was
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	Not at all like me	A little bit like me	like me	©	Ф	VH260271 VH260272	a. Reading is one of my favorite activities. b. I like talking about books with other people. c. I think reading is important.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	те Ф	V76844170 V16844170		person like" was remove and a sub- item was
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.	Not at all like me	A little bit like me	like me	©	Ф	VH260271 VH260272	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. e. I enjoy finding things	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	те Ф Ф	VH84169 V184170 V184172 V184172		person like' was remove and a sub- item was
one answer choice on a. Reading is one of my favorite activities. b. I like talking about books with other people. I think reading is important. I. I enjoy going to a bookstore or a library.	each row. Not at all like me	A little bit like me	like me	like me	те Ф Ф	VH260271 VH260272	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. e. I enjoy finding things to read online.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	те Ф Ф Ф	V76844170 V76844172 V76844172	NC	person like' was remove and a sub- item was
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. 2017 Grade 4) 1. Besides doing homework 2 Less than 30 minut About 30 minutes	weach row. Not at all like me	A little bit like me	like me	like me	те Ф Ф	V912x0271 V912x0272 V912x0275 V912x0277	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. e. I enjoy finding things to read online. Issue: Student Fa. 7. Besides doing homework	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	те Ф Ф Ф	V7684109 V1664170 V7684172 V7684171 V7684171		person like" was remove and a sub- item was added.
one answer choice on a. Reading is one of my favorite activities. b. I like talking about books with other people. I think reading is important. I. I enjoy going to a bookstore or a library. 2017 Grade 4) 1. Besides doing homework Less than 30 minutes About 1 hour a day	weach row. Not at all like me	A little bit like me	like me	like me	те Ф Ф	V912x0271 V912x0272 V912x0275 V912x0277	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. e. I enjoy finding things to read online. Issue: Student Far. 7. Besides doing homeworl	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	те Ф Ф Ф	V7684109 V1664170 V7684172 V7684171 V7684171		person like" was remove and a sub- item was added.
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. 2017 Grade 4) 1. Besides doing homework 2 Less than 30 minut About 30 minutes	weach row. Not at all like me	A little bit like me	like me	like me	те Ф Ф	V912x0271 V912x0272 V912x0275 V912x0277	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. e. I enjoy finding things to read online. Issue: Student Fa. 7. Besides doing homework Less than 30 minutes a About 30 minutes a About 1 hour a day About 2 hours a day	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	те Ф Ф Ф	V7684109 V1664170 V7684172 V7684171 V7684171		person like" was remove and a sub- item was added.
a. Reading is one of my tavorite activities. b. Hike 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) 31. Besides doing homework test than 30 minutes About 30 minutes About 1 hour a day About 2 hours a day About 2 hours a day	weach row. Not at all like me	A little bit like me	like me	like me	те Ф Ф	V912x0271 V912x0272 V912x0275 V912x0277	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. e. I enjoy finding things to read online. Issue: Student Far. 7. Besides doing homeworl	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	те Ф Ф Ф	V7684109 V1664170 V7684172 V7684172 V7684171		person like" was remove and a sub- item was added.

Pilot Grade 4 Re	ading	g Stuc	dent					
2019 item							D/A/ R/NC+	Rationale
N/A							D	This item was dropped to reduce student burden and create opportunity for future development.
8. How often do you recei schoolwork outside of	ve the follo	wing types ter school?	of help with Er Select one ansy	nglish/language wer choice on e	arts ach row.	V0811176	А	This item was
	Never	About or	nce About one	ce About onc	e Every day or			added.
a. Help from a teacher	⊗	©	0	0	0	VER11190		
					-			
member or friend d. Help from online					1	100000		
websites or apps)			100					
9. How useful do you find	each of the	following	types of help to	understand yo	ur	VH811276	A	This item was added.
	Not us	seful at	Somewhat useful	Very useful	that type of			added.
a. Help from a teacher	0	30	0	0	0	VH61(287		
b. Help from a tutor	0	D	0	0	0	VERE1391		
c. Help from a family member or friend	0	D	(3)	0	•	VHR11.002		
d. Help from online resource (for example, websites or		D	0	0	0	VHat1304		
	8. How often do you receischoolwork outside of schoolwork outside outsid	8. How often do you receive the folloschoolwork outside of school or af Never a. Help from a teacher	8. How often do you receive the following types schoolwork outside of school or after school? Never	8. How often do you receive the following types of help with Exschoolwork outside of school or after school? Select one answer choices are schoolwork outside of school or after school? Select one answer choices are schoolwork outside of school or after school? Select one answer choice are schoolwork outside of school or after school? Select one answer choice are schoolwork?	8. How often do you receive the following types of help with English/language schoolwork outside of school or after school? Select one answer choice on e as week a. Help from a teacher Never	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	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	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

Previous item							2019 item							D/A/ R/NC+	Rationale
33. How often do you typo one answer choice on	ically do eacl each row.	h of the follow	ing things out	side of school	? Select	VH260006	12. How often do you typic one answer choice on e		of the followin	g activities ou	tside of school	? Select	VH85632	R	In the item
	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	T		stem, "things" was
Talk about books (print or online) with other people	®	Ф	0	Φ	0	VECINIST	a. Read online about topics I am interested in	0	0	0	0	Φ	VIBISIASA		replaced with "activities". In
 Go to my local library to borrow books (print or online) 	0	0	0	Φ	Φ	V18260911	b. Talk about things I read with other people	0	0	0	0	0	VH853657		sub-item "c",
. Read blogs	Φ	0	0	Φ	0	VH260913	c. Borrow or download books from a local	0	•	0	0	0	VH883635		"Read blogs"
d. Use social media (for example, Facebook, Twitter, Instagram)	0	0	0	Φ	Φ	V1033361	d. Use social media (for example, Facebook,	®	®	0	60	Φ.	VH853654		was replaced with "Read
e. Help friends with reading homework	0	•	0	Ф	Φ	VH260917	Twitter, Instagram) e. Help friends with	@	(D)	0	0	Φ	VIDIS3638		online about
															In sub-item "b", "Go to my local library to
															borrow book (print or online)" was
															replaced wit
															download
															books from
															local library'
															and moved
															sub-item "c'

Appendix K-1r: Pilot Grade 4 Reading

			VH332853
1.	Но	w often does your teacher ask you to discuss new or difficult vocabulary?	
	(A)	Never	
	®	About once or twice a year	
	0	About once or twice a month	
	(About once or twice a week	
	(E)	Every day or almost every day	
			VH332862
2.		r school this year, how often do you work in pairs or small groups to talk about mething that you have read?	V11332002
	\bigcirc	Never	
	®	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	(E)	Every day or almost every day	
			VH332871
3.		r school this year, how often do you have a class discussion about something at the class has read?	
	(A)	Never	
	®	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	(E)	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	®	0	0	Œ	VH260848
b.	Explain the meaning of something you have read	(A)	®	0	0	Œ	VH260849
c.	Figure out the main idea of a text	(A)	B	0	0	Œ	VH260851
d.	Find text in a reading passage to help you answer a question on a test	(A)	®	0	0	Œ	VH260859
e.	Recognize when you don't understand something you are reading	(4)	®	0	0	©	VH260861
f.	Recognize the difference between fact and opinion in a text	(4)	®	0	0	Œ	VH260863
g.	Use evidence from a text to support your answer	(A)	®	0	0	Œ	VH811215

- **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
 - Tour or five times
 - More than five times

VI	J 5	nο	62	6

- **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

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

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	A	®	0	0	Œ	VH811190
b. Help from a tutor	(A)	®	0	0	Œ	VH811192
c. Help from a family member or friend	A	®	0	0	Œ	VH811196
d. Help from online resources (for example, websites or apps)	(A)	®	0	0	Œ	VH811200

VH811276

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	®	0	0	VH811287
b. Help from a tutor	A	®	0	0	VH811291
c. Help from a family member or friend	A	®	0	0	VH811302
d. Help from online resources (for example, websites or apps)	(A)	®	0	0	VH811304

10. 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)	®	0	0	Œ	VH844169
b.	I like talking about books with other people.	(8)	®	0	0	Œ	VH844170
c.	I think reading is important.	A	®	0	0	Œ	VH844172
d.	I enjoy going to a bookstore or a library.	(A)	®	0	0	Œ	VH844171
e.	I enjoy finding things to read online.	A	®	0	0	Œ	VH853415

- **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

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	(A)	®	0	0	©.	VH853656
b.	Talk about things I read with other people	A	®	0	0	Œ	VH853657
c.	Borrow or download books from a local library	(A)	®	0	0	Œ	VH853655
d.	Use social media (for example, Facebook, Twitter, Instagram)	(8)	®	0	0	Œ	VH853654
e.	Help friends with reading homework	(A)	®	0	0	Œ	VH853658

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

Not at all A little bit Somewhat Quite a bit **Exactly like** like me like me like me like me me a. I want other students to think I am good at VH853764 **(A)** 0 Œ ദ \odot reading. b. I want to show others that my English/ language arts VH853765 A $^{\odot}$ \odot **(** Œ schoolwork is easy for me. c. I want to look smart in comparison to the other students in my VH853766 \bigcirc ദ \odot **(** Œ English/language arts class. d. I want to get better English/language arts Œ VH853776 A B 0 **(** grades than most other students in my class.

14. 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.	®	®	©	•	©.	VH853767
b.	I want to become a better reader this year.	A	B	0	0	Œ	VH853777
c.	I want to understand as much as I can in my English/language arts class.	®	®	0	0	©.	VH853774
d.	I want to master a lot of new English/ language arts skills in my class.	0	®	0	0	©	VH853770

Appendix K-1s: Spiral Map Grade 4 Reading

Accnum	Grade	Grade 4 OMB PDF Sequence Number	Number of Grade 4 booklets item appears in	Grade 4 booklets item appears in
VH853176	4, 8	11_00	3	1, 2, 3
VH853652	4, 8	12_00	2	1, 2
VH853656	4, 8	 12_01	2	1, 2
VH853657	4, 8		2	1, 2
VH853655	4, 8	12_03	2	1, 2
VH853654	4, 8	12_04	2	1, 2
VH853658	4, 8	12_05	2	1, 2
VH598636	4, 8	06_00	3	1, 2, 3
VH844168	4, 8	10_00	2	1, 2
VH844169	4, 8	10_01	2	1, 2
VH844170	4, 8	10_02	2	1, 2
VH844172	4, 8	10_03	2	1, 2
VH844171	4, 8	10_04	2	1, 2
VH853415	4, 8	10_05	2	1, 2
VH811176	4, 8	08_00	2	1, 2
VH811190	4, 8	08_01	2	1, 2
VH811192	4, 8	08_02	2	1, 2
VH811196	4, 8	08_03	2	1, 2
VH811200	4, 8	08_04	2	1, 2
VH811276	4, 8	09_00	2	1, 2
VH811287	4, 8	09_01	2	1, 2
VH811291	4, 8	09_02	2	1, 2
VH811302	4, 8	09_03	2	1, 2
VH811304	4, 8	09_04	2	1, 2
VH598686	4, 8	07_00	1	3
VH337050	4,8	04_00	1	3
VH260848		04_01		
	4, 8		1	3

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

evious item							2019 item							D/A/ R/NC+	Rationale
. For your English/lang following? Select one			w often do you	do each of th	e	VH23288T	22. For your English/langua following? Select one at	nge arts class i nswer choice	his year, how on each row.	v often do you	do each of th	ie	VHURSE	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	r		
Have a class discussion about something that the whole class has read	Θ	®	8	0	θ	VIELI2888	a. Have a class discussion about something that the whole class has read	Φ	(3)	0	0	Φ	V18332888		
Work in pairs or small groups to talk about something that you have read	8	0	0	0	Ф	VIII:2889	b. Work in pairs or small groups to talk about something that you have read	Φ	00	0	0	Φ	V14332889		
017 Grade 8)							Issue: Organizatio	n of Inst	ruction						
. In your English/langua passage, how often do choice on each row.	nge arts class t es your teache	his year, whe ir ask you to c	n reading a sto lo the followin	ery, article, or ng? Select one	other answer	VH280254	 In your English/languag passage, how often does choice on each row. 	ge arts class th s your teacher	nis year, when ask you to d	n reading a sto lo the followin	ory, article, or ng? Select one	other answer	VIC90254	R	A sub-item was dropped
	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	9	Φ	0	0	Φ	VH260256	Evaluate the main evidence in a persuasive/argument passage	0	0	9	0	9	VH260256		
Analyze the author's organization of information in a passage	0	0	0	0	θ	VIII333142	b. Analyze the author's organization of information in a passage	Φ	•	0	0	Φ	VH353142		
Critique the author's craft or technique	8	0	0	0	Ф	VH333144	passage								
O17 Grade 8) 3. In your English/langu passage, how often de choice on each row.	oes your teach	er ask you to o				VH333074	24. In your English/langu passage, how often de choice on each row.	age arts class	this year, whe				VIGSS074	R	A sub-item was dropped
. Summarize the	Never or hardly ever	Once in a while	Sometimes	Often	almost always			Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
passage	®	(3)	0	0	Ð	VH333075	a. Summarize the passage	0	Φ.	0	Φ	Φ ,	VH333075		
of the passage	0	®	0	0	©	VH333076	b. Interpret the meaning of the passage	8	®	0	Θ	•	VH333076		
. Question the motives or feelings of the characters	•	•	0	Φ	©	VH333079	c. Question the motives or feelings of the characters	0	©	0	0		VH333079		
. Identify the main ideas of the passage	0	(5)	0	Φ	Ф	VH333078	d. Identify the main ideas	0	Φ	©	0	Φ ,	VH333078		
. Identify the themes of the passage	@	® ®	0	0	Ф	VH333094	of the passage e. Identify the themes of the passage	0	Φ.	0	0	0	VH333094		
. Analyze two or more				•	(D)	VH333077	1 0								

2019 O	perational Grade 8 Reading Student			
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?	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?	V16588774	NC	N/A
Never	Never Never			
① Once	© Once			
Two or three times	© Two or three times			
D Four or five times	© Four or five times			
More than 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?	On a typical school day, how much time do you use a computer or other digital device to do your English/language arts schoolwork?	V1898536	NC	N/A
D Less than 30 minutes	D Less than 30 minutes			
About 30 minutes	About 30 minutes			
O About I hour	About I hour			
About 2 hours	About 2 hours			
About 3 hours	About 3 hours			
② 4 or more hours	4 or more hours			
(2017 Grade 8)	Issue: Resources for Learning and Instruction			
	Herbit	VH66001	NC	N/A
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?			,
Never				
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	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			

Previous item							2019 item							D/A/ R/NC+	Rationale
7. Do you think you wou answer choice on each		lo each of the f	ollowing wh	en reading? Se	lect one	VIENBAT	28. Do you think you wou answer choice on each		lo each of the f	ollowing wh	en reading? Se	lect one	VHEMBET	NC	N/A
	I definitely can't	I probably can't	Maybe	I probably can	1 definitely can			I definitely can't	I probably can't	Maybe	I probably can	I definitely			
Figure out the meaning of a word you don't know by using other words in the text	@	Φ	0	0	Ф	V11270848	a. Figure out the meaning of a word you don't know by using other words in the text	0	•	0	•	•	VHD/0848		
 Explain the meaning of something you have read 	0	•	0	6	6	V1423/0649	b. Explain the meaning of something you have read	0	00	0	0	Φ	V#12/0849		
c. Figure out the main idea of a text	•	•	0	0	Φ	V102/0851	c. Figure out the main idea of a text	9	®	0	0	0	V#280851		
d. Find text in a reading passage to help you answer a question on a	GD.	0	0	0	Ф	VH2/2/839	d. Find text in a reading passage to help you	•	00	0	0	Φ	VH200859		
test		1 1 1 1 1				100	answer a question on a	•							
test e. Recognize when you don't understand something you are reading 2017 Grade 8)	© uld be able to d	⊕ lo each of the f	©	© contrading? Se	D Dect one	VIEGORE1	e. Recognize when you don't understand something you are reading	© ctors	Φ	0	0	Φ	VH260861	NC	N/A
e. Recognize when you don't understand something you are reading	ıld be able to e					VIMITMO	e. Recognize when you don't understand something you are reading Issue: Student Fac. 29. Do you think you woul answer choice on each	© Ctors Id be able to drow.	© o each of the fo	0	© En reading? Sel	© lect one		NC	N/A
e. Recognize when you don't understand something you are reading 2017 Grade 8) 8. Do you think you wou answer choice on each	ald be able to do now.	lo each of the f	ollowing wh	en reading? Se	lect one	VIMITMO	e. Recognize when you don't understand something you are reading Issue: Student Face 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 d row.	Φ o each of the fe	© ollowing wh	en reading? Se	© lect one		NC	N/A
test e. Recognize when you don't understand something you are reading 2017 Grade 8) 8. Do you think you wou answer choice on each a. Recognize the difference between fact and opinion in a	ald be able to e row. 1 definitely can't	lo each of the f I probably can't	ollowing wh	en reading? Se	lect one I definitely	VIMITMO	e. Recognize when you don't understand something you are reading Issue: Student Face 29. Do you think you woul 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 d row. I definitely can't	© o each of the fo	© ollowing wh	en reading? Sel	ect one	V78611 500	NC	N/A
test e. Recognize when you don't understand something you are reading 2017 Grade 8) 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. Incrique an author's craft or technique	ald be able to e row. 1 definitely can't	lo each of the f	Maybe	en reading? Se	I definitely can	VHIDORO3	e. Recognize when you don't understand something you are reading Issue: Student Face 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 d row. I definitely can't	© o each of the form of the fo	© ollowing wh	en reading? Sel	© lect one I definitely can	VICEGRA3	NC	N/A
test c. Recognize when you don't understand something you are reading 2017 Grade 8) 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 en row. I definitely can't	I probably can't	Maybe ©	en reading? So I probably can	I definitely can	VHIDORO3	e. Recognize when you don't understand something you are reading Issue: Student Face 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 drow. I definitely can't	o each of the form	© ollowing who Maybe	en reading? Se	Dect one I definitely can	V10401 100 V1040863	NC	N/A

revious item							2019 item							D/A/ R/NC+	Rationale
9. How much does each one answer choice on		ing statement	s describe a po	erson like you	? Select	VH2MH2h	30. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? 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 me			was removed
. I want other students to think I am good at reading.	0	D	0	Θ	Ð	VHIMINGS	a. I want other students to think I am good at reading.	@	(D)	0	0	Ф	VHIMAGES		and two sub- items were
I want to show others that my English/ language arts schoolwork is easy for me.	9	0	0	0	θ	V14260929	b. I want to show others that my English/ language arts schoolwork is easy for me.	0	•	0	0	Ф	VH844066		added.
 I want to look smart in comparison to the other students in my English/language arts class. 	Ø	€	0	0	0	V1050430	c. I want to look smart in comparison to the other students in my English/language arts	0	0	0	0	0	VH844068		
I want to learn as much as possible in my English/language arts class.	۵	Ф	۵	0	Ø	VH280931	class. d. I want to get better English/language arts grades than most other students in my class.	0	0	0	0	9	V38844070		
I want to become a better reader this year.	۵	Φ.	0	0	Ф	VH260934	31. How much does each	of the follow	ving statemen	ts describe yo	u? Select one	answer	VIBHOU		
I want to understand as much as I can in my English/language arts class.	Φ	Φ	0	0	Ф	VH260938	choice on each row.	Not at all	A little bit	Somewhat	Quite a bit	Exactly like			
							a. I want to learn as	like me	like me	like me	like me	me			
							much as possible in my English/language arts class.	0	•	0	9	Φ	Viteleon		
							 b. I want to become a better reader this year. 	@	0	0	0	Φ	VH844097		
							c. I want to understand as much as I can in my English/language arts class.	Ø	⊕	0	0	0	VHISTAGAN		
							d. I want to master a lot of new English/ language arts skills in my class.	(4)	Φ	0	0	0	VH544100		
2017 Grade 8)						V1889152	Issue: Student Fa						VMedian		
0. How much does each one answer choice on	of the follow each row.	ing statement	s describe a pe	rson like you	? Select		 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	u: Select one	answer		R	The phrase " 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
Reading is one of my favorite activities.	Φ	®	©	0	Φ	VH260271	Reading is one of my favorite activities.	0	Ф	0	Φ	Ф	VH844169		
I like talking about books with other people.	•	•	0	0	0	VH260272	b. I like talking about books with other people.	0	(3)	0	0	0	VH844170		
	@	0	0	0	Φ	VH260275	c. I think reading is important. d. I enjoy going to a	0	9	0	0	θ	VII844172		
I think reading is important. I enjoy going to a															

Previous item							2019 item							D/A/ R/NC+	Rationale
11. Besides doing homew	ork hour must	aine Jacon	mand vandina	auteida of cel	nol?	VH598685	22 0 1 1 1 1	. I i	Lance Areas	1 1		h - 12	VH598686	NC	N/A
		i time do you	spend reading	ourside of sci	1001:		33. Besides doing homew		n time do you	spend reading	outside of sc	1001			
Less than 30 minu							Less than 30 min	CC - 20 - 11 - 1							
About 30 minutes							About 30 minute								
About 1 hour a da							About 1 hour a da								
About 2 hours a d							About 2 hours a d								
About 3 hours a d	ay						About 3 hours a d	lay							
4 or more hours a	day						4 or more hours a	ı day							
(2017 Grade 8)							Issue: Student F	actors							
2020						VI03280)	16 - 100 - 100 - 100 -						VH332820	NC	N/A
12. How often do you rec English/language arts				friend with			35. How often do you rec English/language arts				friend with			INC.	IN/A
Never							Never								
About once or tw	ice a year						About once or tw	ice a year							
About once or tw	ice a month						About once or tw	ice a month							
About once or tw	ice a week						About once or tw	rice a week							
Every day or almo							© Every day or almo								
	or or or y saily						Every day or aime	ost every day							
(2017 Grade 8)															
							Issue: Resources	s for Lear	ning and	Instructi	ion				
13. How often do you ty online)? Select one a	pically read ea nswer choice o	ch of the follow on each row.	ving outside o	f school (prin	t or	VH261065	34. How often do you ty online)? Select one a			ving outside o	f school (prin	t or	VII261068	R	Sub-items
	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			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	00	0	0	Φ	Φ	VIII261066	a. Stories or novels	0	(D)	Ф	Ф	©	VH261086		
b. Poems	•	0	0	0	0	V11261067	b. E-mails	9	0	0	0	9	VHIAIGTA		
c. Plays	0	0	0	0	0	V\$32A1068	c. Text messages	9	0	0	0	0	VH261075		
d. Biographies	@	(1)	0	0	0	V11617013	d. Biographies	0	Φ	0	0	Φ.	VH617043		
e. Comic books	0	(3)	0	9	0	VER261070.			,						
f. Magazines	(0)	(0)	0	0	0	VH25/1071									
g. E-mails	(D)	⊕	0	0	Θ	VH261074	ĺ							1	

Previous item							2019 item							D/A/ R/NC+	Rationale
14. How often do you typi one answer choice on c	cally do eac each row.	h of the followi	ing things out	side of school	Select	VKOVONN	36. How often do you typi one answer choice on e	VII260006	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	0	Ф	0	9	θ	SHEMMIT	Talk about books (print or online) with other people	0	0	0	0	Φ	VH250907		
 Go to my local library to borrow books (print or online) 	0	•	0	0	9	VH260911	b. Go to my local library to borrow books (print or online)	Ø	0	0	0	0	VH550911		
c. Read blogs	(3)	(3)	0	0	0	VIDARIA	c. Read blogs	(3)	0	0	0	Ф	VH260VL1		
d. Use social media (for example, Facebook, Twitter, Instagram)	•	•	0	Θ	Φ	VH343261	d. Use social media (for example, Facebook, Twitter, Instagram)	Ø	•	0	0	Ф	VIIII3261		
e. Help friends with reading homework	0	•	0	0	Θ	V1(2609)7	e. Help friends with reading homework	®	(1)	0	0	Ф	VH280917		

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	®	®	0	0	©.	VH332888
b. Work in pairs or small groups to talk about something that you have read	(A)	®	0	0	Œ	VH332889

VH260254

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	(4)	®	0	Φ	©	VH260256
b. Analyze the author's organization of information in a passage	(4)	®	0	0	Œ	VH333142

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	(A)	B	0	0	Œ	VH333075
b.	Interpret the meaning of the passage	A	®	0	0	Œ	VH333076
c.	Question the motives or feelings of the characters	(4)	®	0	0	Œ	VH333079
d.	Identify the main ideas of the passage	A	®	0	0	Œ	VH333078
e.	Identify the themes of the passage	A	®	0	0	Œ	VH333094

- **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
 - Four or five times
 - More than five times

- **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?
 - Less than 30 minutes
 - About 30 minutes
 - O About 1 hour
 - About 2 hours
 - About 3 hours
 - ① 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

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. Figure out the meaning of a word you don't know by using other words in the text	(A)	®	0	•	©.	VH260848
b. Explain the meaning of something you have read	(A)	®	0	0	Œ	VH260849
c. Figure out the main idea of a text	(A)	®	0	0	Œ	VH260851
d. Find text in a reading passage to help you answer a question on a test	®	®	0	0	©.	VH260859
e. Recognize when you don't understand something you are reading	(A)	(8)	0	0	Œ	VH260861

29. 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	0	©.	VH260863
b.	Judge the reliability of sources (for example, how a website might be biased or inaccurate)	(9)	®	0	•	©	VH260857
c.	Critique an author's craft or technique	A	B	0	0	Ē	VH260866
d.	Use evidence from a text to support my answer	(A)	®	0	0	Œ	VH616841
e.	Identify the author's perspective in a persuasive text	(8)	®	0	0	Œ	VH260868

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	
a.	I want other students to think I am good at reading.	®	®	0	0	Œ	VH844065
b.	I want to show others that my English/ language arts schoolwork is easy for me.	(8)	®	0	0	Œ	VH844066
c.	I want to look smart in comparison to the other students in my English/language arts class.	(4)	®	0	0	©	VH844068
d.	I want to get better English/language arts grades than most other students in my class.	®	®	©	0	©	VH844070

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. I want to much as p my Englis arts class.	possible in sh/language	(A)	®	0	0	©.	VH844096
b. I want to better rea	become a der this year.	(A)	B	0	0	Œ	VH844097
	understand as I can in my anguage arts	(4)	®	0	0	©.	VH844098
d. I want to of new En language my class.		(8)	®	0	0	Œ	VH844100

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. Reading is one of my favorite activities.	A	®	0	0	Œ	VH844169
b. I like talking about books with other people.	(A)	®	0	0	Œ	VH844170
c. I think reading is important.	(A)	®	0	0	Œ	VH844172
d. I enjoy going to a bookstore or a library.	(A)	®	0	0	Œ	VH844171

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

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	®	0	0	Œ	VH261066
b. E-mails	A	®	0	0	(E)	VH261074
c. Text messages	A	®	0	0	Œ	VH261075
d. Biographies	(A)	®	0	0	©	VH617043

- **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
 - 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**? 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	(A)	®	0	0	©.	VH260907
b.	Go to my local library to borrow books (print or online)	(A)	®	0	0	Œ	VH260911
c.	Read blogs	A	®	©	0	Œ	VH260913
d.	Use social media (for example, Facebook, Twitter, Instagram)	Ø	®	0	0	Œ	VH333261
e.	Help friends with reading homework	A	®	0	0	Œ	VH260917

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

Previous item							2019 item							D/A/ R/NC+	Rationale
25. For your English/lang following? Select one				do each of th	e	VIIIIZBI	4. For your English/lange following? Select one	uage arts class answer choice	this year, how on each row.	w often do you	do each of th	ie	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			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	Φ	Φ	0	9	Φ	VHU2868	a. Have a class discussion about something that the whole class has read	Φ	0	0	9	Θ	VHTANA		
 Work in pairs or small groups to talk about something that you have read 	•	•	0	0	Ф	VINESZSSO	b. Work in pairs or small groups to talk about something that we have read	•	0	0	0	θ	V#1652035		
2017 Grade 8) 26. In your English/langu passage, how often do choice on each row.						VID6034	Issue: Organizatio 1. In your English/langus passage, how often doe choice on each row.	ige arts class t	his year, whe	n reading a sto lo the followir	ory, arricle, or ng? Select one	other answer	VII290254	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			
Evaluate the main evidence in a persuasive/argument passage	®	®	0	0	Φ	V11200256	Evaluate the main evidence in a persuasive/argument passage	0	•	0	0	Ф	VH260256		
b. Analyze the author's organization of information in a passage	Ø	0	0	0	Θ	VHX8042	b. Analyze the author's organization of information in a passage	0	0	.0	•	Θ	VH331142		
c. Critique the author's craft or technique	®	•	0	6	Φ	VI(233144		.							
In your English/langupassage, how often dechoice on each row.						VH133074	5. In your English/langus passage, how often doe choice on each row.	age arts class t	his year, whe	n reading a sto to the followir	ory, article, or ng? Select one	other answer	VIET3074	R	A sub-item
	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. Summarize the passage	00	00	0	0	Φ	VIEX33075	a. Summarize the passage	•	0	0	0	Ф	VH333675		
b. Interpret the meaning of the passage	®	0	0	0	Φ	V1533a076	b. Interpret the meaning of the passage	Ø	(3)	0	@	Œ.	Vitter/a		
c. Question the motives or feelings of the characters	@	Ф	0	0	Φ	V15333079	c. Question the motives or feelings of the characters	0	0	0	0	Ф	VHERA3079		
d. Identify the main ideas of the passage	0	®	0	0	Φ	VI1533078	d. Identify the main ideas of the passage	Ø	Ф	O	0	Ф	VHLU078		
	0	0	0	0	0	Altirane	e. Identify the themes of the passage	®	0	0	0	Θ	VIESS/094		
Identify the themes of the passage Analyze two or more	1				11		the passage							İ	

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

20:	19 Pilot Grade 8 Reading Student		
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? ◆ Never ◆ Once ◆ Two or three times ◆ Four or five times ◆ More than five times (2017 Grade 8)	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? ① Never ① Once ② Two or three times ① Four or five times ① More than five times Issue: Organization of Instruction	NC	N/A
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 houts (2017 Grade 8)	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 © A or more hours Issue: Resources for Learning and Instruction	R	The word "homework" was removed.
<u></u>	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	R	The phrase "classroom library" was added and "classroom library, school library, media center" was
(2017 Grade 8)	Issue: Resources for Learning and Instruction		bolded.

⁺ 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
31. 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 f	ollowing wh	en reading! Se	lect one	VH260847	NC	N/A
	I definitely can't	I probably can't	Maybe	I probably	I definitely			I definitely	I probably	Maybe	I probably	I definitely			
a. Figure out the meaning of a word you don't know by using other words in the text	0	Ф	0	0	Ф	V1080848	a. Figure out the meaning of a word you don't know by using other words in the text	9	0	0	Θ	θ	VHSKALK		
b. Explain the meaning of something you have read	0	•	0	0	0	V21240849	b. Explain the meaning of something you have read	Ø	Ф	0	Φ	Φ	VH262600		
c. Figure out the main idea of a text	Ø	Ф	0	0	0	VH2x0851	c. Figure out the main idea of a text	0	9	0	0	Θ	VH260851		
d. Find text in a reading passage to help you	Ø	0	0	0	0	V11260859	d. Find text in a reading passage to help you	9	00	0	0	Θ	VH26085V		
answer a question on a test	177	1-1					answer a question on a				1				
Recognize when you don't understand something you are reading	©	Φ	Θ	0	Φ	VH260661	e. Recognize when you don't understand something you are reading		Φ	0	0	Ф.	VH56861		
test e. Recognize when you don't understand something you are	uld be able to o	lo each of the t	ollowing wh	en reading? Se	lect one	VH56061	e. Recognize when you don't understand something you are reading	Ctors ild be able to e row.	lo each of the f	ollowing wh	en reading? Se	lect one	VH611500	R	In sub-item "d", "my
test e. Recognize when you don't understand something you are reading 2017 Grade 8) 32. Do you think you wot answer choice on each	uld be able to s		1122				e. Recognize when you don't understand something you are reading Issue: Student Fa 8. Do you think you wou answer choice on each	ctors			- 22 1			R	"d", "my answer" wa
test c. Recognize when you don't understand something you are reading 2017 Grade 8) 32. Do you think you wou	ald be able to on row.	lo each of the I	ollowing wh	en reading? Se	lect one		e. Recognize when you don't understand something you are reading Issue: Student Fa. 8. Do you think you wou	CTOTS Ild be able to e row.	lo each of the f	ollowing wh	en reading? Se	lect one		R	"d", "my answer" wa
test e. Recognize when you don't understand something you are reading 2017 Grade 8) 32. Do you think you wot answer choice on each	ald be able to on row. I definitely can't	lo each of the t I probably can't	ollowing wh	en reading? Se	lect one I definitely	VH61D00	e. Recognize when you don't understand something you are reading Issue: Student Fa 8. Do you think you won 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 e row. I definitely can't	I probably can't	ollowing wh	en reading? Se	lect one I definitely can	VH611500	R	"d", "my answer" wa replaced wit
test Recognize when you don't understand something you are reading 2017 Grade 8) 32. Do you think you wot 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) or actique an author's craft or technique	ald be able to on how. I definitely can't	lo each of the t	ollowing wh Maybe	en reading? Se	I definitely can	V1126963	e. Recognize when you don't understand something you are reading. Issue: Student Factor and the state of the	Ctors Ild be able to a row. I definitely can't	I probably can't	Maybe	en reading? Se I probably can	I definitely	VH611991	R	"d", "my answer" wa replaced wi "your
test c. Recognize when you don't understand something you are reading 2017 Grade 8) 32. Do you think you wot answer choice on each difference between lact 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 on row. I definitely can't	I probably can't	ollowing wh Maybe ©	en reading? Se I probably can	I definitely can	V161200 - V1026663	e. Recognize when you don't understand 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 inaccurrare)	ctors Id be able to e row. I definitely can't	I probably can't	Maybe ©	en reading? Se I probably can	I definitely can	VH511991 VH25686X VH256857	R	"d", "my answer" wa replaced wi "your

⁺ 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
33. How much does each one answer choice on o	of the follow each row.	ing statements	s describe a p	erson like you	17 Select	VIEWOON	How much does each choice on each row.	of the follow	ring statemen	its describe yo	u? Select one	answer	VHR53747	R	The previo
	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			matrix was
a. I want other students to think I am good at reading.	0	0	0	@	Θ	V11260928	a. I want other students to think I am good at reading.	0	00	0	0	0	VP1853764		into two
b. I want to show others that my English/ language arts schoolwork is easy for me.	Φ	•	0	Φ	Φ	VH260929	b. I want to show others that my English/ language arts schoolwork is easy for me.	•	®	0	•	θ	VHESS/63		matrices of achievement goals item
c. I want to look smart in comparison to the other students in my English/language arts class.	æ	•	0	Φ	Φ	V94260450	c. I want to look smart in comparison to the other students in my English/language arts	⊗	®	0	Φ	0	VEHSS3766		(performa
d. I want to learn as much as possible in my English/language arts class.	®	•	0	Ф	0	V10260931	d. I want to get better English/language arts grades than most other	•	•	0	0	Ф	VH853776		In order to
e. I want to become a better reader this year.	Φ	0	©	0	Φ	V21260934	students in my class.								for both
f. I want to understand as much as I can in my English/language arts class.	۵	0	Ø	@	Φ	VH260938	16. How much does each choice on each row.	of the follow	ring statemen	ts describe yo	u? Select one	answer	VB853%3		performan and maste goals base
(2017.6 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
2017 Grade 8)							a. I want to learn as much as possible in my English/language arts class.	0	•	0	Ф	Φ	V18853767		at least 4 items,

b. I want to become a better reader this year.

c. I want to understand as much as I can in my English/language arts

d. I want to master a lot of new English/

language arts skills in my class.

Issue: Student Factors

class.

149

VH844052

VH844081

were added.

revised from "describe a

person like you" to "describe you".

The stem was

and

0

0

0

1

0

0

0

0

0

0

0

Φ

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

					20	19	Pilot Grade 8 R	eading	Stude	nt					
Previous item							2019 item							D/A/ R/NC+	Rationale
34. How much does each one answer choice on	of the followi	ing statement	s describe a p	erson like you	? Select	VIES89132	How much does each choice on each row.	of the follow	wing statemen	its describe ye	ou? Select one	answer	V\$0544168	R	The phrase "a
							Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			person like" was removed	
Reading is one of my favorite activities.	Ø 0 0 0 0			Θ	VH260171	a. Reading is one of my favorite activities.				VH64009		and a sub-			
 I like talking about books with other people. 	ø	Φ.	0	0	Ф	VI1266272	b. I like talking about books with other people.	®	•	0	0	0	VH844170		item was added.
c. I think reading is important.	0	0 0 0			c. I think reading is important.	®	0	0	0	0	V21844172		added.		
d. I enjoy going to a bookstore or a library.	Ø	Ф	0	0	Φ	V185617†	d. I enjoy going to a bookstore or a library.	⊗	0	0	•	0	VH8+4171		
		•	•				e. I enjoy finding things	Φ	0	0	0	0	VHKAMIN		
(2017 Grade 8)							Issue: Student Fa								
35. Besides doing homewo Less than 30 minutes About 30 minutes About 1 hour a day About 2 hours a da About 3 hours a da 4 or more hours a co	a day a day y y		-peru ceani				Described by Less than 30 minutes a About 30 minutes a Described by About 1 hour a day About 2 hours a day About 3 hours a day 4 or more hours a day	day							
(2017 Grade 8)							Issue: Student Fa	ctors							
36. How often do you rece English/language arts of Never About once or twice About once or twice About once or twice Every day or almost	e a year ce a month ce a week			friend with		Vigreyal	N/A							D	This item was dropped to reduce student burden and create
(2017 Grade 8)															opportunity for future development.

⁺ 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
37. How often do you typi online)? Select one and			wing outside o	of school (prins	or	VIDHOS	3. How often do you typi online)? Select one ans			wing outside o	f school (prin	t or	VH261065	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	(D)	0	©	Ф	VH281068	a. Stories or novels	9		month	Ф	© ©	VH261066		
b. Poems	0	0	0	0	Φ.	VHD61067	b. Biographies	9	0	0	0	0	VH617043		
c. Plays	Ø	0	0	0	Ф	VH2a trave	c. E-mails	9	00	0	0	0	VH261074		
d. Biographies	0	0	0	0	Φ	\$36553H3	d. Text messages	0	0	0	0	0	VH161073		
e. Comic books	0	(0)	0	0	Ф	VH2810/0	tt. Text messages	49	9		4		7000000		
f. Magazines	Ø	0	0	0	Ф	VH261071									
g. E-mails h. Text messages	®	(1)	0	0	Ф	VH261074 VH261075									
2017 Grade 8) 38. How often do you typone answer choice on	ically do eac each row.	h of the follow	ing things out	side of school	? Select	VIEWOON	14. How often do you typic one answer choice on	cally do each	of the followin	g activities ou	tside of school	I? Select	VH853652	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" wa
a. Talk about books (print or online) with other people	0	•	۵	0	Φ	VH260907	a. Read online about topics I am interested in	@	0	Ø	0	Ф	VH850656		replaced w "activities"
 Go to my local library to borrow books (print or online) 	0	0	0	0	0	VH2609(1	b. Talk about things I read with other people	®	0	0	0	Φ	VH853657		sub item "a
c. Read blogs	•	0	0	0	Φ	VH260913	c. Borrow or download books from a local	0	@	0	0	0	VH853655		"Talk abou
d. Use social media (for example, Facebook, Twitter, Instagram)	0	0	0	0	0	VH333261	library d. Use social media (for								books (prin
e. Help friends with reading homework	0	0	0	0	0	VPDMONIT	example, Facebook, Twitter, Instagram)	Φ	0	0	Φ	Ф	VHt853654		with other
resumg nomework							e. Help friends with reading homework	Ø	0	0	Ф	Φ	VHSSJAAK		people" wa
(2017 Grade 8)							Issue: Student Fa	ctors							replaced wi "Talk about things I rea with other people" and was moved sub-item "k In sub-item "c", "Read
															blogs" was replaced w "Read onlin about topic

⁺ 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	Stude	nt					
Previous item	2019 item							D/A/ R/NC+	Rationale
							VIBILITA		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 recei schoolwork outside of	ive the follo school or aft Never	About once or twice a	About once or twice a	About once or twice a	Every day or almost		A	This item was added.
	a. Help from a teacher		year	month	week	every day	VH811100		
	b. Help from a teacher	®	0	0	0	Ф	VH811190		
	c. Help from a family	0	0	0	- 60	0	VERSELING		
	member or friend d. Help from online resources (for example, websites or apps)	©	Φ	0	0	0	VHS11300		

⁺ 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
N/A	11. How useful do you find English/language arts so	each of the fol choolwork? Se	lowing type ect one ans	es of help to wer choice	understand yo on each row.	ur	VHNITTIE	Α	This item was
		Not usefu	l at Som	newhat seful	Very useful	I don't receive that type of help.			added.
	a. Help from a teacher	@		0	0	0	VH81(287		
	b. Help from a tutor	0		(D)	0	0	VIII/1291		
	c. Help from a family member or friend	•		•	0	Φ	VHx11302		
	d. Help from online resource (for example, websites or apps)			•	0	0	VERT11304		
N/A	Issue: Resources f 10. Do you think you would answer choice on each i	d be able to do				elect one	VHN0222	A	This item wa
		I definitely can't	I probably can't	Maybe	I probably	I definitely can			addcu.
	a. Recognize the author's use of figurative language (for example, symbolism, similes, metaphors, or personification)	۵	•	0	0	Φ	VII811229		
	b. Evaluate the author's use of features in a text (for example, figurative language, voice, or transition words)	•	•	0	0	Φ	VHI11227		
	c. Recognize tools the author is using (for example, rhyme, imagery, examples, or repetition)	0	0	0	0	0	VIII.1)231		
	d. Evaluate the strength and quality of evidence used by the author to support his or her position	0	0	0	0	Θ	VH61)233		
	e. Evaluate the author's use of multimedia or non-print rext (e.g., texts including images, infographics, or animations)	3	•	0	0	Φ	¥10019237		

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

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	®	®	0	•	©.	VH260256
b. Analyze the author's organization of information in a passage	(9)	₿	0	0	©	VH333142

VH260847

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	0	©.	VH260848
b.	Explain the meaning of something you have read	(4)	®	0	0	Œ	VH260849
c.	Figure out the main idea of a text	(A)	B	0	0	Œ	VH260851
d.	Find text in a reading passage to help you answer a question on a test	(4)	®	0	0	©.	VH260859
e.	Recognize when you don't understand something you are reading	(8)	®	0	0	©.	VH260861

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	®	0	0	Œ	VH261066
b. Biographies	(A)	®	0	0	(E)	VH617043
c. E-mails	(A)	®	0	0	Œ	VH261074
d. Text messages	(A)	®	0	0	(E)	VH261075

VH332887

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	(A)	(8)	0	0	©.	VH332888
b. Work in pairs or small groups to talk about something that we have read	(A)	®	0	0	Œ	VH652035

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	(A)	B	0	0	Œ	VH333075
b.	Interpret the meaning of the passage	(A)	B	0	0	Œ	VH333076
c.	Question the motives or feelings of the characters	(A)	®	0	0	Œ	VH333079
d.	Identify the main ideas of the passage	A	B	0	0	Œ	VH333078
e.	Identify the themes of the passage	(A)	B	0	0	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 1 hour
 - About 2 hours
 - © About 3 hours
 - © 4 or more hours

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

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

VH611300

		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	0	©.	VH260863
b.	Judge the reliability of sources (for example, how a website might be biased or inaccurate)	®	®	0	•	©	VH260857
c.	Critique an author's craft or technique	(A)	B	0	0	Œ	VH260866
d.	Use evidence from a text to support your answer	(A)	®	0	0	Œ	VH811215
e.	Identify the author's perspective in a persuasive text	®	®	O	0	Œ	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	®	O	0	Œ	VH811190
b. Help from a tutor	A	®	0	0	Œ	VH811192
c. Help from a family member or friend	A	®	0	0	Œ	VH811196
d. Help from online resources (for example, websites or apps)	(A)	®	0	0	Œ	VH811200

10. 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 author's use of figurative language (for example, symbolism, similes, metaphors, or personification)	(9)	©	0	0	Œ	VH811229
b.	Evaluate the author's use of features in a text (for example, figurative language, voice, or transition words)	(9)	®	0	Φ	Œ	VH811227
c.	Recognize tools the author is using (for example, rhyme, imagery, examples, or repetition)	(4)	®	0	0	©	VH811231
d.	Evaluate the strength and quality of evidence used by the author to support his or her position	(4)	®	0	0	©	VH811233 (
e.	Evaluate the author's use of multimedia or non-print text (e.g., texts including images, infographics, or animations)	(4)	®	0	Φ	©	VH811237

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)	®	0	0	VH811287
b. Help from a tutor	(A)	®	0	0	VH811291
c. Help from a family member or friend	A	B	0	0	VH811302
d. Help from online resources (for example, websites or apps)	(9)	®	0	0	VH811304

VH844168

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.	(A)	B	0	0	Œ	VH844169
b.	I like talking about books with other people.	(9)	®	0	0	Œ	VH844170
c.	I think reading is important.	(A)	B	0	0	Œ	VH844172
d.	I enjoy going to a bookstore or a library.	A	B	0	0	Œ	VH844171
e.	I enjoy finding things to read online.	A	B	0	0	Œ	VH853415

- **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

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	(A)	®	0	0	©.	VH853656
b.	Talk about things I read with other people	A	®	0	0	Œ	VH853657
c.	Borrow or download books from a local library	(A)	®	0	0	Œ	VH853655
d.	Use social media (for example, Facebook, Twitter, Instagram)	(8)	®	0	0	Œ	VH853654
e.	Help friends with reading homework	A	®	0	0	Œ	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	
1	nt other students nink I am good at ing.	(9)	®	0	0	©	VH853764
that lang	nt to show others my English/ uage arts oolwork is easy for	(4)	®	0	0	©	VH853765
com	nt to look smart in parison to the r students in my ish/language arts	(9)	®	0	Θ	Œ	VH853766
Engl grade	nt to get better ish/language arts es than most other ents in my class.	0	®	0	0	Œ	VH853776

16. 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 to learn as much as possible in my English/language arts class.	(4)	®	0	0	©.	VH853767
I want to become a better reader this year.	A	B	0	0	Œ	VH853777
I want to understand as much as I can in my English/language arts class.	0	®	0	0	©.	VH853774
I want to master a lot of new English/ language arts skills in my class.	0	®	0	0	Œ	VH853770

- 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
 - © Two or three times
 - Four or five times
 - More than five times

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		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

VH260256	8	01_01	1	3
VH333142	8	01_02	1	3
VH333074	8	05_00	1	3
VH333075	8	05_01	1	3
VH333076	8	05_02	1	3
VH333079	8	05_03	1	3
VH333078	8	05_04	1	3
VH333094	8	05_05	1	3
VH261065	8	03_00	1	3
VH261066	8	03_01	1	3
VH617043	8	03_02	1	3
VH261074	8	03_03	1	3
VH261075	8	03_04	1	3
VH260847	4, 8	02_00	1	3
VH260848	4, 8	02_01	1	3
VH260849	4, 8	02_02	1	3
VH260851	4, 8	02_03	1	3
VH260859	4, 8	02_04	1	3
VH260861	4, 8	02_05	1	3
VH611300	8	08_00	1	3
VH260863	4, 8	08_01	1	3
VH260857	8	08_02	1	3
VH260866	8	08_03	1	3
VH811215	4, 8	08_04	1	3
VH260868	8	08_05	1	3
VH853747	4, 8	15_00	1	3
VH853764	4, 8	15_01	1	3
VH853765	4, 8	15_02	1	3
VH853766	4, 8	15_03	1	3
VH853776	4, 8	15_04	1	3
VH853763	4, 8	16_00	1	3
VH853767	4, 8	16_01	1	3
VH853777	4, 8	16_02	1	3
VH853774	4, 8	16_03	1	3

VH853770	4, 8	16_04	1	3
VH588774	4, 8, 12	17_00	1	3
VH811222	8	10_00	2	1, 2
VH811229	8	10_01	2	1, 2
VH811227	8	10_02	2	1, 2
VH811231	8	10_03	2	1, 2
VH811233	8	10_04	2	1, 2
VH811237	8	10_05	2	1, 2

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

Previous item							2019 item							D/A/ R/NC+	Rationale
For your English/languages each of the following?				imes have you	done	VH731527	24. For your English/langueach of the following?				times have yo	u done	VH731427	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	Ф	0	0	Φ	VH711330	Made a presentation to the class about something that you have read	6	69	0	6	0	VH731530		
b. Done a project about something that you have read (for example, written a play, created a website)	®	®	0	0	6	VH751509	b. Done a project about something that you have read (for example, written a play, created a website)	Φ	•	0	9	0	VII731529		
(2018 Grade 12)							Issue: Organization	on of Ins	truction						
2. For your English/languated following? Select one				do each of the		VHSTERST	 For your English/langu following? Select one a 	iage arts class inswer choice	this year, how on each row.	w often do you	do each of th	e	VH482575	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	•	•	0	0	Θ	VHRIDERS	a. Have a class discussion about something that the whole class has read	0	(0)	0	0	Ф	VH332888		
b. Work in pairs or small groups to talk about something that we have read	6 0	0	9	8	Ф	VH642035	b. Work in pairs or small groups to talk about something that we have read	•	0	0	0	Φ	V11662035		
 Discuss different interpretations of what we have read 	•	•	0	0	Φ	VHANDAT	c. Discuss different interpretations of what we have read	•	(1)	0	0	Φ	VHn52097		
(2018 Grade 12)							Issue: Organization	on of Ins	truction						
 In your English/languagessage, how often do choice on each row. 	ge arts class thes your teach	nis year, when er ask you to	reading a stor do the followir	y, article, or o ng? Select one	ther answer	VH260254	26. In your English/langua passage, how often do choice on each row.	ige arts class i	his year, whe	en reading a sto do the followin	ory, article, or ng? Select one	other answer	VH92582	NC	N/A
	Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always	П		Never or hardly ever	Once in a while	Sometimes	Often	Always or almost always			
Evaluate the main evidence in a persuasive/argument passage	0	®	0	0	Φ	VIIDAGES.	Evaluate the main evidence in a persuasive/argument passage	8	00	0	0	Ф	VH260256		
 Analyze the author's organization of information in a passage 	3	•	0	6	Ф	VH:833142	b. Analyze the author's organization of information in a passage	(3)	(3)	0	0	0	VHI330142		
	0	0	0	0	0	VH333144	c. Critique the author's	Φ		0			VYEKKY144	1	

evious item			2019 item							D/A/ R/NC+	Rationale
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.		VM39074	 In your English/langua passage, how often do choice on each row. 						YH802547	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	Φ	VIII333075	a. Summarize the	0	0	0	9	0	VB188071		
interpret the meaning	0	VH233076	b. Interpret the meaning	0	0	0	0	Φ	VH133076		
Of the passage Question the motives or feelings of the	Θ	V)4221070	of the passage c. Question the motives or feelings of the	@	Φ	0	0	Ф	VH333079		
dentify the main ideas of the passage	Ф	V16833078	d. Identify the main ideas	00	0	0	Φ	0	VH330078		
dentify the themes of he passage	Ф	VHII33094	of the passage e. Identify the themes of		9	0	Φ	0	VH358094		
Analyze two or more copic	Ф	V1683/077	f. Analyze two or more texts on the same	8	9	9	9	9	VIESSA077		
or school this year, how often have you been asked to write long answers sentences or paragraphs) to questions on tests or assignments that involv		V1886774	28. For school this year, he sentences or paragraph					everal	VHS88774	NC	N/A
				s) to question				everal	VHS86774	NC	N/A
sentences or paragraphs) to questions on tests or assignments that involverading? Never Once Two or three times Four or five times			sentences or paragraph reading? O Never Once Two or three times Four or five times	s) to question	s on tests or a			everal	VIBROZI	NC	N/A
sentences or paragraphs) to questions on tests or assignments that involve reading? Never Once Two or three times Four or five times More than five times	d	ViDesale	sentences or paragraph reading? Never Once Two or three times More than five times	es on of Ins	truction	assignments the	t involved		Attourn	NC NC	N/A
sentences or paragraphs) to questions on tests or assignments that involveding? Never Once Two or three times Four or five times More than five times 118 Grade 12) On a typical school day, how much time do you use a computer or other device to do your English/language arts schoolwork? Less than 30 minutes	d		sentences or paragraph reading? Never Once Two or three times Four or five times More than five tim Issue: Organizatio 29. On a typical school day device to do your Engli	es on of Ins y, how much the sh/language a	truction	assignments the	t involved		SHEMIZH VIENMON		
sentences or paragraphs) to questions on tests or assignments that involveding? Never Once Two or three times Four or five times More than five times 118 Grade 12) On a typical school day, how much time do you use a computer or other device to do your English/language arts schoolwork? Less than 30 minutes About 30 minutes	d		sentences or paragraph reading? Never Once Two or three times Four or five times More than five tim Issue: Organizatio 29. On a typical school day device to do your Engli Less than 30 minutes About 30 minutes	es on of Ins y, how much the sh/language a	truction	assignments the	t involved		SHEMICH VIEWMON		
sentences or paragraphs) to questions on tests or assignments that involvereading? Never Once Two or three times Four or five times More than five times Mare than five times The atypical school day, how much time do you use a computer or other device to do your English/language arts schoolwork? Less than 30 minutes About 30 minutes About 1 hour	d		sentences or paragraph reading? Never Once Two or three times Four or five times More than five tim Issue: Organizatio 29. On a typical school dadevice to do your Engli Less than 30 minute About 30 minutes About 1 hour	es on of Ins y, how much the sh/language a	truction	assignments the	t involved		SHEMICH		
sentences or paragraphs) to questions on tests or assignments that involveding? Never Once Two or three times Four or five times More than five times 118 Grade 12) On a typical school day, how much time do you use a computer or other device to do your English/language arts schoolwork? Less than 30 minutes About 30 minutes	d		sentences or paragraph reading? Never Once Two or three times Four or five times More than five tim Issue: Organizatio 29. On a typical school day device to do your Engli Less than 30 minutes About 30 minutes	es on of Ins y, how much the sh/language a	truction	assignments the	t involved		SHEMICH		

							2019 item							D/A/ R/NC+	Rationale
7. In this school year, how magazines) from your	often do you l	oorrow reading	g materials (s rary, or medi	such as books a center?	or	VH460301	30. In this school year, how magazines) from your c	often do you lassroom libr	borrow reading	ng materials rary, or medi	(such as books	s or	VB460001	NC	N/A
Never							Never								
About once or twice	e a year						About once or twice	a year							
About once or twice	e a month						About once or twice	a month							
About once or twice	e a week						About once or twice	a week							
© Every day or almos	t every day						© Every day or almost	every day							
(2018 Grade 12)							Issue: Resources f	for Learr	ning and	Instruct	ion				
Do you think you woul answer choice on each		each of the fo	llowing when	n reading? Sele	ect one	VH260647	31. Do you think you wou answer choice on each	ld be able to e row.	lo each of the f	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			
Figure out the meaning of a word you	9	0	0	9	Θ	VH280s48	Figure out the meaning of a word you don't know by using other words in the text	Φ	Φ	0	Φ	Φ	VH260848		
don't know by using other words in the text	9	Φ	0	9	Φ	VH26664ir	b. Explain the meaning of something you have read	Θ	®	0	0	0	VH250849		
	ω			Ф	Ф	VHZAOWI	c. Figure out the main	-	(3)	0	Φ	Ф	V11260851		
other words in the text b. Explain the meaning of something you have read c. Figure out the main idea of a text	θ	Ф	0	Φ.			idea of a text	0							
b. Explain the meaning of something you have read c. Figure out the main		0	0	0	Ф	VEDMONOV	d. Find text in a reading passage to help you answer a question on a test	•	•	0	Φ	Φ	VH260859		

Previous item							2019 item							D/A/ R/NC+	Rationale
Do you think you woul answer choice on each		each of the fo	llowing when	reading? Sele	ect one	VII611300	32. Do you think you wou answer choice on each		lo each of the	following who	en reading? Se	lect one	VHeII too	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	1 definitely			
Recognize the difference between fact and opinion in a text	۵	0	0	9	Φ	V11260863	a. Recognize the difference between fact and opinion in a text	®	0	0	Φ	Ф	VH260863		
 Judge the reliability of sources (for example, how a website might be biased or inaccurate) 	•	•	Θ	0	6	VH240857	b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	0	0	0	Ф	θ	V3D40857		
 c. Critique an author's craft or technique 	0	00	9	9	Φ	VH260866	c. Critique an author's craft or technique	®	0	0	Φ	Φ	V112/0986		
d. Use evidence from a text to support my answer	Φ	0	0	0	Ф	VH616841	d. Use evidence from a text to support my answer	•	(8)	0	Ф	Ф	V786108#1		
													_		
10. How much does each	of the follow	⊕ ing statements	© describe a pe	erson like you	© Select	VH280868 VH20826	e. Identify the author's perspective in a persuasive text Issue: Student Fa 33. How much does each	- 6 /2 N N N T	© ring statemen	©	© au? Select one	© answer	VHIACSAN VHISHAS2	R	The phrase
perspective in a persuasive text	of the follow				? Select		perspective in a persuasive text Issue: Student Fa	ctors						R	person like"
perspective in a persuasive text (2018 Grade 12)	of the follows	ng statements	describe a pe	erson like you	Select		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	ring statemen	ts describe yo	u? Select one	answer Exactly like		R	was remove
perspective in a persuasive text 2018 Grade 12) 10. How much does each one answer choice on a. I want other students to think I am good at	of the follows each row.	ng statements A little bit like me	describe a pe Somewhat like me	rson like you Quite a bit like me	Exactly like		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	of the follow Not at all like me	ring statemen A little bit like me	s describe yo	u? Select one Quite a bit like me	answer Exactly like	VIB4802	R	person like" was remove
perspective in a persuasive text 2018 Grade 12) 10. How much does each one answer choice on 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.	of the followice each row. Not at all like me	A little bit like me	describe a pe Somewhat like me	Quite a bit like me	Exactly like me	V100006	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	A little bit like me	Somewhat like me	Quite a bit like me	answer Exactly like me	V8848052	R	person like" was remove and two sub items were
perspective in a persuasive text 2018 Grade 12) 10. How much does each one answer choice on 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 followicach row. Not at all like me	A little bit like me	describe a pe	Quite a bit like me	Exactly like me	V100006	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 grades than most other	Ctors of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	answer Exactly like me	V8844052 V9844005	R	person like" was remove and two sub items were
perspective in a persuasive text 2018 Grade 12) 10. How much does each one answer choice on 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 learn as much as possible in my English/language	of the followicach row. Not at all like me	A little bit like me	describe a pe	Quite a bit like me	Exactly like me	V1E560928 V1E560928 V1E560929 V1E560930	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	A little bit like me	somewhat like me	Quite a bit like me	answer Exactly like me	VIENNO2 VIENNO5 VIENNO6	R	person like" was remove and two sub items were

Previous item							2019 item							D/A/ R/NC+	Rationale
							34. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	ou? Select one	answer	V1844081		
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			
							I want to learn as much as possible in my English/language arts class.	0	•	0	9	Φ	V1844096		
							b. I want to become a better reader this year.	0	0	0	0	Φ.	VH5.44097		
							I want to understand as much as I can in my English/language arts class.	@	(1)	Ø	0	Θ	VF634098		
							d. I want to master a lot of new English/ language arts skills in my class.	Ø	®	0	(0)	Φ	VH844100		
1. How much does earl	of the followi	ne statements	describe a ne	rson like von	? Select	VH2809132	Issue: Student Fa		ving statemen	ts describe vo	n? Select one	answer	V38844168	P	The phrase
one answer choice of		ng statements A little bit like me	Somewhat like me	Quite a bit like me	Exactly like		35. How much does each choice on each row.		A little bit like me	Somewhat like me	Quite a bit like me			R	The phrase person like" was remove
one answer choice of Reading is one of my favorite activities.	Not at all	A little bit	Somewhat	Quite a bit	Exactly like		35. How much does each	of the follow	A little bit	Somewhat	Quite a bit	Exactly like		R	person like"
one answer choice of Reading is one of my favorite activities.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like		a. Reading is one of my favorite activities. b. I like talking about books with other 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"
Reading is one of my favorite activities. I like talking about books with other	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		How much does each choice on each row. Reading is one of my favorite activities. I like talking about books with other people. 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	VIREGIAN	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.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VH260272	How much does each choice on each row. Reading is one of my favorite activities. I like talking about books with other people.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VIER46100 VIER4170	R	person like"
one answer choice 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.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VHD60273 VHD60275	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	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VESP44 AM VESP44 70 VESP44 72	R	person like"
one answer choice of the control of	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VHD60273 VHD60275	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 homeword Less than 30 minut About 30 minutes a About 1 hour a day About 2 hours a day	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VESP44 AM VESP44 70 VESP44 72	R NC	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 homew © Less than 30 minutes © About 1 hour a da	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH260271 VRDA0272 VHDA0275 VH260277	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 Description: About 30 minutes a About 1 hour a day	Not at all like me Ctors Cto	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VFB44170 VFB44170 VFB44171		person like" was remove

Previous item							2019 item							D/A/ R/NC+	Rationale
13. How often do you recei English/language arts o	ve help from utside of sch	a tutor, family	member, or:	friend with		Vittispgn	36. How often do you receiv English/language arts ou				riend with		VII32830	NC	N/A
Never															
About once or twice	e a year						About once or twice	a vear							
About once or twice	e a month						About once or twice								
About once or twice	e a week														
Every day or almos							About once or twice								
w zivi) mi) or minos	((11)						Every day or almost e	every day							
2018 Grade 12)							Issue: Resources for	or Lear	ning and	Instructi	on				
14. How often do you typi online)? Select one and			ving outside o	f school (print	or	VH261068	38. How often do you typics online)? Select one answ	ally read ea	ch of the follow		2 10 10 10 10 10	or	Violetsia	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	0	0	0	0	Ф	VH261066	a. Stories or novels	®	0	0	0	Φ	VIIDELOSS		
b. Poems	0	0	0	0	Θ	VH261067	b. Poems	Ø	0	0	0	Θ	VH2nios7		
c. Plays	0	0	0	0	0	VH261068	c. Plays	②	0	0	9	Θ	VH261068		
d. Biographies	0	0	-0	0	0	VH617043	d. Biographies	®	0	0	0	Θ	VH617043		
e. Comic books f. Magazines	Φ	0	0	0	Φ	VHORIONI	e. Comic books	®	0	0	0	Θ	V19261070		
g. E-mails	Φ	9	9	9	- 6	VH261074	f. Magazines	®	0	0	0	θ	VH261071		
h. Text messages	0	0	0	0	0	V11261075	g. E-mails h. Text messages	®	0	0	0	θ θ	VH261075		
2018 Grade 12) 15. How often do you typi one answer choice on		of the follows About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	VIC8006	Issue: Student Fac 39. How often do you typic, one answer choice on ea	ally do eacl	About once or twice a	About once or twice a month	About once or twice a week	Select Every day or almost every day	VH26906	NC	N/A
		0	0	۵	Φ	VINITEGRAL	a. Talk about books (print or online) with other people	®	Φ	0	Ф	Φ	VH260907		
a. Talk about books (print or online) with other people	0				Ф	VII2/09(1	b. Go to my local library to borrow books (print	®	0	0	0	Ф	VH260911		
(print or online) with other people b. Go to my local library to borrow books (print or online)	•	0	0	0										1	1
(print or online) with other people b. Go to my local library to borrow books (print or online) c. Read blogs		0	0 0	0	0	VH260913	or online)	®	0	0	0	0	VH2/6913		
(print or online) with other people b. Go to my local library to borrow books (print or online)	•		12			VIEWS261		®	®	0	9	θ	VH288913 VH338261		

2019 Oper	ational Grade 12 Reading Student		
Previous item	2019 item	D/A R/N	
16. Are you currently enrolled in or have you taken an Advanced Placement (AP®) course in English/language arts? Select all that apply.	40. Are you currently enrolled in or have you taken an Advanced Placement (AP®) course in English/language arts? Select all that apply.	NC NC	N/A
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 Language and Composition.		
Yes, I am enrolled in or have taken Advanced Placement (AP) English Literature 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.	© No, I have never taken an Advanced Placement (AP) English/language arts course.		
(2018 Grade 12)	Issue: Organization of Instruction		
17. Are you currently enrolled in or have you taken the International Baccalaureate® (IB) Language Al course?	41. Are you currently enrolled in or have you taken the International Baccalaureate® (IB) Language AI course?	NC	N/A
© Yes	∇ Yes ✓ Yes		
© No	⊕ No		
(2018 Grade 12)	Issue: Organization of Instruction		
VIGHAN		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?	42. Are you currently enrolled in or have you taken any online English/language arts courses for high school or college credit?		,
© Yes	© Yes		
◆ No	© No		
(2018 Grade 12)	Issue: Organization of Instruction		

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	®	0	Θ	©.	VH731530
b. Done a project about something that you have read (for example, written a play, created a website)	0	(G)	0	Θ	(VH731529

VH882575

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	®	®	0	0	©.	VH332888
b. Work in pairs or small groups to talk about something that we have read	Ø	®	0	Φ	©	VH652035
c. Discuss different interpretations of what we have read	(A)	®	0	0	Œ	VH652037

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	®	®	0	•	©	VH260256
b.	Analyze the author's organization of information in a passage	(4)	®	0	Θ	Œ	VH333142
c.	Critique the author's craft or technique	(A)	®	0	0	Œ	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	(A)	B	0	0	Œ	VH333075
b.	Interpret the meaning of the passage	A	B	0	0	Œ	VH333076
c.	Question the motives or feelings of the characters	(9)	®	0	0	Œ	VH333079
d.	Identify the main ideas of the passage	A	®	0	0	Œ	VH333078
e.	Identify the themes of the passage	A	B	0	0	Œ	VH333094
f.	Analyze two or more texts on the same topic	(A)	(8)	0	0	Œ	VH333077

- **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
 - Once
 - © Two or three times
 - Tour or five times
 - More than five times

VI	J 5	nο	62	6

- **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?
 - Less than 30 minutes
 - About 30 minutes
 - O About 1 hour
 - About 2 hours
 - About 3 hours
 - 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

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.	Figure out the meaning of a word you don't know by using other words in the text	®	®	0	0	©.	VH260848
b.	Explain the meaning of something you have read	(A)	®	0	0	Œ	VH260849
c.	Figure out the main idea of a text	(A)	®	0	0	Œ	VH260851
d.	Find text in a reading passage to help you answer a question on a test	®	®	0	0	Œ	VH260859
e.	Recognize when you don't understand something you are reading	(A)	(8)	©	0	©.	VH260861

32. 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	
di fa	ecognize the ifference between act and opinion in a ext	(4)	®	0	0	©.	VH260863
so ho bo	ndge the reliability of ources (for example, ow a website might e biased or naccurate)	0	®	0	Φ	Œ	VH260857
c. C	ritique an author's raft or technique	A	®	0	0	Œ	VH260866
te	se evidence from a ext to support my nswer	(4)	®	0	0	Œ	VH616841
pe	lentify the author's erspective in a ersuasive text	(A)	®	0	0	Œ	VH260868

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

Not at all A little bit Somewhat Quite a bit **Exactly like** like me like me like me like me me a. I want other students to think I am good at VH844065 A Œ $^{\odot}$ \bigcirc 0 reading. b. I want to show others that my English/ language arts VH844066 \bigcirc 0 **(** (E) B schoolwork is easy for me. c. I want to look smart in comparison to the other students in my VH844068 A 0 **(** Œ B English/language arts class. d. I want to get better English/language arts VH844070 A B 0 **(** Œ grades than most other students in my class.

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	
a.	I want to learn as much as possible in my English/language arts class.	(4)	®	0	0	©.	VH844096
b.	I want to become a better reader this year.	(A)	®	0	0	Œ	VH844097
c.	I want to understand as much as I can in my English/language arts class.	(9)	®	0	0	©.	VH844098
d.	I want to master a lot of new English/ language arts skills in my class.	0	®	0	0	Œ	VH844100

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.	(A)	B	0	0	Ē	VH844169
b.	I like talking about books with other people.	(A)	®	0	0	Œ	VH844170
c.	I think reading is important.	(A)	B	0	0	Œ	VH844172
d.	I enjoy going to a bookstore or a library.	A	B	0	0	Œ	VH844171

VH332820

- **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

VH598686

- 37. Besides doing homework, how much time do you spend reading outside of school?
 - Less than 30 minutes a day
 - About 30 minutes a day
 - O 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	®	0	0	Œ	VH261066
b. Poems	(A)	®	0	0	Œ	VH261067
c. Plays	A	®	O	0	(E)	VH261068
d. Biographies	A	®	0	0	Œ	VH617043
e. Comic books	A	®	O	0	(E)	VH261070
f. Magazines	A	®	0	0	Œ	VH261071
g. E-mails	A	®	0	0	Œ	VH261074
h. Text messages	A	®	©	0	©	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	
a.	Talk about books (print or online) with other people	(A)	®	0	0	©.	VH260907
b.	Go to my local library to borrow books (print or online)	(A)	®	0	0	Œ	VH260911
c.	Read blogs	A	®	0	0	Œ	VH260913
d.	Use social media (for example, Facebook, Twitter, Instagram)	(A)	®	0	0	Œ	VH333261
e.	Help friends with reading homework	A	B	0	0	Œ	VH260917

VH	24	N3	98

40.	Are you currently enrolled in or have you taken an Advanced Placement (AP®) course in English/language arts? Select all that apply.
	(AP) English Language and

Composition.

(A.D.) English Literature and

W	1es, I alli cilioned ili oi nave taken Advanced Flacement (AF) English Literature and
	Composition.

© No, I have never taken an Advanced Placement (AP) English/language arts course.

41. Are you currently enrolled in or have you taken the International Baccalaureate[®] (IB) Language A1 course?

A Yes

® No

VH240007

42. Are you currently enrolled in or have you taken any online English/language arts courses for high school or college credit?

A Yes

® No

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

2019 Oper	rational Grade 4 Mathematics Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
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? Never Once Two or three times More than five times	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 Two or three times Four or five times More than five times	NC	N/A
2. For school this year, how often do you work in pairs or small groups to talk about something that you have done in 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	N/A	D	This item was dropped based on the ADC's recommendat ion.
3. 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 month About once or twice a week Every day or almost every day	N/A	D	This item was dropped based on NCES's review of technology-use items.
4. How often do you use a computer or other digital device (excluding handheld calculators) for math homework? ② Never ③ About once or twice a year ③ About once or twice a month ④ About once or twice a week ⑤ 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.

Previous item		2019 item								Rationale
5. How often do you use the Internet to learn things about math? ① Never ① About once or twice a year ② About once or twice a month ② About once or twice a week ① 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.	
6. 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 19. How often do you use a calculator? Never About once or twice a year About once or twice a month Every day or almost every day 19. How often do you use a calculator? About once or twice a year About once or twice a month Every day or almost every day							NC	N/A		
(2017 Grade 4)		Issue: Resources	s for Lea	arning ar	nd Instru	ction				
7. 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 22. How often do you receive help or tutoring with math outside of school or after school? About once or twice a year About once or twice a month Every day or almost every day 22. How often do you receive help or tutoring with math outside of school or after school? About once or twice a year About once or twice a month Every day or almost every day Street Resources for Learning and Instruction							NC	N/A		
This school year, how often did the following things happen in your math class? Select one answer choice on each row.	VH267415	18. 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 hardly ever time Less than half of the time About half of the time All or almost all the time	of		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		
a. My teacher used computers or other digital devices when	VH588077	My teacher used computers or other digital devices when teaching math to my class.	0	(3)	0	Φ	Œ	VH588077		
b. My teacher required us to use computers or other digital devices to complete math assignments.	VH267419	b. My teacher required us to use computers or other digital devices to complete math assignments.	®	(5)	0	Φ	•	VH267419		

Previous item							2019 item							D/A/ R/NC+	Rationale
9. How often do vou use n	VIDS998. How often do you use math in everyday life outside of school?					20. How often do you use m	ath in every	day life outsid	e of school?			VH268936	NC	N/A	
Never							Never Nevre								
About once or twice	a vear						About once or twice	a vear							
About once or twice							About once or twice								
About once or twice	a week						About once or twice								
© Every day or almost	every day						© Every day or almost of								
(2017 Grade 4)							Issue: Resources	for Lear	rning and	d Instruc	ction				
10. How often do you participate in each of the following activities outside of school? Select one answer choice on each row. VIESBOS						21. How often do you participate in each of the following activities outside of school? Select one answer choice on each row.							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 of almost every day	DE .		
a. Talk about math problems with your friends	8	0	6	0	0	V112/2004/.	Talk about math problems with your friends	0	(1)	0	Φ	Φ	VH268946		
b. Play an instrument and read music	0	•	0	Ф	Φ	VH268961	b. Play an instrument and read music	(A)	•	0	0	0	VH268961		
c. Go to websites for help with your math homework	0	0	0	0	0	VH188962	c. Go to websites for help with your math homework	0	(1)	0	Φ	©	VH268962		
(2017 Grade 4) Issue: Resources for Learning and Instruction 11. Have you ever helped your friends with their math homework? Yes 24. Have you ever helped your friends with their math homework? © Yes							NC	N/A							
© No (2017 Grade 4)							Issue: Resources	for Leai	rning and	d Instruc	ction				
12. Over the past seven da math homework? Ente			ı helped your	friends with th	heir	VH269037	25. Over the past seven days math homework? Enter t	, how many	days have you	3.50.		their	VH269037	NC	N/A
(2017 Grade 4)							Issue: Resources	for Lear	rning and	d Instruc	ction				

				,	2019	Opera	tional Grade 4	Math	ematio	s Stud	ent				
Previous item							2019 item							D/A/ R/NC+	Rationale
13. Thinking about math, following? Do not acts					ch row.	VIUGGZ	26. Thinking about math following? Do not act	, do you thinl ually solve th	that you wo e problems. S	uld be able to o	do each of the er choice on e	ach row.	VH267672	NC	N/A
	I definitely can't	I probably can't	Maybe	1 probably can	1 definited	У		I definitely can't	I probably can't	Maybe	I probably can	I definitely			
 Estimate the weight of 5 apples using pounds (lbs.) 	0	0	0	9	Φ	VH267674	a. Estimate the weight of 5 apples using pounds (lbs.)	@	®	0	Φ	0	VH267674		
 b. Divide 42 stickers among 6 students 	8	Ф	0	0	Ф	VHUSECUSE	b. Divide 42 stickers among 6 students	®	60	0	•	•	VH617317		
c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ø	Φ	Ø	Φ	Φ	VHI267681	c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	0	(5)	0	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	٩	•	Ø	Φ	Φ	VHZe7es4	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	Ф	Θ	VH267683		
14. How much does each one answer choice on e	of the follow each row. Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly lil	ke	27. How much does eac choice on each row.	Not at all like me	A little bit		Quite a bit		VH844870	R	The previous matrix was separated
I want other students to think I am good at math.	0	®	0	Φ	(VH269049	a. I want other students to think I am good at	⊕ ⊕	®	©	Ф	(D)	VH844871		into two
b. I want to show others that my math schoolwork is easy for me.	((8)	0	Φ	Œ	VH269050	b. I want to show others that my math schoolwork is easy for	®	(1)	0	0	Φ	VH844872		matrices of achievement
c. I want to look smart in comparison to the other students in my math class.	•	®	0	0	1	VH269053	c. I want to look smart in comparison to the other students in my	n	®	0	0	•	VH844873		goals items (performance
d. I want to learn as much as possible in my math class.	®	(8)	0	0	θ	VH269059	d. I want to get better grades than most other		1.5					9	and mastery).
e. I want to become better in math this	0	®	0	0	(VH269056	students in my math class.	a	(8)	0	0	•	VH844882		In order to create indices
year. f. I want to understand as much as I can in my math class.	®	®	0	0	Φ	VH269060	28. How much does each choice on each row.	of the follow	ing statemen	ts describe you	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 me			and mastery
							a. I want to learn as much as possible in my math class.	0	(8)	0	•	D	VH845117		goals based on a total of
							b. I want to master a lot of new skills in my math class.	0	(B)	0	0	•	VH845114		at least 4
							c. I want to become better in math this year.	0	®	0	0	•	VH845115		items, VH844882
							d. I want to understand as much as I can in my math class.	0	(8)	0	0	Ð	VH845118		and
(2017 Grade 4)							Issue: Student F	actors							VH845114

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

Previous item							2019 item							D/A/ R/NC+	Rationale
15. How much does each one answer choice on	of the follow each row.	ing statement	s describe a po	erson like you	7 Select	ARPSTA	29. How much does each choice on each row.	of the follow	ing statemen	ts describe yo	ou? Select one	answer	VH844769	R	The stem wa
	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			revised from "describe a
a. I enjoy doing math.	0	0	0	Φ	Θ	VH267179	a. I enjoy doing math.	®	•	0	0	0	VH844770		
 I look forward to my math class. 	0	OD:	0	0	dD .	V1123/7/0011	b. I look forward to my math class.	0	•	0	0	0	VH844771		person like
 I am interested in the things I learn in math. 	0	0	0	9	θ	VI3617X24	c. I am interested in the things I learn in math.	®	■	0	0	0	VH844775		you" to
d. I think making an effort in math is worthwhile.	Φ	0	0	0	Φ	VFI267485	d. I think making an effort in math is worthwhile.	0	®	0	0	Œ	VH844772	-	"describe you".
e. I think math will help me even when I am not in school.	Ø	ap	0	0	Œ	VI 2287486	e. I think math will help me even when I am not in school.	0	•	0	Φ	(D)	VH844777		
f. I think it is important to do well in math.	0	Φ	Q	Φ	Ф	VH267487	f. I think it is important to do well in math.	®	®	0	0	Θ	VH844774		
2017 Grade 4) 6. How often do you play games) outside of school	digital games	(for example, e math?	apps, video ga	ames, or comp	puter	VH460329	Issue: Student Fa 23. How often do you play d games) outside of school	igital games	for example, math?	apps, video ga	nmes, or comp	outer	VH460329	NC	N/A
Never							Never								
About once or twice	e a year						About once or twice	a year							
About once or twice	e a month						 About once or twice 	a month							
About once or twice							About once or twice	a week							
Every day or almost	every day						© Every day or almost of	warr day							

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
 - © Two or three times
 - Tour 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.

VH267415

		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.	(®	0	0	©.	VH588077
b.	My teacher required us to use computers or other digital devices to complete math assignments.	0	(6)	0	Θ	©	VH267419

19.	How	often	do	you	use	a	cal	lcu]	lato)ľ	?
-----	-----	-------	----	-----	-----	---	-----	------	------	----	---

- 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. How often do you use math in everyday life **outside of 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

VH268945

21. 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	(A)	®	0	0	©.	VH268946
b. Play an instrument and read music	(A)	®	0	0	Œ	VH268961
c. Go to websites for help with your math homework	(A)	®	0	0	Œ	VH268962

22.		w often do you receive help or tutoring with math outside of school or after nool?	
	(A)	Never	
	$^{\odot}$	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	(E)	Every day or almost every day	
			VH460329
23.		we often do you play digital games (for example, apps, video games, or computer mes) outside of school that involve math?	
	lack	Never	
	$^{ ext{ $	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	(E)	Every day or almost every day	
			VH336085
24.	На	ve you ever helped your friends with their math homework?	
	lack	Yes	
	ഀ	No	
			VH269037
25.		er the past seven days, how many days have you helped your friends with their oth homework? Enter the number of days.	
		and iteme item to itemper 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.)	®	®	0	0	Œ	VH267674
b.	Divide 42 stickers among 6 students	(A)	B	0	0	Œ	VH617317
c.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	®	®	0	0	©	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	(A)	(8)	0	Φ	Œ	VH267683

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

Not at all A little bit Somewhat Quite a bit **Exactly like** like me like me like me like me me a. I want other students to think I am good at VH844871 **(A)** $^{\odot}$ 0 0 Œ math. b. I want to show others that my math VH844872 **(A)** B 0 **(** Œ schoolwork is easy for c. I want to look smart in comparison to the VH844873 **(A)** $^{\odot}$ 0 0 Œ other students in my math class. d. I want to get better grades than most other VH844882 **(A)** 0 Œ $^{\odot}$ 0 students in my math class.

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 want to learn as much as possible in my math class.	(A)	(8)	0	0	Œ	VH845117
b. I want to master a lot of new skills in my math class.	(A)	(8)	0	0	Œ	VH845114
c. I want to become better in math this year.	(A)	®	0	0	Œ	VH845115
d. I want to understand as much as I can in my math class.	(A)	®	0	0	Œ	VH845118

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 enjoy doing math.	A	®	©	0	Œ	VH844770
b. I look forward to my math class.	(A)	®	0	0	Œ	VH844771
c. I am interested in the things I learn in math.	(A)	®	0	0	Œ	VH844775
d. I think making an effort in math is worthwhile.	(A)	®	0	0	Œ	VH844772
e. I think math will help me even when I am not in school.	(A)	®	0	0	©.	VH844777
f. I think it is important to do well in math.	(A)	®	0	0	Œ	VH844774

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

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? © Never © Once © Two or three times © Four or five times © More than five 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 math? ② Never ③ Once ③ Two or three times ④ Four or five times ④ More than five times	NC	N/A
(2017 Grade 4)	Issue: Organization of Instruction		
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? 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 the ADC's recommendation.
	N/A	D	This item was dropped based on NCES's review of technology-use items.
24. How often do you use a computer or other digital device (excluding handheld calculators) for math homework? ② Never ③ About once or twice a year ③ About once or twice a month ③ About once or twice a week ⑤ 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.

⁺ 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			
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? 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	¥11236.231	NC	N/A			
27. How often do you receive help or tutoring with math outside of school or after school? ② Never ③ About once or twice a year ③ About once or twice a month ④ About once or twice a week ① Every day or almost every day	N/A N/A		D	This item was dropped in place of keeping VH853724, as per similar recommendations made for Reading based on pretesting and to ensure consistency			
(2017 Grade 4)				across subjects.			

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

					2019	9 Pilo	ot Grade 4 Mat	hemat	ics Stu	dent					
Previous item							2019 item							D/A/ R/NC+	Rationale
28. This school year, how one answer choice on		ollowing thin	gs happen in ye	our math class	? Select	Vittorals	12. This school year, how one answer choice on		ollowing thin	gs happen in ye	our math class	? Select	VH002494	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 o 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	f		items was revised to
My teacher used computers or other digital devices when teaching math to my class.	٩	(3)	0	Ф	Φ	VH568077	My teacher used computers or other digital devices to go on websites or use apps when teaching math	©	®	0	۵	Φ	VHB10476		focus more on assessing
 My teacher required us to use computers or other digital devices to complete math assignments. 	0	Φ	Ø	Ф	Ф	VHQ67419	b. My teacher required us to use computers or other digital devices to go on websites or use	©	00	0	۵	Ф	VM810877		what the students are utilizing the
(2017 Grade 4)							apps to complete math assignments.	.							technology for.
Never About once or twice About once or twice About once or twice Every day or almos	e a month						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 part school? Select one ans			wing activities	outside of		VIEWWY	 How often do you part school? Select one ans 	icipate in eac wer choice o	th of the follow n each row.	wing activities	outside of		VIEGORAS	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 Play an instrument	0	(1)	Ø	0	0	V11268946	 Talk about math problems with your friends 	Φ	0	0	.0	Φ	VH268946		
and read music c. Go to websites for help with your math	®	© ©	0	0	0	VH268961 VH268963	b. Play an instrument and read music Go to websites for	0	D	Ø	0	Φ	VHIMM		
(2017 Grade 4)							help with your math homework	(3)	(1)	0	0	Ф	V1II289962		
31. Have you ever helped to Yes No	your friends v	vith their mat	h homework?		h	ViD36085	3. Have you ever helped you be Yes No				on		VHDwas	NC	N/A
(2017 Grade 4)			itom was				Issue: Resources	for Lear	ning and	Instructi	on				

⁺ 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
,					VI4269017	Over the past seven day math homework? Enter			helped your	friends with	their	VIOMAII)	NC	N/A	
2017 Grade 4)							Issue: Resources	for Learr	ning and	Instruct	ion				
	 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. 				VH267672	13. Thinking about math, following? Do not actu	do you think ally solve the	that you woul problems, Scl	d be able to o	lo each of the er choice on e	ach row.	VH082502	R	Sub-item "a"	
	I definitely a probably can't Maybe a probably can and can						I definitely can't	I probably can't	Maybe	I probably	I definitely			was revised from "lbs" to	
 Estimate the weight of 5 apples using pounds (lbs.) 	0	®	0	0	Ф	V11267674	a. Estimate the weight of 5 apples using pounds (lb)	69	0	0	0	Ф	VH859273		"lb"; sub-iten
b. Divide 42 stickers among 6 students	•	0	0	0	Ф	VH617317	b. Share 42 stickers equally among	0	0	0	0	•	VHStüsst		"b" was revised;
c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Θ	Φ.	Ø	Φ	Ф	VH267682	6 students c. Find the amount of carpet needed to cover a rectangular floor if you know its length	@	9	0	Φ	Φ	VH267682		previous sub item "d" was
 Know when to take a turkey out of the oven 							and width								replaced wit
if it goes in at 10:00 A.M. and it takes 3 hours and 45 minutes to cook	0	3	Ø	0	Ф	VH267683	d. Calculate what time the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes.	©	(5)	0	Θ	Φ	VIH10865		an alternate version.
A.M. and it takes 3 hours and 45 minutes	of the follows	ing statements	s describe a pe	rson like you!	' Select	VH267683 VH266948	the movie ends if it starts at 11:00 AM and lasts for 2 hours and	ctors					V33810865 V8053944	R	
A.M. and it takes 3 hours and 45 minutes to cook 2017 Grade 4) 34. How much does each	of the follows						the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes. Issue: Student Fa. 9. How much does each	ctors				2 answer		R	version. The previous
A.M. and it takes 3 hours and 45 minutes to cook 2017 Grade 4) 34. How much does each one answer choice on 1. I want other students to think I am good at math.	of the follows each row.	ing statements	s describe a pe	tson like you	Select Exactly like		the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes. Issue: Student Fa. 9. How much does each	ctors of the follow	ring statement	s describe ye	ou? Select one	e answer		R	The previous matrix was separated into two
A.M. and it takes 3 hours and 45 minutes to cook 2017 Grade 4) 34. How much does each one answer choice on	of the follows each row. Not at all like me	A little bit like me	s describe a pe Somewhat like me	rson like you: Quite a bit like me	Select Exactly like me		the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes. Issue: Student Far 9. How much does each choice on each row. a. I want to learn as much as possible about math in my class. b. I want to master a lot of new math skills in	of the follow Not at all like me	ring statement A little bit like me	s describe ye Somewhat like me	Quite a bit like me	Exactly like	V855944	R	The previous matrix was separated into two matrices of achievemen
A.M. and it takes 3 hours and 45 minutes to cook 2017 Grade 4) 34. How much does each one answer choice on 1. I want other students to think I am good at math. 20. I want to show others that my math schoolwork is easy for	of the follows each row. Not at all like me	A little bit like me	s describe a pe	Quite a bit like me	Select Exactly like me	VHZ06MH	the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes. Issue: Student Fa. 9. How much does each choice on each row. a. I want to learn as much as possible about math in my class. b. I want to master a lot	Ctors of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VIESSIDS7	R	The previous matrix was separated into two matrices of achievemen goals items (performance)
A.M. and it takes 3 hours and 45 minutes to cook 2017 Grade 4) 34. How much does each one answer choice on think I am good at math. b. I want to show others that my math schoolwork is easy for me. c. I want to look smart in comparison to the other students in my math class. l. I want to learn as much as possible in	of the follows each row. Not at all like me	A little bit like me	s describe a per Somewhat like me	Quite a bit like me	Select Exactly like me	VEZ06046 VEZ06040	the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes. Issue: Student Fa. 9. How much does each choice on each row. a. I want to learn as much as possible about math in my class. b. I want to master a lot of new math skills in my class. c. I want to become a better math student	Ctors of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VERSONA VERSONS VERSONS VERSONS	R	The previous matrix was separated into two matrices of achievemen goals items
A.M. and it takes 3 hours and 45 minutes to cook 2017 Grade 4) 34. How much does each one answer choice on answer choice on the control of	of the follows each row. Not at all like me	A little bit like me	s describe a pe	Quite a bit like me	Select Exactly like me	VH2690MF VH269050 VH269053	the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes. Issue: Student Far. 9. How much does each choice on each row. a. I want to learn as much as possible about math in my class. b. I want to master a lot of new math skills in my class. c. I want to become a better math student this year. d. I want to understand as much as I can in my	Ctors of the follow Not at all like me	A little bit like me	s describe ye Somewhat like me	Quite a bit like me	Exactly like me	V1853957 V1853961 V1853961	R	The previou matrix was separated into two matrices of achievemen goals items (performanciand mastery

⁺ 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
							 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	ou? Select one	answer	VIRSHIE		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,
							I want other students to think I am a good math student.	8	®	0	0	0	VHs54117		VH844882 VH853961
							b. I want to show others that my math schoolwork is easy for me.	0	0	0	0	0	VH854118		and VH8451314
							 c. I want to look smart in comparison to the other students in my math class. 	0	•	0	0	Ф	VH854110		were added
							d. I want to get better math grades than most other students in my class.	8	Œ	0	0	Θ	VH854134		2016 pilot assessmen
															"describe a
							Issue: Student Fa	ctors							"describe a person like you" to "describe
35. How much does each one answer choice on		ng statements	s describe a pe	rson like youi	? Select	VIENZĖL	Issue: Student Fa		ving statemen	its describe yo	ou? Select one	answer	YHRSAGZK	R	"describe a person like you" to "describe you". The stem w
		ng statements A little bit like me	s describe a pe Somewhat like me		Select Exactly like me		10. How much does each		ving statemen A little bit like me	ats describe yo	ou? Select one Quite a bit like me			R	"describe
one answer choice on a. I enjoy doing math.	each row.	A little bit	Somewhat	Quite a bit	Exactly like		How much does each choice on each row. I enjoy doing math.	of the follow	A little bit	Somewhat	Quite a bit	Exactly like		R	"describe a person like you" to "describe you". The stem w revised from "describe a
one answer choice on I enjoy doing math.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		How much does each choice on each row. I enjoy doing math. 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		R	"describe a person like you" to "describe you". The stem we revised from "describe a person like"
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.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	V91567470	How much does each choice on each row. I enjoy doing math.	of the follow Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	Asterotin	R	"describe a person like you" to "describe you". The stem we revised frou "describe a describe a de
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	VH167419 VH167481	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	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	Asterotin	R	"describe a person like you" to "describe you". The stem we revised from "describe a person like you" to
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	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VHI67479 VHI67481 VH617324	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	Somewhat like me	Quite a bit like me	Exactly like me	VH854039 VH854030 VH854034	R	"describe a person like you" to "describe you". The stem we revised from "describe a person like you" to "describe"

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⁺ 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
16. 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 (2017 Grade 4)	6. How often do you play digital games (for example, apps, video games, or computer games) outside of school that involve math? O Never About once or twice a year About once or twice a month Every day or almost every day Issue: Resources for Learning and Instruction						NC	N/A	
N/A	7. How often do you recei	ve the following	g types of he	elp with mat	h schoolwork	outside	VHH53724	Α	This item was
N/A	a. Help from a teacher b. Help from a family member or friend d. Help from online resources (for example, websites or apps) Issue: Resources f 8. How useful do you find	Never A	bout once or twice a year	About once or twice a month © © ©	About once or twice a week	almost every day	VERSA725 VERSA726 VERSA728 VERSA720 VERSA720	Α	added in place of VH336233. This item was pretested and kept in Reading, and to ensure consistency, the same decision was made for math. This item was
	schoolwork? Select one		on each row	outhou I		I don't receive			added in
		all		eful V	ery useful	that type of help.			place of VH336233.
	a. Help from a teacher	•	$\overline{}$	D	0	0	VH8S3733		
	b. Help from a tutor	0	0	3D	0	0	VH853734		This item was
	 Help from a family member or friend 	۵		D	0	0	VH851736		pretested and
	d. Help from online resource (for example, websites or apps)		d	D	0	0	VHG53737		kept in Reading, and
	Issue: Resources f	or Learnir	ng and I	Instruct	ion				to ensure consistency, the same decision was

⁺ 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
			made for
			math.

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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	
pro	lk about math oblems with your ends	®	ß	0	0	©.	VH268946
	ay an instrument d read music	(A)	B	0	0	Œ	VH268961
hel	to websites for lp with your math mework	(A)	®	0	0	Œ	VH268962

2.	Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.	VH26903
3.	Have you ever helped your friends with their math homework?	VH33608:
	YesNo	

			VH336231
4.	Но	w often do you use a calculator ?	
	\bigcirc	Never	
	®	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	(E)	Every day or almost every day	
			VH350115
5.		r school this year, how often have you been asked to write long answers (several atences or paragraphs) to questions on tests or assignments that involved math?	
	lack	Never	
	$^{\odot}$	Once	
	0	Two or three times	
	0	Four or five times	
	(E)	More than five times	
			VH460329
6.		we often do you play digital games (for example, apps, video games, or computer mes) outside of school that involve math?	
	lack	Never	
	$^{\odot}$	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	(E)	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	0	(Ē)	VH853725
b. Help from a tutor	(A)	®	0	0	(Ē)	VH853726
c. Help from a family member or friend	A	®	0	0	Ē	VH853728
d. Help from online resources (for example, websites or apps)	(A)	®	0	0	©.	VH853729

VH853732

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	®	0	0	VH853733
b. Help from a tutor	A	®	0	0	VH853734
c. Help from a family member or friend	A	®	0	0	VH853736
d. Help from online resources (for example, websites or apps)	(9)	(8)	0	0	VH853737

9. 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 about math in my class.	(4)	®	0	0	©.	VH853957
b.	I want to master a lot of new math skills in my class.	(A)	®	0	0	Œ	VH853961
c.	I want to become a better math student this year.	(4)	®	0	0	Œ	VH853949
d.	I want to understand as much as I can in my math class.	(A)	®	0	0	©	VH853952

10. 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	®	©	0	Œ	VH854029
b.	I look forward to my math class.	A	®	0	0	Œ	VH854030
c.	I am interested in the things I learn in math.	A	®	0	0	Œ	VH854034
d.	I think making an effort in math is worthwhile.	(A)	®	0	0	Œ	VH854031
e.	I think math will help me even when I am not in school.	(A)	®	0	0	Œ	VH854036
f.	I think it is important to do well in math.	A	®	0	0	Ē	VH854033

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

VH854116

		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 a good aath student.	(A)	®	0	0	©	VH854117
th sc	want to show others nat my math choolwork is easy for ne.	(9)	®	0	0	©	VH854118
ot	want to look smart in omparison to the ther students in my nath class.	(4)	®	0	•	©.	VH854119
m ot	want to get better nath grades than most ther students in my lass.	(A)	®	0	•	©.	VH854134

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.	(4)	®	0	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.	(4)	®	0	Φ	©.	VH810477

VH882502

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)	(A)	®	0	0	Œ	VH858273
b.	Share 42 stickers equally among 6 students	(A)	®	0	0	Œ	VH810864
c.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	(9)	®	0	0	(i)	VH267682
d.	Calculate what time the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes.	®	®	0	0	Œ	VH810865

- **14.** How often do you use math in everyday life **outside of 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

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				
1. What math class are you taking this year? Select one or more answer choices. © Eighth-grade math © Ceneral eighth-grade math © Algebra I course © First year of a two-year algebra course © Second year of a two-year algebra course © Algebra I (one-year course) © Algebra II © Geometry © Other (2017 Grade 8)	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 © Algebra I (one-year course) © Algebra II © Geometry © Other	VH256769	NC	N/A				
2. What math class do you expect to take next year? © Geometry © Algebra I © 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.	Issue: Organization of Instruction 23. What math class do you expect to take next year? © Geometry © 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. Issue: Organization of Instruction	VIDEOSS	NC	N/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? Never Once Two or three times Four or five times More than five times	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 Once Two or three times Four or five times More than five times Issue: Organization of Instruction	VH2S015	NC	N/A				

2019 C	erational Grade 8 Mathematics Student		
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?	N/A	D	This item was dropped
			based on the
About once or twice a year			
© About once or twice a month			ADC's
About once or twice a week			recommendat
© Every day or almost every day			ion.
(2017 Grade 8)			
5. How often do you use a computer or other digital device (excluding handheld calculators) for math at school?	N/A	D	This item was dropped
© 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-
			<u>.</u>
(2017 Grade 8)			use items.
How often do you receive help or tutoring with math outside of school or after school?	30. How often do you receive help or tutoring with math outside of school or after school?	NC	N/A
Never	Never		
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	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		
7. In your math class this year, how often have you used the following types of	25. In your math class this year, how often have you used the following types of	NC	NI/A
In your matriciass mis year, now often have you used the following types of calculators? Select one answer choice on each row.	calculators? Select one answer choice on each row.	NC	N/A
Never or hardly ever hardly ev	Never or hardly ever time Less than half of the time time All of the time time All of the time time the time		
a. Basic calculator	a. Basic calculator 💿 🕦 🖒 🕦 VIII.66809		
b. Graphing calculator 🐵 🖈 😊 🖜 👁	b. Graphing calculator 💿 🕦 🖒 🗘 VH268810		
(2017 Grade 8)	Januar Danar was fau Languing and Instruction		
, ,	Issue: Resources for Learning and Instruction		

					2019	Opera	tional Grade 8	Math	ematio	cs Stud	ent				
Previous item							2019 item							D/A/ R/NC+	Rationale
8. This school year, how one answer choice on	often did the f	ollowing thin	gs happen in y	our math class	s? Select	VERSIA	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 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	of		
My teacher used computers or other digital devices to show us how to work through math problems.	9	®	9	9	θ	VH167416	a. My teacher used computers or other digital devices to show us how to work through math problems.	8	®	Θ	•	Φ	VH267416		
 b. I used the Internet for my math work. 	0	0	0	0	.0	VHI267417	b. I used the Internet for	®	®	0	0	©	VH267417		
c. My teacher used computers or other digital devices when teaching math to my class.	8	θ	0	0	0	YH588077	my math work. c. My teacher used computers or other digital devices when teaching math to my	0	•	0	0	•	VH588077		
d. My teacher required us to use computers or other digital devices to complete math assignments.	0	0	0	(9)	Φ	VH267419	class. d. My teacher required us to use computers or other digital devices to complete math assignments.	0	®	0	0	©	VH267419		
9. In this school year, how (excluding handheld cale Description Never About once or twice About once or twice Every day or almost (2017 Grade 8)	a year a month				ce	VII36036	Issue: Resources N/A							D	This item was dropped based on NCES's review of technology-use items.
10. In this school year, hov (excluding handheld ca math assignments? ⚠ Never ⚠ About once or twic ⚠ About once or twic Ϫ About once or twic Ϫ Every day or almos	e a year se a month se a week					VH38607	27. In this school year, ho (excluding handheld c math assignments? ② Never ③ About once or twi: ③ About once or twi: ⑤ About once or twi: ⑤ Every day or almost	alculators) to ce a year ce a month ce a week					VIIS6057	NC	N/A
(2017 Grade 8)							Issue: Resources	for Lea	rning an	nd Instru	ction				

Previous item					2019	•	2019 item								Rationale
(excluding handheld ca ◆ Never ◆ Once ◆ Two or three times ◆ Four or five times ◆ More than five times	OnceTwo or three times							N/A							This item was dropped based on NCES's review of technology-use items.
12. How often do you use math in everyday life outside of school? Never About once or twice a year About once or twice a month Every day or almost every day (2017 Grade 8)							NeverAbout once or twiceAbout once or twiceAbout once or twice	 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. How often do you par school? Select one an	ticipate in ea swer choice o	n each row.				yH4802511	29. How often do you part school? Select one ans	icipate in ea wer choice o	n each row.			Transaction in	VH589204	NC	N/A
	Never	About once or twice a year	About once or twice a month	About once or twice a week	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 math problems with your friends	0	Φ	0	0	0	VEZZANIA.	a. Talk about math problems with your friends	®	(3)	0	0	Θ	VH268946		
b. Program computers	Ø	(D)	9	Φ	00	VH268940	b. Program computers	0	(5)	0	0	©	VH268949		
c. Play an instrument and read music	Ø	Ф	0	Φ.	0	V11228961	c. Play an instrument and read music	@	•	0	•	©	VH268961		
d. Go to websites for help with your math homework	Ø	•	0	•	©	VED:8961	d. Go to websites for help with your math homework	®	•	0	•	Φ	VH268962		
(2017 Grade 8)							Issue: Resources	for Lea	ırning an	ıd Instru	ction				
14. Have you ever helped Tes To Yes To No	your friends	with their math	homework?			VH336085	31. Have you ever helped your friends with their math homework? ② Yes ③ No							NC	N/A
(2017 Grade 8)							Issue: Resources	for Lea	ırning an	ıd Instru	ction				

Previous item						•	2019 item							D/A/ R/NC+	Rationale
15. Over the past seven day math homework? Enter	ys, how many r the number o	days have you of days.	helped your	friends with th	neir	VH269037	32. Over the past seven day math homework? Enter	NC NC	N/A						
 Thinking about math following? Do not act 	i, do you thinl tually solve th	that you wou e problems. Sel	ld be able to lect one answ	do each of the er choice on er	ich row.	VHSHALIC	36. Thinking about math, following? Do not actu	do you think aally solve the	that you woul problems. Sele	d be able to o ect one answ	do each of the er choice on ea	ach row.	VIIABUSES	R	Items VH267674,
	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			VH617317,
Estimate the weight of 5 apples using pounds (lbs.)	00	Ф	0	60	0	VERNINA	List all of the different possible outcomes when a coin is flipped	8	(1)	0	0	•	VH460382		VH267681,
b. Divide 42 stickers among 6 students	0	Φ	0	0	Φ	VHA17317	b. Create an expression								VH267683,
c. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	0	00	9	Φ	Φ	YH247678	that represents the average number of miles you run in a week if you run 100	•	•	0	•	Φ	VH460383		VH460348, VH460355,
d. Describe the properties shared by every isosceles right triangle	0	Θ	0	Φ	Φ	VH267681	miles in w weeks c. Determine a 20 percent tip of a 67-dollar restaurant	@	®	0	0	®	VH267679		VH460381, VH460386,
Find the amount of carpet needed to cover a rectangular floor if you know its length and width	8	œ	0	Θ	60	VITSOARS	dinner bill d. Find the amount of carpet needed to cover a rectangular floor if you know its length	0	•	0	Φ	•	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	9	Ф	0	Φ	Φ	VH367683	and width e. Give an example to show that a math statement is false	0	0	0	Φ	Φ	VH460399		VH460398, VH460900, and
to cook 23. Thinking about math	, do you think	that you woul	ld be able to	do each of the		Asstron	f. Explain to your classmate how you solved a math problem	8	®	0	0	0	VH460910		VH460912
following? Do not act	ally solve the	problems. Sel-		I probably	ch row.		g. Use correct mathematical words and symbols when	®	®	0	0	•	VH460902		were droppe
a. Create a bar graph to	can't	can't	Maybe	can	can	\vdash	showing your work							4	based on NCES's revie
represent the number of desks, chairs, and tables in your classroom	Ø	(D)	0	Ф	Ф	VH460348									of self-
b. Use a box plot to represent the height, in inches, of all of the students in your class	©	0	9	9	Θ	VH440355									efficacy item 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	Ø	9	8	6	0	3/4460381									
d. List all of the different possible outcomes when a coin is flipped three times	Ø	Ф	0	0	Ф	Wisaumi.									

Previous item							2019 item	D/A/ R/NC+	Rationale
24. Thinking about math, following? Do not actu	do you think ally solve the	that you woul problems. Sel	ld be able to o	do each of the er choice on ea	ich row.	VH613511			
	1 definitely can't	I probably can't	Maybe	I probably can	I definitely				
Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	0	Φ	0	Ф	θ	VH4eGJR3			
 b. Create an expression to show how old you will be in n years if you are 8 years old today 	8	9	0	θ	Θ	Vettensee-			
c. Create an expression that shows the number of wheels on n wagons if each wagon has 4 wheels	8	Φ	9	0	Φ	VH160B89			
d. Explain how you know the number of books you can buy if you know the price of each book and you have \$35	60	Ф	9	Ф	(D)	VH460391			
			46 7 28 24			VH613523			
following? Select one	do you think answer choice I definitely can't	that you woul on each row. I probably can't	d be able to o	I probably	I definitely				
a. Decide if your classmate's math work is correct	I definitely	on each row.		I probably					
a. Decide if your classmate's math work is correct b. Give an example to show that a math statement is false	I definitely can't	on each row. I probably can't	Maybe	I probably can	can	7			
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	I definitely can't	on each row. I probably can't	Maybe ©	I probably can	© ©	7 VH460398			
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 about math	I definitely can't	I probably can't	Maybe ©	I probably can	© ©	7 V14460398 V14460399			
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	I definitely can't	I probably can't	Maybe © ©	I probably can	©	7 V14460398 V14460399 V14469910			

Previous item						-	2019 item							D/A/ R/NC+	Rationale
17. How much does each one answer choice on	of the followi each row.	ng statements	describe a pe	rson like you?	Select	VHDMOU	37. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	ou? 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.	۵	Φ	0	Φ	Φ	VH260019	a. I want other students to think I am good at math.	@	®	©	Ф	Ф	VH844871		into two
b. I want to show others that my math schoolwork is easy for me.	0	0	0	Φ	0	VH2690EO	b. I want to show others that my math schoolwork is easy for	Ø	(8)	0	0	(VH844872		matrices of achievemen
c. I want to look smart in comparison to the other students in my math class.	Ø	œ	0	Φ	æ	YIDIADA)	c. I want to look smart in comparison to the other students in my	®	(3)	0	•	(D)	VH844873		goals items (performan
d. I want to learn as much as possible in my math class.	۵	Ф	0	Φ	0	VH269059-	math class. d. I want to get better grades than most other students in my math	3	(3)	0	Φ	©	VH844882		and master
e. I want to become better in math this year.	8	00	8	0	0	VIDWES	class.								create indic
f. I want to understand as much as I can in my math class.	۵	٩	0	Ф	Φ	VHIONORO	38. How much does each choice on each row.	of the follow	wing statemen	ts describe yo	ou? Select one	answer	VH845110		for both performand
								Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			and master
							a. I want to learn as much as possible in	Ø	®	©	©	©	VH845117		goals based
							my math class. b. I want to master a lot								on a total o
							of new skills in my math class.	®	•	0	•	©	VH845114		at least 4
							c. I want to become better in math this year.	0	■	0	Φ	Φ	VH845115		items, VH844882
							 d. I want to understand as much as I can in my math class. 	0	®	0	•	©	VH845118		and VH845114
2017 Grade 8)	VALUE -					VH267478	Issue: Student fa		w 14 60 50 1		322		VH844769		were added from the 2016 pilot assessment
18. How much does each one answer choice on	each row.						 How much does each choice on each row. 							R	The stem w 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. I enjoy doing math. b. I look forward to my	Ø	(D)	0	69	Φ.	VH267470 VH267481	a. I enjoy doing math. b. I look forward to my	(4)	(5)	0	0	0	VH844770		person like
math class. c. I am interested in the						VISSINIE VISSINIE	math class.	Ø	(B)	0	•	•	VH844771		you" to
things I learn in math. d. I think making an effort in math is	Ø	(D)	0	0	© ©	V#267465	c. I am interested in the things I learn in math. d. I think making an effort in math is	ØØ	® ®	0	0	© ©	VH844775 VH844772		"describe you".
worthwhile,	00	Φ	0	0	Ф	VPDs7ass	worthwhile. e. I think math will help me even when I am	@ @	9	0	9	Φ	VH844777		you .
e. I think math will help me even when I am not in school		1		-		-	not in school.			0	4		Secretary C	ı	
	0	00	Ø	Φ	Φ	VHD67887	f. I think it is important to do well in math.	0	®	0	•	•	VH844774		

Previous item 2019 item														D/A/ R/NC+	Rationale
19. How much do you en one answer choice on	joy solving eacl each row.	n of the follow	ving types of n	nath problems	? Select	VH267498	40. How much do you en answer choice on each	njoy each of th	e following t	types of math	activities? Sel	ect one	VH844743	R	The stem
	Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite	Enjoy a lot			Enjoy not at	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			wording was revised to
Addition, subtraction, multiplication, and division	®	(8)	0	•	(D)	VH267499	Addition, subtraction, multiplication, and division	®	(B)	©	Φ	©	VH844744		remove the
b. Finding areas of shapes and figures	®	•	0	0	©	VH267501	b. Finding areas of shapes and figures	Φ	®	0	•	(VH844745		word
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	0	•	Ø	0	©	VH267502	c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	®	(8)	0	Φ	•	VH844746		"solving" as per ADC feedback that
d. Solving equations or simplifying expressions	•	•	0	0	Ð	VH267503	d. Solving equations or simplifying expressions	0	(1)	0	0	(VH844750		the stem did
e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	0	•	0	Φ	Œ	VH267504	e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	0	(8)	0	Φ	•	VH844748		not match rows E and F in the
f. Working with geometric figures like rectangles and squares	Ø	(8)	Ø	Φ	©	VH267505	f. Working with geometric figures like rectangles and squares	Φ	•	0	Φ	•	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

2019 Op	erational Grade 8 Mathematics Student		
Previous item	2019 item	D/A/ R/NC-	Rationale
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	Never Never		
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	About once or twice a week		
© Every day or almost every day	© Every day or almost every day		
(2017 Grade 8)	Laure Dansware for Laureiga and Lautenation		
VIII	Issue: Resources for Learning and Instruction		
21. How often do you use a computer, tablet, smartphone, or gaming console outside of school to play educational games that involve math?	N/A	D	This item was dropped
Never			
About once or twice a year			based on
About once or twice a month			NCES's review
About once or twice a week			of
© Every day or almost every day			technology-
			use items.
(2017 Grade 8)			ase items.
VBB	N/A	D	This item was
22. How often do you use a computer, tablet, smartphone, or gaming console outside of school to play popular games that involve math?			
Never			dropped
About once or twice a year			based on
About once or twice a year About once or twice a month			NCES's review
About once or twice a week			
© Every day or almost every day			of
Tref, day of dimensional and			technology-
(2017 Grade 8)			use items.
·	4973	VH460923	NI/A
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?	NC	N/A
Yes			
① No	① No		
(2017 Grade 8)	to a Curtary Course		
VH4	Issue: Student factors	MINISTER	
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.	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.	NC	N/A
(2017 Grade 8)	Issue: Student factors		

2019 Operational Grade 8 Mathematics Student								
Previous item	2019 item	D/A/ Rationale R/NC+						
28. Have you ever participated in a math study group at school? ① Yes ① No (2017 Grade 8)	N/A	D This item was dropped based on the ADC's recommendation.						
29. Over the past seven days, how many days have you participated in a math study group at school? Enter the number of days. (2017 Grade 8)	N/A	D This item was dropped based on the ADC's recommendation.						

Appendix K-1ag: Operational Grade 8 Mathematics

			VH266769
22.	Wł	nat math class are you taking this year? Select one or more answer choices.	
	(A)	Eighth-grade math	
	$^{ ext{ B}}$	General eighth-grade math	
	0	Algebra I course	
	0	First year of a two-year algebra course	
	(E)	Second year of a two-year algebra course	
	Ð	Algebra I (one-year course)	
	©	Algebra II	
	\oplus	Geometry	
	0	Other	
			VH240046
23.	Wł	nat math class do you expect to take next year?	
	\bigcirc	Geometry	
	®	Algebra II	
	0	Algebra I (one-year course)	
	(First year of a two-year Algebra I course	
	(E)	Second year of a two-year Algebra I course	
	(Ē)	Introduction to algebra or pre-algebra	
	©	Basic or general math	
	\oplus	Business or consumer math	
	0	Other math class	
	Ф	I don't know.	
			VH350115
24.		school this year, how often have you been asked to write long answers (several stences or paragraphs) to questions on tests or assignments that involved math?	
	(A)	Never	
	$^{\odot}$	Once	
	0	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	®	0	0	Œ	VH266809
b. Graphing calculator	(A)	®	0	0	(E)	VH266810

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

VH589166

	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.	®	®	0	•	©.	VH267416
I used the Internet for my math work.	(A)	B	0	0	Œ)	VH267417
My teacher used computers or other digital devices when teaching math to my class.	@	®	0	Φ	©.	VH588077
My teacher required us to use computers or other digital devices to complete math assignments.	0	®	0	Θ	©	VH267419

- **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

VH268936

- **28.** How often do you use math in everyday life **outside of 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

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	(A)	®	0	0	©	VH268946
b. Program computers	A	®	©	0	(Ē)	VH268949
c. Play an instrument and read music	A	®	0	0	©	VH268961
d. Go to websites for help with your math homework	(A)	®	0	0	Œ	VH268962

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

$\overline{}$	TA T
(A)	NEWEY

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 homewo	ork
--	-----

A Yes

No

VH269037

32.	Over the past seven of	days, how man [:]	y days h	ave you h	elped	your frien	ds with	ı their
	math homework? En	iter the number	of days	i.				

33.	Ha	ve you ever participated in a math study group outside of school?	
	\bigcirc	Yes	
	®	No	
34.		er the past seven days, how many days have you participated in a math study outside of school? Enter the number of days.	VH460925
35.		w often do you play digital games (for example, apps, video games, or computer nes) outside of school that involve math?	
	(A)	Never	
	B	About once or twice a year	
	0	About once or twice a month	
	0	About once or twice a week	
	Œ	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	(4)	®	0	0	©.	VH460382
b.	Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	(4)	(9)	0	Φ	Œ	VH460383
c.	Determine a 20 percent tip of a 67-dollar restaurant dinner bill	(4)	®	0	0	©	VH267679
d.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	(®	0	0	Œ	VH267682
e.	Give an example to show that a math statement is false	(A)	®	0	0	Œ	VH460399
f.	Explain to your classmate how you solved a math problem	(A)	®	0	0	Œ	VH460910
g.	Use correct mathematical words and symbols when showing your work	0	®	0	0	Œ	VH460902

37. 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.	(A)	®	0	0	Œ	VH844871
b.	I want to show others that my math schoolwork is easy for me.	(9)	®	0	Θ	©.	VH844872
c.	I want to look smart in comparison to the other students in my math class.	(9)	®	0	Θ	©	VH844873
d.	I want to get better grades than most other students in my math class.	(4)	®	0	0	©	VH844882

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

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

39. 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	®	©	0	Œ	VH844770
b. I look forward to my math class.	(A)	®	0	0	Œ	VH844771
c. I am interested in the things I learn in math.	(A)	®	0	0	Œ	VH844775
d. I think making an effort in math is worthwhile.	(A)	®	0	0	Œ	VH844772
e. I think math will help me even when I am not in school.	(A)	®	0	0	©.	VH844777
f. I think it is important to do well in math.	(A)	®	0	0	Œ	VH844774

40. 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	
a.	Addition, subtraction, multiplication, and division	(A)	®	0	0	Œ	VH844744
b.	Finding areas of shapes and figures	(A)	B	0	0	Œ	VH844745
c.	Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	(9)	®	0	0	Œ	VH844746
d.	Solving equations or simplifying expressions	(A)	®	0	0	Œ	VH844750
e.	Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	(4)	®	0	0	©	VH844748
f.	Working with geometric figures like rectangles and squares	(A)	B	0	0	Œ	VH844749

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

2019 P	ilot Grade 8 Mathematics Student			
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 © First year of a two-year algebra 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:	- YIR 1000:	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? ① Geometry ① Algebra II ② Algebra I (one-year course) ② First year of a two-year Algebra I course ① Second year of a two-year Algebra I course ② Introduction to algebra or pre-algebra ② Basic or general math ③ Business or consumer math ② Other math class ③ I don't know.	9. What math class do you expect to take next year?	V18(100)T	R	This item's response options were revised based on cognitive interviews and as recommende d by NCES.
(2017 Grade 8) 27. 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 (2017 Grade 8)		VIESSIE	NC	N/A

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

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? 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	N/A	D	This item was dropped based on the ADC's recommendat ion.
(2017 Grade 8)	NI/A	D	This item was
29. 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 month Every day or almost every day (2017 Grade 8)	N/A	D	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
◆ Never			place of
About once or twice a year			keeping
About once or twice a month			VH853724, as
About once or twice a week Every day or almost every day			per similar
2 Lity any or minoscorety any			recommendat
			ions made for
			Reading
			based on
			pretesting
			and to ensure
			consistency
(2247.2.1.2)			across
(2017 Grade 8)			subjects.

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

					2019) Pilo	ot Grade 8 Mat	hemat	ics Stu	dent					
Previous item							2019 item							D/A/ R/NC+	Rationale
31. In your math class thi calculators? Select on	is year, how of e answer choi	ten have you ce on each rov	used the follow.	wing types of		VH200818	19. In your math class thi calculators? Select on	s year, how of e answer choice	ten have you ce on each rov	used the follow.	wing types of		VIIS82460	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 examples of
Basic calculator Craphing calculator	Ø	(B)	0	®	Φ	VH266610	 Basic calculator (for example, four function or scientific) 	0	Φ	0	0	Φ	VH853523		what is meant
(2017 Crade 9)							b. Graphing calculator	Φ	(1)	Ö	0	0	VFC266816		by a basic calculator.
(2017 Grade 8) 32. This school year, how one answer choice on	often did the f	ollowing thin	gs happen in yo	our math class	? Select	VIBS99166	Issue: Resources 20. This school year, how one answer choice on	often did the f				37 Select	VIII:82471	R	Previous 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 "a" and "c" were
My teacher used computers or other digital devices to show us how to work through math problems.	6	•	0	0	θ	VID67416	a. My teacher used computers or other digital devices to show us how to work through math problems.	Φ	(3)	0	Ф	Φ	V34267410		revised to focus more on assessing
 I used the Internet for my math work. 	®	•	0	0	Ф	VH267417	b. I used the Internet for my math work.	®	Φ	0	Ф	Œ	VH267417		what the students are
c. My teacher used computers or other digital devices when teaching math to my class.	Φ	Ф	0	6	Φ	VH588077	c. My teacher used computers or other digital devices to go on websites or use apps when teaching math	•	•	0	Ф	Ф	VH810476		utilizing the technology
d. My teacher required us to use computers or other digital devices to complete math assignments.	Ф	•	۵	۵	Φ	V11267419	to my class. d. My teacher required us to use computers or other digital devices to	8	•	0	0	θ	VH810427		for. These are current sub-
(2017 Grade 8)							go on websites or use apps to complete math assignments.								items "c" and "d".
(2017 Grade 8)						1 martine	Issue: Resources	for Lear	ning and	Instruct	on				
33. In this school year, how (excluding handheld ca Never About once or twice About once or twice Every day or almost	e a year e a month e a week				e	VID36036	N/A							D	This item was dropped based on NCES's review of technology-
(2017 Grade 8)															use items.

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

					2019) Pilo	ot Grade 8 Mat	hemat	tics Stu	dent					
Previous item							2019 item							D/A/ R/NC+	Rationale
34. In this school year, how of (excluding handheld calculus math assignments? Never About once of twice a About once of twice a Every day of almost every day of almost every day.	lators) to le year month week	ou used a con ook online for	mputer or othe	er digital device	ur	VH39037	10. In this school year, how your math assignments Never About once or twice About once or twice Every day or almost	e a year e a month e a week t every day				vith	VHHID512	R	The item stem was revised.
(2017 Grade 8)						VH417207	Issue: Resources	for lear	ning and	instructi	on				
35. In this school year, how of texcluding handheld calculon Never Once Two or three times Four or five times More than five times (2017 Grade 8)					ce		N/A							D	This item was dropped based on NCES's review of technology-use items.
36. How often do you use mat Never About once or twice a About once or twice a Every day or almost ev (2017 Grade 8)	year month week	lay life outsid	de of school?			VICHI935	1. How often do you use m Never About once or twice About once or twice About once or twice Every day or almost Issue: Resources	a year a month a week every day			ion		VII266936	NC	N/A
37. How often do you particip school? Select one answer			ving activities	outside of		VieSergisi	18. How often do you pare school? Select one ans	ticipate in ea	ch of the follow				VIB82492	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 of almost every day	r		was revised.
a. Talk about math problems with your friends	0	Ф	0	Ф	©	VH266946	Talk about math problems with your triends	0	year ©	ω .	Ф	© ©	VH268986		
b. Program computers	®	•	0	Ф	Φ	VH268949	b. Write a computer	0	•	0	0	0	VH858371		
c. Play an instrument and read music	0	@	0	0	0	VH268961	c. Play an instrument	-		-	40	-	-		
d. Go to websites for help with your math homework	0	®	0	0	Ф	VHIseno2	d. Go to websites for help with your math	9	0	9	0	9	VH268901		

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

2019 Pilo	ot Grade 8 Mathematics Student			
Previous item	2019 item		D/A/ R/NC+	Rationale
38. Have you ever helped your friends with their math homework? © Yes © No	3. Have you ever helped your friends with their math homework? © Yes © No	VHIODIS	NC	N/A
(2017 Grade 8)	Issue: Resources for Learning and Instruction			
39. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.	Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.	VHOMMIT	NC	N/A
(2017 Grade 8)	Issue: Resources for Learning and Instruction			

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

2019 Pilot Grade 8 Mathematics Student

2019 item

Previous item

40. 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.	Estimate the weight of 5 apples using pounds (lbs.)	0	0	0	0	Ф	V11267674
b.	Divide 42 stickers among 6 students	0	Ф	0	•	Ф	VH617317
c.	Determine a 20 percent tip of a 67-dollar restaurant dinner bill	9	Φ	0	0	Φ	VH267679
d.	Describe the properties shared by every isosceles right triangle	Θ	0	0	Φ	Ф	VH267681
e.	Find the amount of carpet needed to cover a rectangular floor if you know its length and width	0	Ф	0	Θ	θ	VH267652
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 to cook	Θ	Φ	9	Φ	Φ	VH267683

23. 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 a bar graph to represent the number of desks, chairs, and tables in your classroom	9	Ф	0	9	Θ	VIAMORIAN
Ь.	Use a box plot to represent the height, in inches, of all of the students in your class	0	Ф	0	0	Θ	VIIMUSS
Ċ.	Determine the probability of picking a blue marble without looking if you know the number of marbles of each color in a bag	0	Φ	0	Ф	Ф	VHMMM
d.	List all of the different possible outcomes when a coin is flipped three times	6	0	0	0	0	VIIestis2

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	
Find the amount of carpet needed to cover a rectangular floor if you know its length and width	®	®	0	0	Φ	VH26768
Determine a 20% tip of a \$55 restaurant dinner bill	®	®	0	0	©	VH85369
c. List all of the different possible outcomes when a coin is flipped three times	•	ⅎ	0	0	Œ	V1485369
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	•	0	0	Θ	VH85368
e. Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	•	•	0	0	•	VH85369.
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	0	©	VH85368:
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	(0)	•	VH853713
h. Find the total sum of the interior angles of a pentagon with 5 equal sides	•	®	0	Φ	Œ	VH85371

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

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D/A/

R/NC+

R

Rationale

Current sub-

item "b" was revised. Current subitems "d", "f", "g", and "h"

administered in coglabs and retained for pilot.

were

Issue: Student factors

Previous item							2019 item							D/A/ R/NC+	Rationale
24. Thinking about math following? Do not act						VH613311									
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	; =									
Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	6 0	®	0	ө	Φ	V154903363									
b. Create an expression to show how old you will be in n years if you are 8 years old today	@	©	0	0	Ф	VH4400366									
c. Create an expression that shows the number of wheels on n wagons if each wagon has 4 wheels	®	Ф	0	Ф	9	VIII466389									
d. Explain how you know the number of books you can buy if you know the price of each book and you have \$35	(3)	Ф	Ф	Ф	θ	V1546G391									
	of the followi	ng statements	describe a ne	rson like vou	Select	Victoria	15. How much does each	of the follow	lina stataman	re daecriba va	n? Select one	ancwar	Visitule	R	The previou
2017 Grade 8) 41. How much does each one answer choice on	each row.	A little bit	Somewhat	Quite a bit	Exactly like		15. How much does each choice on each row.	Not at all	A little bit	Somewhat	Quite a bit	Exactly like	VISSINI	R	matrix was
41. How much does each one answer choice on a. I want other students to think I am good at	each row.						a. I want to learn as much as possible	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		R	matrix was separated into two
41. How much does each one answer choice on a. I want other students	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. b. I want to master a lot	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VVII.53957	R	matrix was separated into two matrices of
41. How much does each one answer choice on a. I want other students to think I am good at math. b. I want to show others that my math schoolwork is easy for me. c. I want to look smart in comparison to the	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VEDAGGE	a. I want to learn as much as possible about math in my class. b. I want to master a lot of new math skills in my class. c. I want to become a better math student	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		R	matrix was separated into two matrices of achievement goals items
41. How much does each one answer choice on a. I want other students to think I am good at math. b. I want to show others that my math schoolwork is easy for me. c. I want to look smart in comparison to the other students in my math class. d. I want to learn as much as possible in	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VIDA9049 VIIDA9050	a. I want to learn as much as possible about math in my class. b. I want to master a lot of new math skills in my class. c. I want to become a better math student this year. d. I want to understand as much as I can in my	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VF883927 VF6834mi	R	matrix was separated into two matrices of achievemer goals items (performan and master
41. How much does each one answer choice on a. I want other students to think I am good at math. b. I want to show others that my math schoolwork is easy for me. c. I want to look smart in comparison to the other students in my math class. d. I want to learn as much as possible in my math class.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VIDA9049 VIIDA9050	a. I want to learn as much as possible about math in my class. b. I want to master a lot of new math skills in my class. c. I want to become a better math student this year. d. I want to understand	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VVHS53927 VVHS53927 VVHS53949	R	matrix was separated into two matrices of achievemen goals items (performan and master In order to create indicates)
41. How much does each one answer choice on a. I want other students to think I am good at math. b. I want to show others that my math schoolwork is easy for me. c. I want to look smart in comparison to the other students in my math class. d. I want to learn as much as possible in my math class. e. I want to become better in math this	Some of the second of the seco	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VIDA9049 VIIDA9050	a. I want to learn as much as possible about math in my class. b. I want to master a lot of new math skills in my class. c. I want to become a better math student this year. d. I want to understand as much as I can in my	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VVHS53927 VVHS53927 VVHS53949	R	separated into two matrices of achievemer goals items (performan and master

⁺ 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						
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.	©	Ф	0	Φ	Ф	VH4854117		from the 2016 pilot
							b. I want to show others that my math schoolwork is easy for me.	0	(D)	8	9	0	V94854118		assessment.
							c. I want to look smart in comparison to the other students in my math class.	9	•	0	© © WIBSAII9		revised from "describe a		
															person like
							d. I want to get better math grades than most other students in my class.	0	•	0	Φ	Φ	VIERS 1.54		
42. How much does each one answer choice on		ing statements	describe a pe	erson like you	? Select	valisten	d. I want to get better math grades than most other students in my	ctors					VIBS4028	R	person like you" to "describe you". The stem wa
		ing statements A little bit like me	describe a pe	erson like you Quite a bit like me			d. I want to get better math grades than most other students in my class. Issue: Student Factors in the control of the contro	ctors of the follow	ving statemen	ts describe yo	u? Select one	answer		R	person like you" to "describe you". The stem wa revised from
one answer choice on	each row.	A little bit	Somewhat	Quite a bit	Exactly lik		d. I want to get better math grades than most other students in my class. Issue: Student Factors in the control of the contro	ctors of the follow	ving statemen	ts describe yo	u? Select one	answer		R	person like you" to "describe you". The stem wa revised from "describe a
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly lik	(e	d. I want to get better math grades than most other students in my class. Issue: Student Fact 16. 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	Quite a bit like me	answer Exactly like me	VIBS4028	R	person like you" to "describe you". The stem warevised from "describe aperson like
a. I enjoy doing math. b. I look forward to my math class. c. I am interested in the things I learn in math.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	VH267479	d. I want to get better math grades than most other students in my class. Issue: Student Fact 16. 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	A little bit like me	ts describe you	Quite a bit like me	answer Exactly like me	V1854028 VF6554729	R	person like you" to "describe you". The stem wa revised from "describe a
a. I emoy 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.	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	V11267479 V(126748)	d. I want to get better math grades than most other students in my class. Issue: Student Factories and the students in my class. 16. How much does each choice on each row. a. I enjoy doing math. b. I look forward to my math class.	of the follow Not at all like me	A little bit like me	somewhat like me	Quite a bit like me	answer Exactly like me	V1854028 V1854029 V18854030	R	person like you" to "describe you". The stem wa revised from "describe a person like you" to
a. I emoy 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	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	V10567479 V10567479 V10567491	d. I want to get better math grades than most other students in my class. Issue: Student Fact 16. 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	somewhat like me	Quite a bit like me	Exactly like me	V1854026 V1854029 V1854030 V78554034	R	person like you" to "describe you". The stem wa 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	Pilo	ot Grade 8 Mat	hemat	ics Stu	dent					
Previous item				2019 item							D/A/ R/NC+	Rationale			
	43. How much do you enjoy solving each of the following types of math problems? Select one answer choice on each row.							11. How much do you enjoy each of the following types of math activities? Select one answer choice on each row.							The stem wording was
	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 somewhat	Enjoy quite a bit	Enjoy a lot		revised to remove the word	•
 Addition, subtraction, multiplication, and division 	®	0	0	9	Θ	VH267499	Adding, subtracting, multiplying, and dividing fractions	Θ	Ф	0	(0)	Φ	VH810635		
 Finding areas of shapes and figures 	Φ	0	0	0	0	VHOA7501	b. Finding areas of shapes and figures	0	Φ	0	0	Ф	VH858661		"solving" as
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	•	0	0	Φ	Ф	VH287902	c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	0	®	Φ	0	Ф	VI1853662		per ADC feedback that
d. Solving equations or simplifying expressions e. Constructing and	Φ	0	0	Φ.	0	VH267503	d. Solving problems about ratios and rates (for example, if	Φ.	Ф	0	0	Φ	- American		the stem did not match
building different types of graphs (for example, bar graph,	Œ)	Ф	0	Ф	Φ	V10267994	4 inches of rain fell in 16 hours, how many inches fell in 1 hour?)	9	Ф		Φ	Ψ.	7145545		rows E and F in the
line graph, or box and whisker plots) f. Working with geometric figures like	Ф	0	0	Ф	Φ	V18267505	e. Constructing and building different types of graphs (for example, a bar graph	Φ	Φ	0	ф	Ф	V1853674		previous phrasing.
rectangles and squares							or line graph) f. Moving geometric figures from one set of points to another (for example, rotating a rectangle 90 degrees)	Φ	®	9	(D)	Θ	VIBS-8671		Additionally, "problems" was replaced
(2017 Grade 8)							Issue: Student Fa	actors							with "activities". Sub-items "d", "e" and "f" were revised.
20. How often do you play games) outside of school	20. How often do you play digital games (for example, apps, video games, or computer games) outside of school that involve math?							5. How often do you play digital games (for example, apps, video games, or computer games) outside of school that involve math?							N/A
Never							Never								
About once or twice	e a year						About once or twice	e a year							
About once or twice							About once or twice	e a month							
About once or twice							About once or twice	e a week							
Every day or almost	t every day						D Every day or almost	every day							
(2017 Grade 8)							Issue: Resources	for Learr	ning and	Instruct	ion				

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

2019 Pilot Grade 8 Mathematics Student										
Previous item	2019 item							D/A/ R/NC+	Rationale	
26. Have you ever participated in a math study group outside of school? © Yes © No (2017 Grade 8)	6. Have you ever participate Tes No Issue: Student fac	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. [] [2017 Grade 8]	7. Over the past seven days group outside of school?	NC	N/A							
N/A	Issue: Student factors 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.							A	This item was	
				About once or twice a month	About once or twice a week	Every day or almost every day			added in place of	
	a. Help from a teacher	Ø	(1)	0	Φ	Ф	VH853725		VH336233.	
	b. Help from a tutor	0	0	0	0	Φ	VH853726		This item was	
	c. Help from a family member or friend	0	©	0	0	(D)	VHSSV720		pretested and	
	d. Help from online resources (for example, websites or apps)	0	Œ	0	0	0	VH853719		kept in Reading, and	
	Issue: Resources f						VH853772		to ensure consistency, the same decision was made for math.	
N/A	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.								This item was added in	
		Not useful all	l at Some use			don't receive that type of help.			place of	
	a. Help from a teacher	0	Œ	0	0	0	VH853733		VH336233.	
	b. Help from a tutor c. Help from a family	0	•		0	0	VH883734		This item was	
	member or friend	0	(5)	0	0	0	VHINATAN		pretested and	
	 d. Help from online resource (for example, websites or apps) 	es ②	Œ	0	0	0	VH95a737		kept in Reading, and	
	Issue: Resources f	or Learnii	ng and I	nstructi	on				to ensure consistency,	

⁺ 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						
						VIHAUSO							V1892480		the same decision was made for math.
25. Thinking about math, do you think that you would be able to do each of the following: Select one answer choice on each row.							Thinking about math, following? Select one	do you think answer choice	that you woul on each row.	d be able to	do each of the			R	Previous subitems "a",
	I definitely can't	I probably can't	Maybe	I probably	I definitely			I definitely can't	I probably can't	Maybe	I probably	I definitely			"d", and "f"
Decide if your classmate's math work is correct	@	0	0	æ	Ф	VI0460398	a. Give an example to show that a math statement is false	t a math	VI6460399		were dropped.				
b. Give an example to show that a math statement is false	Φ	0	0	8	Θ	VI5460399	b. Explain to your classmate how you solved a math problem	•	®	0	0	θ	Y11460F10		игорреи.
 Explain to your classmate how you solved a math problem 	0	0	9	9	θ	VH460910	c. Use correct mathematical words and symbols when	0	®	0	9	0	V15460902		
d. Use correct mathematical words and symbols to communicate ideas about math	0	Φ	0	0	θ	V15440900	showing your work	- V - 1							
e. Use correct mathematical words and symbols when showing your work	0	0	0	0	0	VH460902									
f. Use definitions of geometric shapes to support an argument	@	0	9	6	Ф	VH460912									

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

Appendix K-1ai: Pilot Grade 8 Mathematics

1. How often do you use math in everyday life outside of 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	
2. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days.	VH269037
3. Have you ever helped your friends with their math homework?	VH336085
 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 	VH350115
© Two or three times	
© Four or five times	
© More than five times	

5.	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	
		VH460923
6.	Have you ever participated in a math study group outside of school ?	
	Yes	
	® 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.	VH460925
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	
	① Other math class. Please specify:	

VI	18	105	07

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
- ① 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
 - About once or twice a year
 - About once or twice a month
 - About once or twice a week
 - © Every day or almost every day

11. 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	
a.	Adding, subtracting, multiplying, and dividing fractions	(8)	®	0	0	Œ	VH810635
b.	Finding areas of shapes and figures	(9)	B	0	0	Œ	VH853661
c.	Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	(9)	®	0	0	Œ	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?)	(4)	©	0	0	Œ	VH853665
e.	Constructing and building different types of graphs (for example, a bar graph or line graph)	(4)	®	0	0	©	VH853674
f.	Moving geometric figures from one set of points to another (for example, rotating a rectangle 90 degrees)	(9)	®	0	0	Œ	VH853671

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	
Find the amount of carpet needed to cover a rectangular floor if you know its length and width	0	®	0	(1)	Œ	VH267682
Determine a 20% tip of a \$55 restaurant dinner bill	(4)	®	0	0	Œ	VH853690
List all of the different possible outcomes when a coin is flipped three times	(9)	®	0	0	©	VH853692
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.	(9)	®	0	Θ	Œ	VH853683
Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	(4)	®	0	Θ	©	VH853693
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	®	0	0	Œ	VH853685
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)	(9)	®	0	©	Œ	VH853713
Find the total sum of the interior angles of a pentagon with 5 equal sides	(4)	®	0	0	©.	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)	®	0	0	Œ	VH853725
b. Help from a tutor	(A)	®	0	0	Œ	VH853726
c. Help from a family member or friend	A	®	0	0	Œ	VH853728
d. Help from online resources (for example, websites or apps)	(A)	®	0	0	Œ	VH853729

VH853732

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)	®	0	0	VH853733
b. Help from a tutor	(A)	®	0	0	VH853734
c. Help from a family member or friend	(A)	B	0	0	VH853736
d. Help from online resources (for example, websites or apps)	®	®	0	0	VH853737

VH853944

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	
a.	I want to learn as much as possible about math in my class.	(4)	®	0	0	©.	VH853957
b.	I want to master a lot of new math skills in my class.	(9)	B	0	0	Œ	VH853961
c.	I want to become a better math student this year.	(A)	®	0	0	Œ	VH853949
d.	I want to understand as much as I can in my math class.	(A)	®	0	0	© OFF	VH853952

16. 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	®	©	0	Œ	VH854029
b.	I look forward to my math class.	A	®	0	0	Œ	VH854030
c.	I am interested in the things I learn in math.	A	®	0	0	Œ	VH854034
d.	I think making an effort in math is worthwhile.	(A)	®	0	0	Œ	VH854031
e.	I think math will help me even when I am not in school.	(A)	®	0	0	Œ	VH854036
f.	I think it is important to do well in math.	A	®	0	0	Ē	VH854033

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	Exactly like me	
a.	I want other students to think I am a good math student.	(A)	®	0	0	©.	VH854117
b.	I want to show others that my math schoolwork is easy for me.	(9)	®	0	Φ	Œ	VH854118
c.	I want to look smart in comparison to the other students in my math class.	(9)	®	0	0	(L)	VH854119
d.	I want to get better math grades than most other students in my class.	Ø	®	0	0	©	VH854134

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	
a. Talk about math problems with your friends	(A)	®	0	0	©.	VH268946
b. Write a computer program	(A)	®	0	0	Œ	VH858371
c. Play an instrument and read music	(A)	®	0	0	Œ	VH268961
d. Go to websites for help with your math homework	(A)	®	0	0	©	VH268962

VH882460

19. 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	
exan	c calculator (for nple, four function cientific)	(A)	®	0	0	Œ	VH853523
b. Grap	phing calculator	A	®	0	0	Œ	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.	(A)	®	©	0	Ē	VH267416
b. I used the Internet for my math work.	(A)	®	0	0	Œ	VH267417
c. My teacher used computers or other digital devices to go on websites or use apps when teaching math to my class.	(A)	®	0	0	Œ	VH810476
d. My teacher required us to use computers or other digital devices to go on websites or use apps to complete math assignments.	(A)	®	0	0	Œ	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	(A)	®	0	0	Œ	VH460399
b.	Explain to your classmate how you solved a math problem	(A)	®	0	0	Œ	VH460910
c.	Use correct mathematical words and symbols when showing your work	®	®	0	0	©	VH460902

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

Previous item								2019 item							D/A/ R/NC+	Rationale	
Which courses have course more than taken in summer part of a longer coprogramming taug	once, give the school, but I urse (such as	e most recer OO NOT INC trigonomet	nt year you t CLUDE topion ry taught in	ook it. INCI cs that were drafting clas	UDE course only taught s or comput	es as	VH240819	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.								R	Sub-item "p" was dropped since "Other"
	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.	course in			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 12.			is not an option
a. Basic or general mathematics course	@	(3)	0	0	Θ	Ф	VH240820	a. Basic or general mathematics course	®	®	0	Ф	0	Ð	V11240820		preferred to be included
b. Tech-prep mathematics, business mathematics, consumer mathematics, or other applied mathematics course	0	•	0	•	θ	Θ	V14240844	b. Tech-prep mathematics, business mathematics, consumer mathematics, or other applied mathematics course	•	•	0	Φ	Φ	•	VH240844		for student operational administration.
c. Introduction to algebra or pre-algebra course	®	(8)	0	•	Θ	0	VH240822	c. Introduction to algebra or pre-algebra course	®	(B)	0	Ф	(©	VH240822		
d. Algebra I course	0	(1)	0	0	Φ	Ð	VH240823	d. Algebra I course	®	®	0	0	0	Ø	VH240823		
f. Algebra II course,	(8)	®	0	0	Θ	Ð	VH240824	e. Geometry course	®	®	0	0	_D	Ð	V14240824		
with or without trigonometry	@	100	0	•	Φ	•	VH240825	f. Algebra II course, with or without trigonometry	⊗	®	0	0	Φ	•	VH240825		
Trigonometry (as a separate course)	(3)	•	0	0	0	©	VH240826	g. Trigonometry (as a separate course)	•	®	0	0	Œ	®	VI-1240826		
h. Pre-calculus course (also called introductory analysis)	@	•	0	0	Θ	0	VH240833	h. Pre-calculus course (also called introductory analysis)	0	•	0	Φ	Φ	Φ	VH240833		
i. Integrated mathematics 1 (first year of a multi-year course) j. Integrated	•	•	0	0	Φ	•	VH240841	i. Integrated mathematics 1 (first year of a multi-year course)	9	•	0	Φ	®	ø	VH240841		
mathematics 2 (second year of a multi-year course)	®	®	0	0	•	•	VH240842	j. Integrated mathematics 2 (second year of a multi-year course)	0	•	Θ	Ф	Φ	•	VH240842		
k. Integrated mathematics 3 (third year of a multi-year course)	®	•	0	0	®	(VH240843	k. Integrated mathematics 3 (third year of a multi-year course)	8	(8)	0	Φ	®	Ø	VH240843		
. Integrated	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.		man you could!	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.			
mathematics 4 (fourth year of a multi-year course)	8	(18)	0	0	•	Ð	VH240821	l. Integrated mathematics 4 (fourth year of a	®	®	0	0	Œ	Ð	VH240821		
n. Probability or statistics course	®	(B)	0	0	•	Ð	VH240836	multi-year course) m. Probability or									
. Calculus course	(9)	®	0	0	(D)	•	VH240829	statistics course	®	®	0	0	®	Ð	VH240836		
computer programming course (such as C++, Visual Basic, etc.)	•	•	0	0	Θ	Ф	VH240835	n. Calculus course o. Computer programming course (such as	®	® ®	0	Φ	Ф Ф	© ©	VH240829 VH240835		
 Other mathematics course (specify): 	8	®	0	0	•	Ð	VH240834	C++, Visual Basic, etc.)									1

Previous item	2019 item		D/A/ R/NC+	Rationale	
2. Are you currently enrolled in or have you taken any of the following Advanced Placement (AP®) courses? Select all that apply. ② Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus AB. ③ Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus BC. ② Yes, I am enrolled in or have taken Advanced Placement (AP) Statistics. ③ 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. ② Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus AB. ③ Yes, I am enrolled in or have taken Advanced Placement (AP) Calculus BC. ② Yes, I am enrolled in or have taken Advanced Placement (AP) Statistics. ③ No, I have not taken any of the courses listed above. Issue: Organization of Instruction	VH250444	NC	N/A	
3. Are you currently enrolled in or have you taken an International Baccalaureate® (IB) mathematics course? ② Yes ③ No (2018 Grade 12)	26. Are you currently enrolled in or have you taken an International Baccalaureate® (IB) mathematics course? ② Yes ③ No Issue: Organization of Instruction	VIII.4908	NC	N/A	
4. Are you currently enrolled in or have you taken any online mathematics courses for high school or college credit? © Yes © No (2018 Grade 12)	27. Are you currently enrolled in or have you taken any online mathematics courses for high school or college credit? ◆ Yes ◆ No Issue: Organization of Instruction	VH240049	NC	N/A	
5. Was there a mathematics course that you would have liked to have taken this school year but did not take? ② Yes, but my school does not offer the course. ③ Yes, but the course was full. ③ Yes, but I did not have the necessary prerequisites. ③ Yes, but my schedule was full. ④ No, there was no other course that I wanted to take.	28. Was there a mathematics course that you would have liked to have taken this school year but did not take? ① Yes, but my school does not offer the course. ① Yes, but the course was full. ② Yes, but I did not have the necessary prerequisites. ② Yes, but my schedule was full. ② No, there was no other course that I wanted to take. Issue: Organization of Instruction	2,0050	NC	N/A	

revious item							2019 item							D/A/ R/NC+	Rationale
Please indicate how mu statements. Select one a	ch you DISA nswer choic	AGREE or AG ce on each row	REE with the	following		VH240763	N/A							D	This item was
Z	Stron	gly ree Dis	sagree	Agree	Strongly agree										dropped in lieu of
 Math is one of my favorit subjects. 	e ®		(8)	0	0	VH240768									keeping item
 I take mathematics because it will help me in the future. 	(4)		0	0	•	VH240770									VH731852.
I take mathematics to me my high school graduatio requirements.	n ®	a I	(8)	0	•	VH240767									
2018 Grade 12)	<u>'</u>	,	•												
7. How much does each of one answer choice on ea		ng statements	s describe a po	erson like you	ı? Select	VH267478	47. How much does each choice on each row.	of the follow	ing statement	s describe you	1? Select one	answer	VH731852	R	The version of
	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			the item that uses
a. I enjoy doing math.	(8)	(1)	0	0	(VH267479	a. I enjoy doing math.	⊗	•	0	Φ	Φ	VH731853		"describe
b. I look forward to my math class.	0	•	0	Φ	©	VH267481	b. I look forward to my math class.	0	•	0	Φ	Φ	VH731854		you" in the
c. I am interested in the things I learn in math.	⊗	•	0	Φ	•	VH617324	c. I am interested in the things I learn in math.	⊗	6	0	0	Θ	VH731858		1 -
d. I think making an effort in math is worthwhile.	®	•	0	0	Ф	VH267485	d. I think making an effort in math is worthwhile.	0	®	0	•	•	VH731855		stem was retained for
e. I think math will help me even when I am not in school.	®	•	0	Φ	•	VH267486	e. I think math will help me even when I am	0	•	0	•	0	VH731860		operational.
f. I think it is important to do well in math.	®	®	0	•	®	VH267487	not in school. f. I think it is important	®	Φ	0	Φ	Φ	VH731857		
g. I take mathematics because it will help me in the future.	•	•	0	Φ	•	VH651872	g. I take mathematics because it will help	0	®	0	0	•	VH731859		
h. I take mathematics to meet my high school graduation requirements.	0	•	0	Φ	•	VH651874	h. I take mathematics to meet my high school graduation	0	•	0	•	0	VH731856		
How much does each of choice on each row.	of the follow	ing statemen	ts describe yo	ou? Select one	answer	VHTTUASZ	requirements.								
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like										
a. I enjoy doing math.	0	0	0	00	(D)	VHT/21853									
b. I look forward to my math class.	0	00	0	Φ	Φ	VH731854									
c. I am interested in the things I learn in math.	00	0	0	0	00	VEG21868									
d. I think making an effort in math is worthwhile.	0	(D)	0	Ф	Ф	VH731855									
e. I think math will help me even when I am not in school.	0	00	0	Φ	Φ	V26731860									
f, I think it is important to do well in math.	0	00	0	0	(D)	V2/7/31867									
g. I take mathematics because it will help me in the future.	©	©	Ø	0	0	VH751869									
h. I take mathematics to meet my high school graduation	@	(3)	6	Φ	0	V94731856									

Previous item	2019 item	D/A/ R/NC+	Rationale
VH2ans	O VIEW		N/A
9. Are you currently taking a mathematics course?	29. Are you currently taking a mathematics course?	IVC	11/7
① No	① No		
(2018 Grade 12)	Issue: Organization of Instruction		
VH390		NC 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?	INC	IN/A
	Never		
① Once	(B) 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		
(2018 Grade 12)	Issue: Organization of Instruction		
VH350		D	This item was
11. For school this year, how often do you work in pairs or small groups to talk about	IV/A	U	
something that you have done in math?			dropped to
			keep in line
About once or twice a year			with the
About once or twice a month			
About once or twice a week			ADC's
© Every day or almost every day			recommenda
			ion for grade
(2018 Grade 12)			
			4 and 8.
VIDS75	N/A	D	This item was
12. How often do you use a computer or other digital device (excluding handheld calculators) for math at school?			dropped to
About once or twice a year			keep in line
© About once or twice a month			with NCES's
About once or twice a week			review of
© Every day or almost every day			
The second coefficient records and the first coefficient of the second			technology-
(22.2.2.1.12)			use items for
(2018 Grade 12)			grades 4 and
			o acco . and

Previous item							2019 item	D/A/ R/NC+	Rationale						
13. How often do you r	acciva halp av t	utoring with	moth outside e	f cehaol ar af	tor	VH336233	42. How often do you rece school?	ive help or tut	oring with m	ath outside of	school or afte	r	VH336233	NC	N/A
school?	eceive neip of ti	atomig with i	math outside o	i school of at	tei		Never								
Never							About once or twice	e a year							
About once or t	wice a year						About once or twice	e a month							
About once or t	wice a month						About once or twice	e a week							
About once or t	wice a week						© Every day or almos	t every day							
© Every day or alr	nost every day														
(2018 Grade 1	2)						Issue: Resources	for Lear	rning an	d Instruc	ction				
14. In your math class t calculators? Select o	his year, how of one answer choice	ten have you ce on each rov	used the follow.	wing types of		VH266808	31. In your math class th calculators? Select or	is year, how of te answer choice	ten have you ce on each rov	used the follow.	wing types of		VH266808	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	f	-	
		0	0	0	•	VH266809	a. Basic calculator	@	(1)	0	0	•	VH266809		
a. Basic calculator b. Graphing calculator	®		0	0	(D)	VH266810	b. Graphing calculator	00	(1)	0	0	(D)	VH266810	1	

Previous item							2019 item							D/A/ R/NC+	Rationale
15. This school year, how one answer choice on		ollowing thing	gs happen in yo	our math class	? Select	VH589166	32. This school year, how often did the following things happen in your math class? Select one answer choice on each row.								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	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.	•	(0	Ф	Φ	VH267416	My teacher used computers or other digital devices to show us how to work through math problems.	0	•	0	Ф	Φ	VH267416		
b. I used the Internet for my math work.	®	®	0	0	•	VH267417	b. I used the Internet for my math work.	⊗	(6)	0	Ф	0	VH267417		
c. My teacher used computers or other digital devices when teaching math to my class.	•	®	0	Φ	•	VH588077	 c. My teacher used computers or other digital devices when teaching math to my class. 	8	(6)	0	Θ	Φ	VH588077		
d. My teacher required us to use computers or other digital devices to complete math assignments.	0	®	0	0	Φ	VH267419	 d. My teacher required us to use computers or other digital devices to complete math assignments. 	0	®	0	Φ	•	VH267419		
6. In this school year, how (excluding handheld cal Never About once or twice About once or twice Every day or almost 2018 Grade 12)	culators) to c a year a month a week				e	VH336036	N/A							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 ⑤ About once or twice ⑤ Every day or almost	culators) to be a year a month a week					WH396037	33. In this school year, how of (excluding handheld calcumath assignments? Description Never Description About once or twice a Description About once or twice a Description About once or twice a Description Every day or almost every day or almos	ators) to look year month week					VH336037	NC	N/A
(2018 Grade 12)							Issue: Resources fo	or Learn	ing and	Instruct	ion				

				2	019 O	perat	tional Grade 12	Math	ematio	cs Stud	lent				
Previous item						•	2019 item							D/A/ R/NC+	Rationale
18. In this school year, how (excluding handheld cal				digital device		VH617207	N/A							D	This item was dropped to
Never															keep in line
Once															•
© Two or three times															with NCES's
Four or five times															review of
More than five time	S														technology-
(2018 Grade 12)															use items for grades 4 and 8.
19. How often do you use	nath in ever	vdav life outsic	de of school?	9		VH268936	39. How often do you use r	nath in ever	yday life outsi	de of school?			VH268936	NC	N/A
Never															
About once or twice	e a year						About once or twice	e a vear							
About once or twice							About once or twice								
About once or twice	e a week						About once or twice								
© Every day or almos	t every day						 Every day or almost 								
(2018 Grade 12) 20. How often do you par school? Select one ans			wing activities	outside of		VH589204	Issue: Resources 41. How often do you part school? Select one ans	icipate in ea	ch of the follow				VH589204	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 	0	•	0	Φ	©	VH268946	Talk about math problems with your friends	(A)	8	0	Φ	©	VH268946		
b. Program computers c. Play an instrument	0	(1)	0	0	(VH268949	b. Program computers	®	•	0	0	•	VH268949		
and read music	0	®	0	0	(D)	VH268961	c. Play an instrument and read music	(A)	•	0	0	©	VH268961		
d. Go to websites for help with your math homework	0	•	0	Ф	•	VH268962	d. Go to websites for help with your math homework	®	3	0	Ф	®	VH268962		
(2018 Grade 12)							Issue: Resources	for Lea	rning an	d Instruc	ction				
21. Have you ever helped y	our friends w	rith their math	homework?			VH336085	43. Have you ever helped y	your friends	with their mat	th homework?	1		VH336085	NC	N/A
Yes							Yes								
® No							® No								
(2018 Grade 12)							Issue: Resources	for Lea	rning an	d Instruc	ction				

					2	019 C	perat	onal Grade 12 Mathematics Student		
Prev	ious item						•	2019 item	D/A/ R/NC+	Rationale
ma	er the past seven day th homework? Enter	the number of		helped your	friends with tl	heir	VH269037	44. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. Issue: Resources for Learning and Instruction	NC NC	N/A
23. T	Thinking about math ollowing? Do not act	, do you thin ually solve th	k that you won te problems. So	uld be able to elect one ans	o do each of th wer choice on	each row.	VH589192	36. Thinking about math, do you think that you would be able to do each of the	R	A subset of items was
		I definitely can't	I probably can't	Maybe	I probably	y I definite can	ely	following? Do not actually solve the problems. Select one answer choice on each row.		selected from
	timate the weight of apples using pounds	®	(1)	0	Φ	Ф	VH267674	I definitely can't I probably can I probably can I definitely can		the previous
b. Di	ivide 42 stickers nong 6 students	®	®	0	0	•	VH617317	a. Create an expression that represents the average number of		two matrices to be
pe 67	etermine a 20 rcent tip of a -dollar restaurant	0	Ф	0	0	Φ	VH267679	miles you run in a week if you run 100 miles in w weeks b. Determine a 20		included in
d. Do	escribe the operties shared by ery isosceles right angle	0	•	0	0	Ф	VH267681	percent tip of a 67-dollar restaurant dinner bill c. Describe the		the self- efficacy
e. Fii ca a i	angle Ind the amount of rpet needed to cover rectangular floor if the know its length d width	0	•	0	Ф	•	VH267682	properties shared by every isosceles right triangle		matrix for operational.
tu if i A.I ho	now when to take a rkey out of the oven it goes in at 10:00 M. and it takes 3 ours and 45 minutes cook	Φ	®	0	0	•	VH267683	Issue: Student factors		
30. T	hinking about math, ollowing? Do not actu	do you think ally solve the	that you would problems. Sele	d be able to d	o each of the	ch row.	VH613511			
		I definitely	I probably can't	Maybe	I probably	I definitely				
tha ave mi we	eate an expression at represents the erage number of les you run in a ek if you run 100 les in w weeks	•	•	0	Φ	Φ	VF460383			
to: wi	eate an expression show how old you ll be in <i>n</i> years if u are 8 years old lay	®	•	0	Φ	Φ	VH460386			
tha nu wa	eate an expression it shows the mber of wheels on <i>n</i> gons if each wagon s 4 wheels	0	(8)	0	Φ	•	VH460389			
the you kno boo	plain how you know number of books u can buy if you ow the price of each ok and you have \$35	@	(6)	Ø	Φ	•	VH460391			
(201	8 Grade 12)									

				2	2019 C	perat	ional Grade 12	Math	emati	cs Stud	dent				
Previous item						-	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 you	u? Select	Mineral	34. How much does each choice on each row.	VH841870	R	The version of					
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like			Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like			the item that uses
I want other students to think I am good at math.	90	œ	0	0	Ф	VIETABLE	I want other students to think I am good at math.	®	•	0	0	Ф	VH844871		"describe
b. I want to show others that my math schoolwork is easy for me.	0	Φ	•	9	0	VH2/9050	b. I want to show others that my math schoolwork is easy for	®	(b)	0	0	•	VH844872		you" in the stem was
c. I want to look smart in comparison to the other students in my math class.	(5)	OD.	0	60	60	VIDWATE	c. I want to look smart in comparison to the other students in my	Φ	•	0	Φ	©	VI4844873		retained for operational.
d. I want to learn as much as possible in my math class.	Φ	0	0	•	Φ	VHQ69058	math class. d. I want to get better grades than most other students in my math	<u> </u>	®	0	Φ	•	VH844882		The single matrix was
e. I want to become better in math this year.	Φ	Ф	0	9	Φ	VH2n9056	class. 35. How much does each	of the follow	ving statemen	ts describe vo	ou? Select one	answer	VH845110		separated
f. I want to understand as much as I can in my math class.	· @	æ	0	Φ.	Ф	VICENSONS	choice on each row.	Not at all	A little bit	Somewhat	Quite a bit	Exactly like	1		into two matrices of
25. How much does each choice on each row.	of the follow	ring statemen	ts describe yo	u? Select one .	answer	VH731863	a. I want to learn as much as possible in	like me	like me	like me	like me	me ®	VH845117		achievement goals items
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me		my math class. b. I want to master a lot of new skills in my math class.	(A)	(3)	0	Φ	(D)	VH845114		(performance
 I want other students to think I am good at math. 	0	0	0	0	θ	VH731806	c. I want to become better in math this year.	0	(8)	0	0	Œ	VH845115		and mastery). In order to
 I want to show others that my math schoolwork is easy for me. 	8	θ	θ	Ф	θ	үнгизэг	d. I want to understand as much as I can in my math class.	@	(8)	0	Φ	Œ	VH845118		create indices for both
c. I want to look smart in comparison to the other students in my math class.	8	OD.	8	9	0	V1(7.218A8									performance and mastery
d. I want to learn as much as possible in my math class.	0	00	0	9	θ	VH73.1872									goals based
e. I want to become better in math this year,	8	(9)	0	9	8	VIOLUEZO.									on a total of at least 4
I want to understand as much as I can in my math class.	Φ	0	0	Φ	θ	VEO/4873									items,
															VH844882 and VH845114 were added from the 2016 pilot

Previous item							2019 item							D/A/ R/NC+	Rationale
26. How much do you enjo one answer choice on o		ch of the follow	wing types of r	nath problems	s? Select	VICEIN	38. How much do you enjoy each of the following types of math activities? Select one answer choice on each row.							R	Previous sub- items "a" –
	Enjoy not at	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			Enjoy not at	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot			"c" were
Addition, subtraction, multiplication, and division	•	Ф	0	ø	Ф	VH267499	Solving equations or simplifying	®	(D)	©	Φ	0	VH860653		dropped.
 Finding areas of shapes and figures 	00	Ф	0	00	op.	V(1267%))	expressions b. Constructing and								
c. Solving for probabilities and events (for example, eard, coin, marble, and spinner problems)	60	9	0	0	Ф	NIESGYAIS	building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	③	•	0	0	•	VH860651		
d. Solving equations or simplifying expressions	60	ø	0	69	Ф	NA KZAZSKIA	c. Working with geometric figures like rectangles and squares	®	®	0	0	©	VH860652		
e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	60	Ф	0	0	0	V11265504				,					
f. Working with geometric figures like rectangles and squares	0	0	0	0	Φ	VH267505									
. How often do you play digames) outside of school to Never About once or twice a About once or twice a About once or twice a Every day or almost every day or almost every day.	year month week		apps, video ga	mes, or comp	uter		40. How often do you play games) outside of school Never About once or twic About once or twic About once or twic Every day or almost	ol that involve e a year e a month e a week		apps, video gai	mes, or compt	iter	VH460329	NC	N/A
2018 Grade 12)						VH460337	Issue: Resources	for Lear	ning and	Instruct	tion				
28. How often do you use a of school to play educa Never About once or twic About once or twic Every day or almost	tional games e a year e a month e a week			ng console ou	tside	VB1460337	N/A							D	This item wa dropped to keep in line with NCES's review of technology- use items fo
2018 Grade 12)															grades 4 and 8.

2019 Oper	2019 Operational Grade 12 Mathematics Student											
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? 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	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.									

Previous item						•	ional Grade 12 I 2019 item							D/A/	Rationale
31. Thinking about math,	do you think	that you wou	ld be able to	do each of the		VIM13323	37. Thinking about math	. do vou think	that you woul	ld be able to	lo each of the		VH613523	R/NC+	Previous sub
following? Select one	answer choic	e on each row.					following? Select one answer choice on each row.								item "d" was
I.	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.
 Decide if your classmate's math work is correct 	۵	00	0	0	0	Y11660398	Decide if your classmate's math work is correct	®	•	0	Φ	•	VH460398		
b. Give an example to show that a math statement is false	0	Ф	0	Ф	Φ	VIEWING	b. Give an example to show that a math statement is false	0	•	0	Φ	©	VH460399		
c. Explain to your classmatc how you solved a math problem d. Use correct	@	Ф	0	60	Ф	VIGORATIV	c. Explain to your classmate how you solved a math problem	®	(8)	0	0	©	VH460910		
mathematical words and symbols to communicate ideas about math	•	Ф	Ф	Φ	0	VILLEGERS	d. Use correct mathematical words and symbols when showing your work	0	•	0	0	•	VH460902		
e. Use correct mathematical words and symbols when showing your work	Φ	Ф	Ø	Ф	Ф	VH144692	e. Use definitions of geometric shapes to support an argument	Ø	◎	0	0	©	VH460912		
f. Use definitions of geometric shapes to support an argument	®	Ф	0	@	Φ	VH460912									
2018 Grade 12)							Issue: Student fac	tors							
2. Have you ever participatedYesNo	l in a math s	tudy group ou	tside of scho	01?			45. Have you ever participatYesNo	ed in a math s	tudy group ou	itside of sch	1015				
2018 Grade 12)							Issue: Student fac	tors							
3. Over the past seven days, h group outside of school? Er	now many da	ys have you p ber of days.	articipated in	n a math study	7	VH460925	46. Over the past seven days, group outside of school?			articipated ir	a math study	7	VH460925	NC	N/A
2018 Grade 12)							Issue: Student fac	tors							
4. Have you ever participated Yes No	l in a math s	tudy group at	school?			V14460401	N/A							D	This item was dropped based on the ADC's recommend ion for grade
2018 Grade 12)															4 and 8.
5. Over the past seven days, h group at school? Enter the	ow many da number of da	ys have you pa	articipated ir	a math study		VH469877	N/A							D	This item wa dropped based on the ADC's

	2019 Operational Grade 12 Mathematics Student		
Previous item	2019 item	D/A/	Rationale
		R/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.	
a.	Basic or general mathematics course	(A)	®	0	0	©.	(F)	VH240820
	Tech-prep mathematics, business mathematics, consumer mathematics, or other applied mathematics course	(9)	®	0	Φ	©	©.	VH240844
c.	Introduction to algebra or pre-algebra course	(A)	®	O	0	Ē	Ē	VH240822
d.	Algebra I course	A	®	©	0	(E)	Ð	VH240823
e.	,	(A)	®	©	0	Œ	Ē	VH240824
f.	Algebra II course, with or without trigonometry	(A)	®	O	•	©.	©	VH240825
g.	Trigonometry (as a separate course)	(4)	®	0	0	Œ	(Ē)	VH240826
h.	Pre-calculus course (also called introductory analysis)	(4)	®	0	Φ	Œ	Œ	VH240833
i.	Integrated mathematics 1 (first year of a multi-year course)	(4)	®	0	Φ	Œ	©	VH240841
j.	Integrated mathematics 2 (second year of a multi-year course)	(A)	®	0	0	©.	Œ	VH240842
k.	Integrated mathematics 3 (third year of a multi-year course)	®	®	0	0	©	(F)	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.	
1.	Integrated mathematics 4 (fourth year of a multi-year course)	(A)	ß	0	0	©.	Œ	VH240821
m	. Probability or statistics course	(A)	®	0	0	Œ	(Ē	VH240836
n.	Calculus course	(A)	®	©	0	Œ	Ē	VH240829
О.	Computer programming course (such as C++, Visual Basic, etc.)	®	®	0	Φ	©.	©	VH240835

VH250444

- **25.** Are you currently enrolled in or have you taken any of the following Advanced Placement ($AP^{\textcircled{\$}}$) courses? Select **all** that apply.
 - (AP) Calculus AB.
 - ® 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.
 - O 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
 - ® No

17	LI 2	40	Ω	0

			VH240049
27.		e you currently enrolled in or have you taken any online mathematics courses high school or college credit ?	
	\bigcirc	Yes	
	®	No	
20	T T 7	and the second consistency of the second con	VH240050
28.		is there a mathematics course that you would have liked to have taken this nool year but did not take?	
	(A)	Yes, but my school does not offer the course.	
	®	Yes, but the course was full.	
	0	Yes, but I did not have the necessary prerequisites.	
	(Yes, but my schedule was full.	
	①	No, there was no other course that I wanted to take.	
		Two, there was no other course that I wanted to take.	
			VH240051
29.	Ar	e you currently taking a mathematics course?	
	(A)	Yes	
	®	No	
			VH350115
30	For	rechool this year how often have you been asked to write long answers (several	V11330113
30.		ntences or paragraphs) to questions on tests or assignments that involved math?	
	(A)	Never	
	®	Once	
	©	Two or three times	
	(D)		
		171016 than 11ve times	
30.	ser		
	O	Two or three times	
	0	Four or five times	
	Œ	More than five times	

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	®	0	0	Œ	VH266809
b. Graphing calculator	(A)	®	0	0	Œ	VH266810

VH589166

32. 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.	(4)	®	0	Φ	©.	VH267416
b. I used the Internet for my math work.	(A)	®	0	0	Œ	VH267417
c. My teacher used computers or other digital devices when teaching math to my class.	(4)	®	0	Φ	©	VH588077
d. My teacher required us to use computers or other digital devices to complete math assignments.	®	®	0	0	©.	VH267419

- **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
 - 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	
a.	I want other students to think I am good at math.	®	®	©	0	Œ	VH844871
b.	I want to show others that my math schoolwork is easy for me.	(4)	®	0	0	Œ	VH844872
c.	I want to look smart in comparison to the other students in my math class.	(4)	®	0	Θ	©	VH844873
d.	I want to get better grades than most other students in my math class.	(A)	®	0	0	Œ	VH844882

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. I want to learn as much as possible in my math class.	(A)	®	0	0	Œ	VH845117
b. I want to master a lot of new skills in my math class.	(A)	®	0	0	Œ	VH845114
c. I want to become better in math this year.	(A)	®	0	0	Œ	VH845115
d. I want to understand as much as I can in my math class.	(A)	(8)	0	0	Œ	VH845118

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 expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	(A)	®	0	Φ	©.	VH460383
b. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	(A)	®	0	0	©	VH267679
c. Describe the properties shared by every isosceles right triangle	(A)	®	0	•	©.	VH267681

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.

		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	®	®	0	0	Œ	VH460398
b.	Give an example to show that a math statement is false	(4)	®	0	0	Œ	VH460399
c.	Explain to your classmate how you solved a math problem	(A)	®	0	0	Œ	VH460910
d.	Use correct mathematical words and symbols when showing your work	(9)	®	0	0	Œ	VH460902
e.	Use definitions of geometric shapes to support an argument	®	®	0	0	Œ	VH460912

VH860646

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	
a.	Solving equations or simplifying expressions	(A)	B	0	0	©.	VH860653
b.	Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	0	®	0	0	(£)	VH860651
c.	Working with geometric figures like rectangles and squares	®	8	0	0	Œ	VH860652

39. J	How	often	do	you	use	math	in	everyday	life	outside	of	scho	ool	?
-------	-----	-------	----	-----	-----	------	----	----------	------	---------	----	------	-----	---

- 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

VH460329

- **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

VH589204

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	(A)	®	0	0	©	VH268946
b. Program computers	(A)	®	0	0	©	VH268949
c. Play an instrument and read music	(A)	®	0	0	©	VH268961
d. Go to websites for help with your math homework	(A)	®	0	0	Œ	VH268962

			V11330233
42.		ow often do you receive help or tutoring with math outside of school or after nool?	
	(A)	Never	
	®	About once or twice a year	
	0	About once or twice a month	
	(About once or twice a week	
	(E)	Every day or almost every day	
			VH336085
43.	Ha	ve you ever helped your friends with their math homework?	
	(A)	Yes	
	B	No	
44.		rer the past seven days, how many days have you helped your friends with their of the number of days.	VH269037
45.	(A)	ve you ever participated in a math study group outside of school ? Yes No	VH460923
46.		rer the past seven days, how many days have you participated in a math study oup outside of school ? Enter the number of days.	VH460925

		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)	®	©	0	Œ	VH731853
b. I look forwar math class.	d to my	(A)	®	0	0	Œ	VH731854
c. I am interest things I learn		(A)	®	0	0	Œ	VH731858
d. I think maki effort in mat worthwhile.		(A)	®	0	0	Œ	VH731855
e. I think math me even who not in schoo	en I am	(A)	®	0	0	©.	VH731860
f. I think it is i to do well in		A	®	0	0	Œ	VH731857
g. I take mathe because it w me in the fu	ill help	(A)	®	0	0	Œ	VH731859
h. I take mathe meet my hig graduation requirement	h school	(A)	®	0	0	©	VH731856

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

2019 (Operational Grade 4 Science Student		
Previous item	2019 item	D/A/ R/NC-	Rationale
	V1859912	NC	N/A
 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)?		,,,,
Never or hardly ever	Never or hardly ever		
© Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
© Very often	Very often		
2018 Grade 4)	Issue: Organization of Instruction		
		NC	N/A
2. 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)?		1.47.
Never or hardly ever	Never or hardly ever		
Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
∇ Very often	© Very often		
(2018 Grade 4)	Issue: Organization of Instruction		
		/Misselly N.C.	N1 / A
In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)?	 In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)? 	NC	N/A
Never or hardly ever	Never or hardly ever		
① Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
Very often	© Very often		
2018 Grade 4)	Issue: Organization of Instruction		
		NC	N/A
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		
Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
○ 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).

2019 Op	erational Grade 4 Science Student		
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	Never or hardly ever		
Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
Always or almost always	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 (print or digital)?		NC NC	N/A
Never or hardly ever	Never or hardly ever		
Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
Always or almost always	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?	In your science class this year, how often have you learned about science topics on the Internet?	NC NC	N/A
Never or hardly ever	Never or hardly ever		
Once in a while	Once in a while		
© Sometimes	© Sometimes		
© Often	© Often		
Always or almost always	Always or almost always		
(2018 Grade 4)	Issue: Organization of Instruction		
336090	24. In your science class this year, how often have you watched a short video clip.	NC	N/A
 In your science class this year, how often have you watched a short video clip, movie, or video about science topics? 	movie, or video about science topics? • Never or hardly ever	V	
Never or hardly ever	Once in a while		
Once in a while	© Sometimes		
© Sometimes	© Often		
© Often	Always or almost always		
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)? © Never or hardly ever © 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	NC NC	N/A
(2018 Grade 4)	Issue: Organization of Instruction		
10. In this school year, how often have you understood what the teacher talks about in science class? © Never or hardly ever © Once in a while © Sometimes © Often © Always or almost always (2018 Grade 4) 11. In this school year, how often have you done well on your science tests? © Never or hardly ever © Once in a while © Sometimes © Often	NYA	D	Due to overlap with new content and to keep student burden low, this item was dropped. Due to overlap with new content and to keep student
© Always or almost always (2018 Grade 4)			burden low, this item was
12. In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)? ① Never or hardly ever ① Once in a while ② Sometimes ② Often ② Always or almost always (2018 Grade 4)	N/A	D	Due to overlap with new content and to keep student burden low, this item was

⁺ 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
13. 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.						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.								R	Due to a lack
	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	I definitely			of response variability and
Describe different ways to heat or cool water	®	6	0	0	Ф	V74638868	Describe different ways to heat or cool water	0	0	0	0	Φ	V16635868		to keep student
b. Describe how the length of a vibrating string affects the sound it makes	0	0	0	8	Ф	V2MG8870	b. Describe how the length of a vibrating string affects the sound it makes	•	Θ	θ	0	Θ	VH638170		burden low, sub-item g
c. Design an experiment to show how sunlight affects the growth of a plant	@	0	0	Φ	Φ	V28638872	c. Design an experiment to show how sunlight affects the growth of a plant	Θ	0	0	0	Θ	VH638871		was dropped
d. Use examples to show how one living thing has helped another to survive	0	0	0	Ф	Ф	V24038875	d. Use examples to show how one living thing has helped another to survive	Φ	9	0	0	Ф	¥15038875		
c. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Φ	9	0	0	Φ	VPM/ARM76	e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the	0	®	0	•	θ	V1853647n		
f. Decide which tool to use if you want to measure wind speed	®	(3)	0	0	Ð	V28638583	f. Decide which tool to use if you want to	0	0	0	9	Φ	VHANKSI		
g. Describe why the weather in the summer is different than in the winter	۵	•	0	Ф	0	уныния	measure wind speed								

⁺ 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 much does each choice on each row. 	of the follow	ving statemen	ts describe yo	u? Select one	answer	VII659079	28. How much does each choice on each row.	of the follow	ving statemen	es describe yo	u? Select one	answer	VHIDWIN	R	This item 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 1		two items to
i. I want other students to think I am good at science.	0	(1)	0	9	9	VHA39080	a. I want other students to think I am good at science.	۵	®	0	9	9	VHGROOD		reduce scrolling and
o. I want to show others that science schoolwork is easy for me.	©	•	0	0	Φ	V11639062	b. I want to show others that science schoolwork is easy for mc.	0	Œ	0	0	9	VHILIPOWZ		align presentation
 I want to look smart in comparison to the other students in my science class. 	Ø	•	0	.0	θ	V116.19064	c. I want to look smart in comparison to the other students in my science class.	•	•	0	Ф	0	VH039084		with similar items in other
l. I want to get better science grades than most other students in my class.	0	Ф	0	0	Φ	VH732329	d. I want to get better grades than most other students in my science	0	0	0	0	0	Vissguine		subjects.
. I want to learn as much as possible in my science class.	0	@	0	0	0	VH630066	29. How much does each choice on each row.	of the follow	ving statemen	es describe yo	ui Select one	answer	Visidousd		Additionally, the wording
. I want to become better in science this year.	0	•	0	0	0	VH639087	choice on each row.	Not at all	A little bit	Somewhat	Quite a bit	Exactly like			of sub-items d and h (now
 I want to understand as much as I can in my science class. 	®	•	0	0	0	VH639089	a. I want to learn as much as possible in	like me	like me	like me	like me	me	VHSSOON		sub-item d in
n. I want to master a lot of new science skills in my class.	0	•	0	٥	Ø	VH7.85400	my science class. b. I want to become better in science	0	0	0	0	Φ	938639087		the second matrix) have
2018 Grade 4)							c. I want to understand as much as I can in my science class.	0	•	0	0	Ф	VM6390R2		been revised, with the word
							d. I want to master a lot of new skills in my science class.	©	0	0	Φ	Ф	VHENDANA		"science" moved to

⁺ 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
15. In this school year, he of school? Select one			of the follow	ing activities	outside	VIRGINSI	30. In this school year, how of school? Select one as	v often have nswer choice	you done each on each row.	of the followi	ng activities	outside	VHCRMSI	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 ar
a. Work on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	۵	θ	0	60	Θ	V94648970	a. Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	•	•	0	θ	θ	VHS:91s2		to keep student burden low sub-item b
Write or blog about science topics	0	•	0	0	9	VH638983	b. Used scientific tools (for example,					1			was droppe
Use scientific tools (for example, microscopes, thermometers, beakers, or weighing	•	•	0	0	60	V24636985	microscopes, thermometers, beakers, or weighing scales)	0	(0)	0	0	0	VH891927		Additionally the verbs a
d. Read about science topics in books or magazines (print or	•	(3)	0	0	Ð	V21636987	topics in books or magazines (print or digital)	0	0	0	.00	0	VH838987		of the origi
digital) Attend clubs or programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)	©	•	0	Φ	Ф	V21538993	d. Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	•	θ	0	θ	Φ	VH393268		sub-items a and c have been chang to past tens
2018 Grade 4)	of the follow	ring statemen	ts describe yo	u? Select one	answer	унсин	Issue: Student Face 31. How much does each choice on each row.		ring statement	es describe yo	u? Select one	answer	VH639125	NC	for consistency with the ite stem. N/A
16. How much does each choice on each row.	No. of the	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like			Not at all like me	A little bit like me	Somewhat	Quite a bit	Exactly like			
 How much does each choice on each row. 	Not at all like me		11111		,		a. I enjoy science		®	like me	like me	те	VH639(17		
choice on each row.		Ф	0	0	0	VH639117		(D)				100	25000		
. Temoy science activities.	like me		0	0	Ø	V16539117. V18639120	b. I look forward to my	9	0	0	0	0	V14639120		
a. I emoy science activities. b. Ilook forward to my science class. c. I am interested in the things I learn in science class.	like me	Ф				V18639120 V18639120 V18639122				0 0	0	0 0	V14639120 V14639122		
a. I emoy 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 is worthwhile.	like me	© ©	0	Φ	0	V18630120 V18630120 V18600122 V18630125	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	Φ	•				L		
a. I empty 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.	like me	0	0	0	6	VIIIGO9127 VIIIGO9125 VIIIGO9125 VIIIGO9127	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	Φ	6	0	0	Φ	VH689122		

⁺ 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
17. In this school year, ho class? Select one answ			following activ	ities in your	science	Visione	26. In this school year, he class? Select one answ			following activ	ties in your	science	V161,101411	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 	0	©	0	0	Φ	Valistiya 60	Made a drawing that explains why or how something happens	0	0	0	Θ	Φ	VH639156		
b. Used a science experiment to answer a question	0	0	@	0	0	V99639162	b. Used a science experiment to answer a question	0	0	0	0	0	V11639162		
 Put information you collected into a table or graph 	0	0	0	0	0	VH639164	c. Put information you collected into a table or graph	®	(B)	0	0	Φ.	VH639164		
d. Used evidence to explain why something happens	69	9	θ	0	0	YESOXURO	d. Used evidence to explain why something happens	Φ	0	0	0	0	VHosero		
e. Found news articles about science on the Internet	9	0	0	0	Φ	VHKRIM	e. Found news articles about science on the Internet	0	0	0	0	0	VHESSIES		
2018 Grade 4)							Issue: Organizati	on of Ins	truction						
8. How often do you talk someone in your family		ou have lear	ned in science	class with		VH745490	32. How often do you talk someone in your fami		you have lear	rned in science	class with		VHISTOR	NC	N/A
 Never or hardly eve 	r.						Never or hardly ev								
Once in a while							Once in a while								
© Sometimes							© Sometimes								
© Often							© Often								
© Very often							Very often								
2018 Grade 4)							Issue: Student Fa								

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

Appendix K-1an: Operational Grade 4 Science

V	Нι	539	90	12

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

VH639027

- **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

			VH639033
19.		your science class this year, how often have you learned about chemicals (for ample, vinegar, baking soda, or hydrogen peroxide)?	V11039032
	(A)	Never or hardly ever	
	®	Once in a while	
	0	Sometimes	
	0	Often	
	Œ	Very often	
			VH639037
20.		your science class this year, how often have you learned about rocks or minerals example, diamond, iron, or lava rock)?	
	(A)	Never or hardly ever	
	®	Once in a while	
	0	Sometimes	
	0	Often	
	Œ	Very often	
			VH639043
21.	sci	your science class this year, how often have you done science activities using entific tools (for example, microscopes, thermometers, beakers, or weighing les)?	
	(A)	Never or hardly ever	
	®	Once in a while	
	0	Sometimes	
	0	Often	
	Œ	Always or almost always	

			VH639047
22.		your science class this year, how often have you read from a science textbook int or digital)?	
	(A)	Never or hardly ever	
	®	Once in a while	
	0	Sometimes	
	0	Often	
	Œ	Always or almost always	
			VH639055
23.		your science class this year, how often have you learned about science topics on EInternet?	
	(A)	Never or hardly ever	
	$^{ ext{ B}}$	Once in a while	
	0	Sometimes	
	0	Often	
	Œ	Always or almost always	
			VH639057
24.		your science class this year, how often have you watched a short video clip, ovie, or video about science topics?	
	\bigcirc	Never or hardly ever	
	$^{ ext{ B}}$	Once in a while	
	0	Sometimes	
	0	Often	
	Œ	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	(A)	®	©	0	Œ	VH639156
b. Used a science experiment to answer a question	(A)	®	0	0	Œ	VH639162
c. Put information you collected into a table or graph	(A)	®	0	0	Œ	VH639164
d. Used evidence to explain why something happens	(A)	®	0	0	Œ	VH639166
e. Found news articles about science on the Internet	(A)	®	0	0	Œ	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	(4)	®	0	0	Œ	VH638868
b.	Describe how the length of a vibrating string affects the sound it makes	(4)	®	0	0	©	VH638870
c.	Design an experiment to show how sunlight affects the growth of a plant	(4)	®	0	Θ	(VH638872
d.	Use examples to show how one living thing has helped another to survive	®	®	0	0	©.	VH638875
e.	Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	(4)	(B)	0	Φ	(£)	VH638876
f.	Decide which tool to use if you want to measure wind speed	(A)	®	0	0	Œ	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.	®	®	0	0	Œ	VH639080
b.	I want to show others that science schoolwork is easy for me.	(4)	®	0	Θ	(L)	VH639082
c.	I want to look smart in comparison to the other students in my science class.	(4)	®	0	Θ	<u>(</u>	VH639084
d.	I want to get better grades than most other students in my science class.	®	®	0	0	(i)	VH860366

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

VH859155

		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	0	©	VH639086
b.	I want to become better in science this year.	(A)	®	0	0	Œ	VH639087
c.	I want to understand as much as I can in my science class.	(A)	(8)	0	0	©.	VH639089
d.	I want to master a lot of new skills in my science class.	(A)	®	0	0	Œ	VH860369

VH638951

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	Φ	©.	VH859162
b.	Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	®	®	0	Φ	©.	VH891927
c.	Read about science topics in books or magazines (print or digital)	®	®	0	0	©.	VH638987
d.	Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	(A)	(B)	0	©	©.	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.	A	®	0	0	Œ	VH639117
b.	I look forward to my science class.	(A)	®	0	0	Œ	VH639120
c.	I am interested in the things I learn in science class.	(A)	®	0	0	Œ	VH639122
d.	I think making an effort in science class is worthwhile.	(A)	®	0	0	Œ	VH639125
e.	I think science will help me even when I am not in school.	(A)	®	0	0	Œ	VH639127
f.	I think it is important to do well on science assignments.	(A)	®	0	0	Œ	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 Ope	rational Grade 8 Science Stude	ent	
Previous item	2019 item	D/A/ R/NC+	Rationale
1. In this school year, how often have you understood what the teacher talks about in science class? Description Never or hardly ever Description Once in a while Sometimes Description Often Always or almost always (2018 Grade 8)	N/A	D	Due to overlap with new content and to keep student burden low, this item was dropped.
2. In this school year, how often have you done well on your science tests? O Never or hardly ever O Once in a while Sometimes Often Always or almost always (2018 Grade 8)	N/A	D	Due to overlap with new content and to keep student burden low, this item was dropped.
3. In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)? Once in a while Sometimes Often Always or almost always (2018 Grade 8)	N/A	D	Due to overlap with new content and to keep student burden low, this item was dropped.

⁺ 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 your science class t projects on any of the						VH63807[22. 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			Never or hardly ever	Once in a while	Sometimes	Often	Very often			
 Living things (for example, plants, animals, or bacteria) 	0	®	0	0	Θ	VH639072	a. Living things (for example, plants, animals, or bacteria)	8	•	0	Φ	Φ	VH6.8072		
 Electricity (for example, circuits, batteries, or light bulbs). 	©	Φ	0	0	0	VHs.vv074	b. Electricity (for example, circuits, batteries, or light bulbs)	0	@	0	0	0	17HK8907a		
Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	@	Ф	0	0	0	VHC1907.1	c. Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	0	•	0	0	θ	VH639073		
 Rocks or minerals (for example, diamond, iron, or lava rock) 	•	•	0	0	Φ	VH639077	d. Rocks or minerals (for example, diamond, iron, or lava rock)	9	0	9	0	Φ	VH6/8627		
Technology and							e. Technology and								
	Ø	(a) Long to	©	⊕ eh ∈ fellowie	Θ	V16539076	engineering (for example, robots, pulley systems, or ramps) Issue: Organization					9	VH639376	D	To simplify
engineering (for example, robots, pulley systems, or ramps)	his year, how answer choice	often have yo on each row.	u done each of	the followin	Always or		engineering (for example, robots, pulley systems, or ramps)	on of Ins	truction	u done each of	the followin	ag Always or		R	To simplify wording
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class tactivities? Select one	his year, how answer choice	often have yo			ng		engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one	on of Ins	truction			og		R	wording based on
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. In your science class tactivities? Select one activities? Select one digital)	his year, how answer choice	often have yo on each row.	u done each of	the followin	Always or almost		engineering (for example, robots, pulley systems, or ramps) Issue: Organization 23. In your science class to	on of Ins	truction often have yo on each row.	u done each of	the followin	Always or almost		R	wording based on
engineering (for example, robots, pulley systems, or ramps) 2018 Grade 8) 5. 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	his year, how answer choice Never or hardly ever	often have yo on each row. Once in a while	ou done each of	the followir Often	Always or almost always	VH60031	engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one activities? Select one textbook (print or	on of Ins his year, how answer choice Never or hardly ever	truction often have yo on each row. Once in a while	u done each of	the followin Often	Always or almost always	VII639311	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. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) about science topics Used the Internet to learn about science topics	his year, how answer choice Never or hardly ever	often have yo on each row. Once in a while	Sometimes	Often	Always or almost always	VH60031	engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one activities? Select one digital 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	on of Ins his year, how answer choice Never or hardly ever	often have yo on each row.	Sometimes	Often	Always or almost always	VH69911	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 tactivities? Select one a. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) c. Used the Internet to learn about science topics Used the Internet to learn about science	his year, how answer choice Never or hardly ever	Once in a while	Sometimes ©	Often	Always or almost always	VH639315	engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one activities? Select one digital) 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	On of Ins this year, how answer choice Never or hardly ever	often have yo on each row. Once in a while	u done each of Sometimes ©	often	Always or almost always	V1659211 V28630313 V36640315	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 to activities? Select one. a. Read from a science textbook (print or digital) b. Read a book or magazine (print or digital) b. Read a book or magazine example or digital) 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	Once in a while	Sometimes ©	Often	Always or almost always	VH639315	engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 23. In your science class t activities? Select one activities? 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	DON OF INS This year, how answer choice Never or hardly ever	often have you on each row. Once in a while	u done each of Sometimes © ©	Often	Always or almost always	VH699311 VH6593113 VH659314 VH659314	R	wording based on stakeholde

⁺ 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
Thinking about scient following activities? S	ce, do you thin Select one answ	k that you wo er choice on t	uld be able to each row.	o do each of th	e	V11633566	24. Thinking about science following activities? S				o do each of th	ie	VH882515	R	Due to a lack
	I definitely can't	I probably can't	Maybe	I probably can	I definitely can			I definitely	I probably can't	Maybe	I probably	I definitely			of response variability and
a. Describe different ways to heat or cool water	0	0	0	0	Θ	VMSSReet	Describe how the length of a vibrating string affects the	®	Ф	0	0	Ф	VHK88870		to keep student
b. Describe how the length of a vibrating string affects the sound it makes	0	•	0	0	0	VI3618870	b. Design an experiment to show how sunlight		®	0		Φ	VNKisa72		burden low,
c. Design an experiment to show how sunlight affects the growth of a plant	Ø	•	0	0	· 60	V16030072	affects the growth of a plant c. Describe what would happen to the number		7 - 7						sub-items a, d, and g were
d. Use examples to show how one living thing has helped another to survive	Ø	®	0	0	Ф	V#638875	of frogs at a pond if all the insects were removed from the pond	0	Œ	0	00	Φ	VH638876.		dropped.
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	0	Φ	Ø	۵	Θ	V94638876	d. Decide which tool to use if you want to measure wind speed	Φ	Ф	Ø	100	Φ	VHAREAT		
f. Decide which tool to use if you want to measure wind speed	Φ.	•	0	Ф	Ф	VHSSNN									
g. Describe why the weather in the summer is different than in the winter	0	©	0	0	Ф	VHSSHIFT									

⁺ 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
7. How much does each choice on each row.	of the follow	ring statemen	ts describe yo	u? Select one	answer	Vaccioni	25. How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? Select one	answer	VI8630079	R	This item v
	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
a. I want other students to think I am good at science.	Φ	00	0	0	Φ	VHG39000	a. I want other students to think I am good at science.	9	@	0	0	0	V14839080		reduce scrolling ar
b. I want to show others that science schoolwork is easy for me.	Φ	Φ	0	0	0	V36/19082	b. I want to show others that science schoolwork is easy for me.	0	•	0	Φ	θ	VH639082		align presentation
c. I want to look smart in comparison to the other students in my science class.	9	0	Θ	0	0	SHUMAN	c. I want to look smart in comparison to the other students in my science class.	0	Φ	0	0	Ф	V18/33/084		with similar
d. I want to get better science grades than most other students in my class.	®	Θ	0	0	0	V117a2329	d. I want to get better grades than most other students in my science	0	®	0	Φ	0	V71360366		subjects.
e. I want to learn as much as possible in my science class.	Φ	Ф	0	Ф	0	Y11639088	class.								Additional the wording
f. I want to become better in science this year.	®	0	0	0	Θ	\$21/39/387	How much does each choice on each row.	of the follow	ring statemen	ts describe yo	u? Select one	answer	VIBI50155		of sub-iten
g. I want to understand as much as I can in my science class.	Ø	0	0	Ф	Ф	Y11639089		Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			sub-item d
h. I want to master a lot of new science skills in my class.	Φ	•	0	0	Ф	V10792436	I want to learn as much as possible in my science class.	0	0	0	0	Ф	VH639066		the second matrix) has
							b. 1 want to become better in science this year.	0	®	0	0	Φ	V31638067		been revis
							c. I want to understand as much as I can in my science class.	۵	®	0	0	Ф	VH630069		with the w "science"
							d. I want to master a lot of new skills in my science class.	0	®	0	0	θ	VH860369		moved to before the

Issue: Student Factors

(2018 Grade 8)

⁺ 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
8. 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	¥1463£95¥	27. In this school year, how o of school? Select one answ			of the follow	ing activities	outside	V1658951	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 an
s. Work on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	Ø	00	.0	0	Θ	V3460/070	a. Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	•	®	0	Θ	9	Messaroz		to keep student burden low, sub-item b
2. Write or blog about science topics	0	0	0	0	0	VH638983	b. Used scientific tools (for example,								was droppe
Use scientific tools (for example, microscopes, thermometers, beakers, or weighing	•	®	Ф	0	Φ	VHARMS	microscopes, thermometers, beakers, or weighing scales)	©	•	9	9	θ	VH891923		Additionally the verbs at the beginning
scales) I. Read about science topics in books or magazines (print or digital)	0	Ф	0	0	Φ	VH636987	topics in books or magazines (print or digital) d. Attended clubs or	0	0	0	9	0	VH638987		of the origin
Attend clubs or programs that include science or engineering activities (for example, chemistry club, or coding programs)	۵	0	0	0	Φ	VH638991	programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	0	Φ	0	0	0	Урекиздац		and c have been chang to past tens
2018 Grade 8)							Issue: Student Facto	ors							for consistency with the ite stem.
How much does each choice on each row.	of the follow	ving statemen	ts describe yo	u? Select one	answer	VIII-3015	28. How much does each of choice on each row.	the follow	ring statement	ts describe yo	u? Select one	answer	VH630.13	NC	N/A
	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			lot at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me			
 I enjoy science activities. 	0	(3)	0	0	0	V1639117	I enjoy science activities.	Ф	Œ	9	0	Θ	VH6393)7		
o. I look forward to my science class.	(3)	(3)	0	0	Ф	V18639120	b. I look forward to my science class.	Ø	(0)	0	0	Ф	VH639120		
. I am interested in the things I learn in science class.	۵	•	0	0	0	Y11649122	c. I am interested in the things I learn in science class.	0	0	0	0	9	VH639122		
l. I think making an effort in science class is worthwhile.	0	(1)	0	0	Ð	VH639125	d. I think making an effort in science class is worthwhile.	0	0	0	0	0	VHSV9125		
. I think science will	0	0	0	0	0	VH639127	e. I think science will help me even when I am not in school.	0	0	0	Φ	θ	VH639127		
help me even when I am not in school. I think it is important		0	0	0		VH619126	f. I think it is important								

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

					2019	Ope	rational Grade	8 Scie	nce Sti	udent					
Previous item							2019 item							D/A/ R/NC+	Rationale
10. In this school year, ho class? Select one answ			following activ	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			
Came up with research questions to explore how something works	0	•	0	0	0	VH639744	a. Came up with research questions to explore how something works	0	(8)	0	•	•	VH639744		
 Made drawings that explain why or how something happens 	0	(D)	O	Φ	•	VH639749	b. Made drawings that explain why or how something happens	0	0	0	Φ	0	VH639749		
c. Came up with experiments that you could use to answer a research question	0	(3)	0	•	©	VH639753	c. Came up with experiments that you could use to answer a research question	0	(8)	0	0	0	VH639753		
d. Used tables or graphs to identify relationships between variables	0	(3)	0	Φ	0	VH639760	d. Used tables or graphs to identify relationships between variables	0	®	0	0	@	VH639760		
e. Used math equations to explain or support scientific conclusions	0	•	0	Φ	0	VH639763	e. Used math equations to explain or support scientific conclusions	0	(8)	0	0	0	VH639763		
f. Used evidence from experiments to explain why something happens	0	(3)	0	Φ	©	VH639765	f. Used evidence from experiments to explain why something	0	(3)	0	•	(1)	VH639765		
g. Used information to disagree with someone about a scientific idea	0	(3)	©	Φ	0	VH639770	g. Used information to disagree with someone	⊗	(8)	0	0	©	VH639770		
h. Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	Φ	(3)	0	Φ	•	VH639777	about a scientific idea h. Combined information about science from multiple sources (for example, books, websites, or articles)	•	©	0	0	•	VH639777		
(2018 Grade 8)							for an assignment Issue: Organization	on of Inst	truction						
11. How often do you talk someone in your family		you have lear	ned in science	class with		VH743438	30. How often do you talk someone in your family		ou have lear	ned in science	class with		NH745438	N/C	N/A
Never or hardly ever	er						 Never or hardly eve 	r							
Once in a whileSometimes							Once in a while								
© Sometimes © Often							© Sometimes								
Very often							OftenVery often								
(2018 Grade 8)							Issue: Student Fa	ctors							

⁺ 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

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.

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

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)	®	®	©	0	Œ	VH639313
b.	Read a book or magazine (print or digital) about science topics	®	®	0	0	Œ	VH639315
c.	Used the Internet to learn about science topics	(A)	®	0	0	Œ	VH639314
d.	Watched a short video clip, movie, or video about science topics	(A)	®	0	0	Œ	VH639312
e.	Used a magnifying glass or microscope	(A)	®	0	0	Œ	VH887984
f.	Used a thermometer or weighing scale for making measurements	(A)	®	0	0	Œ	VH639078

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.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Describe how the length of a vibrate string affects the sound it makes	ting	(4)	®	0	0	©	VH638870
b. Design an experito show how sur affects the growt of a plant	ılight	(ß	0	Φ	©.	VH638872
c. Describe what we happen to the number of frogs at a pond the insects were removed from the pond	ımber l if all	(4)	®	0	Φ	Œ	VH638876
d. Decide which to use if you want to measure wind sp	to	(A)	®	0	0	Œ	VH638883

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

Not at all A little bit Somewhat Quite a bit **Exactly** like me like me like me like me like me a. I want other students to think I am good VH639080 **(A)** $^{\odot}$ \bigcirc **(** Œ at science. b. I want to show others that science VH639082 A B 0 **(** Œ schoolwork is easy for me. c. I want to look smart in comparison to the VH639084 \bigcirc $^{\odot}$ \bigcirc 0 Œ other students in my science class. d. I want to get better grades than most other VH860366 A B 0 **(** Œ students in my science class.

		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.	(A)	®	0	0	©.	VH639086
b.	I want to become better in science this year.	(9)	®	0	0	Œ	VH639087
c.	I want to understand as much as I can in my science class.	(4)	®	0	0	Œ	VH639089
d.	I want to master a lot of new skills in my science class.	(A)	(8)	0	0	Œ	VH860369

VH638951

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)	®	®	©	•	Œ	VH859162
b.	Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	(4)	®	0	Θ	©.	VH891927
c.	Read about science topics in books or magazines (print or digital)	(4)	®	0	0	©.	VH638987
d.	Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	(4)	®	0	Θ	©.	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.	(A)	®	0	0	Œ	VH639117
b. I look forward to my science class.	(A)	®	0	0	Œ	VH639120
c. I am interested in the things I learn in science class.	(A)	®	0	0	Œ	VH639122
d. I think making an effort in science class is worthwhile.	(A)	®	0	0	Œ	VH639125
e. I think science will help me even when I am not in school.	(A)	®	0	0	Œ	VH639127
f. I think it is important to do well on science assignments.	(A)	®	0	0	Œ	VH639128

29. 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.	Came up with research questions to explore how something works	0	®	0	0	Œ	VH639744
b.	Made drawings that explain why or how something happens	(A)	®	©	0	Œ	VH639749
c.	Came up with experiments that you could use to answer a research question	(4)	®	0	Θ	<u>(</u>	VH639753
d.	Used tables or graphs to identify relationships between variables	(4)	®	0	•	Œ	VH639760
e.	Used math equations to explain or support scientific conclusions	(A)	®	0	0	Œ	VH639763
f.	Used evidence from experiments to explain why something happens	0	®	0	0	Œ	VH639765
g.	Used information to disagree with someone about a scientific idea	(A)	®	0	0	Œ	VH639770
h.	Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	(8)	®	©	©	Œ	VH639777

- **30.** 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-1aq: Summary of Changes Operational Grade 12 Science

2019 Օր	2019 Operational Grade 12 Science Student							
Previous item	2019 item	D/A/ R/NC+	Rationale					
1. In this school year, how often have you understood what the teacher talks about in science class? ② Never or hardly ever ① Once in a while ② Sometimes ③ Often ① Always or almost always (2018 Grade 12)	N/A	D	Due to overlap with new content and to keep student burden low, this item was dropped.					
	N/A	D	Due to overlap with new content and to keep student burden low, this item was dropped.					
3. In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)? ① Never or hardly ever ① Once in a while ② Sometimes ② Often ② Always or almost always (2018 Grade 12)	N/A	D	Due to overlap with new content and to keep student burden low, this item was dropped.					

⁺ 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
4. In your science class to projects on any of the	this year, how following top	often have yo ics? Select on	u done hands-o e answer choice	n activities e on each ro	or w.	VIBORITI	28. In your science class to projects on any of the						V14630071	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)	0	Ф	0	Φ	0	V11639072	Living things (for example, plants, animals, or bacteria)	(8)	0	0	0	Θ	VHA39072		
Electricity (for example, circuits, batteries, or light bulbs)	0	Ф	0	0	θ	V11630074	b. Electricity (for example, circuits, batteries, or light bulbs)	00	0	0	0	θ	V8668074		
Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	0	Θ	0	Θ	9	VH639073	c. Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	•	0	0	0	Φ	VH6.99073		
Rocks or minerals (for example, diamond, iron, or lava rock)	0	Φ	0	•	0	VH639077	d. Rocks or minerals (for example, diamond, iron, or lava rock)	0	0	0	0	Φ	V24639077		
Technology and								-	-						
engineering (for example, robots, pulley systems, or ramps)	©	Φ	Φ	•	Φ	V18639078	e. Technology and engineering (for example, robots, pulley systems, or ramps) Issue: Organization	on of Inst	truction	Φ	Φ	Φ	унамо <i>г</i> ь		
engineering (for example, robots, pulley systems, or ramps) 018 Grade 12)	this year, how	often have yo				VH639076	engineering (for example, robots, pulley systems, or ramps)	on of Inst	truction				VH039076	R	To simplify wording
engineering (for example, robots, pulley systems, or ramps) 018 Grade 12) 5. In your science class to	this year, how	often have yo					engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 29. In your science class ti	on of Inst	truction					R	wording based on
engineering (for example, robots, pulley systems, or ramps) 018 Grade 12) 5. In your science class to	this year, how answer choice Never or	often have yo on each row.	u done each of	the followin	Always or almost		engineering (for example, robots, pulley systems, or ramps) Issue: Organizatio 29. In your science class ti	on of Inst	truction often have yo on each row,	u done each of	the followin	Always or almost		R	wording based on
engineering (for example, robots, pulley systems, or ramps) 018 Grade 12) 5. In your science class t activities? Select one Read from a science textbook (print or	chis year, how answer choice Never or hardly ever	often have yo on each row. Once in a while	u done each of	the followin	Always or almost always	V3629711	engineering (for example, robots, pulley systems, or ramps) Issue: Organization 29. In your science class the activities? Select one activities? Select one detection of the content of	on of Inst his year, how unswer choice Never or hardly ever	truction often have yo on each row, Once in a while	u done each of	the followin Often	Always or almost always	VH69011	R	wording based on stakeholde feedback, sub-item e
engineering (for example, robots, pulley systems, or ramps) O18 Grade 12) 5. In your science class t activities? Select one exactivities? Select one textbook (print or digital) Read a book or magazine (print or digital) about science	his year, how answer choice Never or hardly ever	often have yo on each row. Once in a while	ou done each of Sometimes	often	Always or almost always	Asersary	engineering (for example, robots, pulley systems, or ramps) Issue: Organization 29. In your science class the activities? Select one ac	on of Inst his year, how unswer choice Never or hardly ever	often have yo on each row.	u done each of Sometimes	Often	Always or almost always	VII69911	R	wording based on stakeholde feedback, sub-item e
engineering (for example, robots, pulley systems, or ramps) O18 Grade 12) 5. In your science class t activities? Select one extended a science textbook (print or digital) Read a book or magazine (print or digital) about science topics Used the Internet to learn about science	his year, how answer choice Never or hardly ever	often have yo on each row. Once in a while	u done each of Sometimes ©	Often	Always or almost always	Asersary	engineering (for example, robots, pulley systems, or ramps) Issue: Organization 29. In your science class the activities? Select one ac	on of Inst his year, how unswer choice Never or hardly ever	truction often have yo on each row, Once in a while	u done each of Sometimes ©	often Often	Always or almost always	VH699113	R	wording based on stakeholde
engineering (for example, robots, pulley systems, or ramps) O18 Grade 12) 5. In your science class t activities? Select one. Read from a science textbook (print or digital) Read a book or magazine (print or digital) about science topics Used the Internet to learn about science topics Watched a short video clip, movie, or video	his year, how answer choice Never or hardly ever	often have yo on each row. Once in a while	u done each of Sometimes © ©	Often	Always or almost always	V28639315 V28639315 V28639315	engineering (for example, robots, pulley systems, or ramps) Issue: Organizatic 29. In your science class the activities? Select one act	on of Insi	truction often have yo on each row. Once in a while	u done each of Sometimes ©	Often	Always or almost always	VH63931A VH639315 VH639314	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).

than once, give the most recent year you took it. Select one answer choice on each row. INCLUDE courses sake an insummer school, but DO NOT INCLUDE topics that were only taught as part of a longer course. I did not two kith i two kith is two kith is course in course in course in course in Grade 11. I wook this tounse in large in take this course in Crade 8. Grade 9. Grade 10. I two kith is course in course in Grade 12. I wook this law this course in course in bilding or his first year hology do	Previous item								2019 item								D/A/ R/NC+	Rationale
I did not take this course in Course	than once, give the INCLUDE courses	most recer taken in su	t year you to	ook it. Select	t one answer	choice on e	ach row.	more	than once, give the INCLUDE courses	most recer taken in su	t year you to	ook it. Select	t one answer	choice on e	ach row.	more	R	,
a. General science		take this	course in	course in	course in	course in	taking or have taken this course in			take this	course in	course in	course in	course in	taking or have taken this course in			response option was removed. This
C. Second-year biology d. Life science (other than biology) e. First-year chemistry f. Second-year chemistry g. First-year physics h. Second-year chemistry g. First-year physics h. Second-year chemistry g. First-year g. F				191					a. General science	®	00	0	0	Φ	Ф	VH241150		
biology d. Life science (other than biology) e. First-year chemistry f. Second-year chemistry f. Second-year chemistry f. Second-year chemistry g. First-year physics h. Second-year chemistry physics h. Physical science (other than dapace science (other than dapace science course (Please specify): D. Other science		0	0	0	0	0	Œ	VH241151	b. First-year biology	0	0	0	0	Φ	Θ	VED41151		1
than biology	biology	00	•	0	0	0	Ð	1	biology	•	•	0	0	Φ	Φ	V182411.09		option is only
chemistry f. Second-year chemistry g. First-year physics i. Physical science course (other than chemistry or physics) j. Earth and space science k. Engineering and technology g. Eight second year course (Please specify): 2018 Grade 12) Lessue: Organization of Instruction C. First-year physics C. First-year chemistry C. Scond-year Chemistry C. First-year chemistry C. First-year chemistry C. Scond-year Chemistry C. First-year chemistry C. Scond-year Chemist	than biology)		(1)	0	0	- 100		7-17		®	•	0	0	Ф	Θ	V18241148		used in pilot
chemistry g. First-year physics h. Second-year physics i. Physical science (other than chemistry or physics) i. Earth and space science science course (Please specify): 2018 Grade 12) Issue: Organization of Instruction Insulation	chemistry		7						chemistry	®	0	0	0	0	Ø	V1041164		
g. First-year physics	chemistry	0	(8)	0	0	0	©			0	@	0	0	0	0			113.
In Second-year physics		0	(8)	0	0	0	(D)	VH241156	and the state of t	(D)	Œ	0	0	Ф	Ф			
Physical science (other than chemistry or physics)	physics	®	(8)	0	Ф	(1)	Œ	VH241157	h. Second-year							V38341157		
Science Scie	(other than chemistry or	Ø	•	0	Ф	©	©	VH241149	Physical science (other than chemistry or	Φ	0	0	0	Φ	Ð	VH241149.		
R. Engineering and technology 1. Other science course (Please specify): 2018 Grade 12) Issue: Organization of Instruction VIEWINIA VIEWINI VIEWINIA VIEWINIA VIEWINIA VIEWINIA VIEWINIA VIEWINIA V		0	•	0	0	•	Ð	VH241147	j. Earth and space	•		-		•		Vanitar		
1. Other science course (Please specify): 2018 Grade 12) Issue: Organization of Instruction VIENDILL VIENDILL 7. Are you currently enrolled in or have you taken any online science courses for 25. Are you currently enrolled in or have you taken any online science courses for		0	(1)	0	0	©	Œ	VH241158			100	1.22	-	-	70	20.000		
2018 Grade 12) VIENDIT NC N/A	course (Please	®	(8)	0	Φ	©	®	VH241153		•	0	0	0	Φ	Φ	V)6241158		
7. Are you currently enrolled in or have you taken any online science courses for 25. Are you currently enrolled in or have you taken any online science courses for	2018 Grade 12	2)			•	•			Issue: Organiza	ition of	Instruc	tion						
	7. Are you currently en	e you currently enrolled in or have you taken any online science courses for							AOUT							YH240111	NC	N/A
									Ø Yes	20.00								
© No																		
	2018 Grade 12	2)							Issue: Organiza	tion of	la atau a	tion						

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

2019 Operational Grade 12 Science Student										
Previous item	2019 item	D/A/ R/NC+	Rationale							
8. Are you currently enrolled in or have you taken an Advanced Placement® course in science? Select all that apply.	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.	Yes, 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.	Tes, I am enrolled in or have taken Advanced Placement Physics 1.									
Yes, I am enrolled in or have taken Advanced Placement Physics 2.	Tyes, I am enrolled in or have taken Advanced Placement Physics 2.									
Yes, I am enrolled in or have taken Advanced Placement Computer Science A.	Tes, 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.	Yes, I am enrolled in or have taken Advanced Placement Computer Science Principles.									
O No, I have never taken an Advanced Placement science course.	No, I have never taken an Advanced Placement science course.									
(2018 Grade 12)	Issue: Organization of Instruction									
AMMIT	VH2491	NC	N/A							
9. Are you currently taking a science course?	27. Are you currently taking a science course?	'''	'','							
© Yes	© Yes									
Φ No	© No	4								
(2018 Grade 12)	Issue: Organization of Instruction									

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⁺ 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. Thinking about science following activities? S	ce, do you thir select one ansv	nk that you wo wer choice on o	ould be able t each row.	o do each of th	e	VH651609	35. Thinking about science following activities? S				o do each of th	ie	VH631600	R	Due to a lack
	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			of response variability an
Describe different ways to heat or cool water	(8)	(3)	0	Φ	Œ	VH638868	Describe how the length of a vibrating string affects the	®	Φ	0	Φ	Φ	V#636470		to keep student
b. Describe how the length of a vibrating string affects the sound it makes	@	®	0	•	Φ	VH638870	sound it makes b. Design an experiment to show how sunlight affects the growth	0	®	0	Ф	Ф	V#868872		burden low,
c. Design an experiment to show how sunlight affects the growth of a plant	®	(3)	0	Φ	©	VH638872	of a plant c. Decide which tool to use if you want to	©	•	0	0	Ф	V2963838K3		sub-items a, d, e, f, and g
d. Use examples to show how one living thing has helped another to survive	②	3	0	0	®	VH638875	d. Design an experiment to test how the growth of a plant is affected by	®	®	0	Φ	Œ.	VH638877		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	•	0	0	Φ	VH638876	light, water, and soil quality e. Create a diagram that shows how bees and plants need each other for survival	•	Φ	0	•	Φ	VH638878		
f. Decide which tool to use if you want to measure wind speed	®	®	9	Φ	D	VH638883	f. Describe how the combination of parental genes can								
g. Describe why the weather in the summer is different than in the winter	®	®	0	Φ	Φ	VH638885	result in different traits in their offspring (for example, eye or hair color)	Ø	⊕	0	0	0	V846.329.70		
h. Design an experiment to test how the growth of a plant is affected by light, water, and soil quality	@	•	9	•	0	VH638877									
Create a diagram that shows how bees and plants need each other for survival	0	•	0	•	•	VH638878									
j. Describe how the combination of parental genes can result in different traits in their offspring (for example, eye or hair color)	•	•	9	Ф	•	VH638879									

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⁺ 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
 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	ou? Select one	answer	VIII.VKD9	How much does each choice on each row.	of the follow	ing statement	s describe yo	u? Select one	answer	VH620070	R	This item was
1 - 1	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
I want other students to think I am good at science.	0	(3)	0	0	θ	V166-140060	a. I want other students to think I am good at science.	0	()	0	0	θ	VENCENDED		reduce scrolling and
b. I want to show others that science schoolwork is easy for me.	Φ	0	Φ	0	Θ	VH639082	b. I want to show others that science schoolwork is easy for me.	•	•	0	Θ	θ	VH639062		align presentation
I want to look smart in comparison to the other students in my science class.	0	Θ	0	9	θ	V74639084	c. I want to look smart in comparison to the other students in my science class.	Φ	(1)	0	0	Ф	VH639084		with similar items in othe
d. I want to get better science grades than most other students in my class.	@	0	0	6	0	VH7/2329	d. I want to get better grades than most other students in my science	Φ	(3)	9	0	Ф	VH80366		subjects.
e. I want to learn as much as possible in my science class.	Ø	0	0	0	0	VH639066	class.						Ш		Additionally, the wording
f. I want to become better in science this year.	Φ	Ф	0	Φ.	Φ	VHAMOUT	 How much does each choice on each row. 	of the follow	ving statemen	ts describe yo	u? Select one	answer	VIB(50)35		of sub-items d and h (now
g. I want to understand as much as I can in my science class.	@	Ф	0	0	0	V116-19089		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.	Ф	Φ	0	9	Ф	V(1732430)	I want to learn as much as possible in my science class.	0	Ð	0	0	0	V31639084		the second matrix) have
							b. I want to become better in science this year.	Ø	®	0	0	Ф	V266330117		been revised,
							 I want to understand as much as I can in my science class. 	0	Œ	0	0	Ф	V18639089		with the word "science"
							d. I want to master a lot of new skills in my science class.	Ø	Ф	0	0	Ф	VERNALIJANO		moved to before the

⁺ 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
12. In this school year, ho of school? Select one			of the follow	ing activities	outside	VII638031	34. In this school year, how of school? Select one a	w often have nswer choice	you done each on each row.	of the follow	ing activities	outside	V186/9951	R	Due to a lac
	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 a
a. Work on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	Ø.	Ф	0	Ф	Ф	V21/48/970	a. Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)	®	Θ	9	0	θ	VHISIVIAE		to keep student burden low sub-item b
o. Write or blog about science topics	0	Ф	0	0	Θ	VHIGHER	b. Used scientific tools								was dropp
c. Use scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	®	.00	0	Φ	Ф	Ystraeins	(for example, microscopes, rhermometers, beakers, or weighing scales) c. Read about science	Φ	Ф	0	0	Φ	VHR01927		Additional the verbs a the beginn
d. Read about science topics in books or magazines (print or digital)	Φ	Ф	0	Ф	Ф	V210/18/87	topics in books or magazines (print or digital) d. Attended clubs or	Φ	•	0	69	Ф	VH63899.7		of the orig
c. Attend clubs or programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)	49	₲	0	Ф	Φ	V31036993	programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	Φ	0	0	0	Φ	VH693269		and c have been chan to past ten
2018 Grade 12)	of the follow	ving statemen	ts describe yo	u? Select one	answer	Appropria	Issue: Student Far 33. How much does each choice on each row.		ving statemen	ts describe yo	u? Select one	answer	VHOULIS	NC	for consistenc with the its stem.
13. How much does each choice on each row.		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	10		
	Not at all like me	пке ше					a. I enjoy science		1 1000		Φ	Φ	V26639317		
choice on each row.	Not at all like me	Ф	0	0	0	V11639117	activities	(3)	0	Ф	-			1	
choice on each row. a. I enjoy science activities.	like me		0	0	Φ Θ	VH639117 VH639120	b. I look forward to my	0	®	0	0	Φ	V11639120		
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.	like me	®		0.71		100000			701				VH639120 VH639122		
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 is worthwhile.	like me	© ©	0	0	0	VHA39120	b. I look forward to my science class. c. I am interested in the things I learn in	0	(5)	0	0	Φ			
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	like me	© ©	0	0	9	VHA39120	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	®	60	0	0	Φ	VH639122		

⁺ 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, hor class? Select one answ			following activi	ities in your	science	VH639733	30. In this school year, ho class? Select one answ	w often have er choice on e	ou done the	following activi	ties 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	(3)	0	0	•	VH639744	a. Came up with research questions to explore how something works	0	(3)	0	0	©	VH639744		
 Made drawings that explain why or how something happens 	®	3	0	•	©	VH639749	b. Made drawings that explain why or how something happens	0	(3)	0	0	©	VH639749		
 Came up with experiments that you could use to answer a research question 	Ø	(3)	0	0	0	VH639753	c. Came up with experiments that you could use to answer a research question	8	(6)	0	0	•	VH639753		
 d. Used tables or graphs to identify relationships between variables 	®	(3)	0	Φ	•	VH639760	d. Used tables or graphs to identify relationships between	8	(8)	0	0	®	VH639760		
e. Used math equations to explain or support scientific conclusions	0	•	0	0	0	VH639763	e. Used math equations to explain or support	0	(8)	0	Φ	©	VH639763		
f. Used evidence from experiments to explain why something happens	®	®	0	0	©	VH639765	f. Used evidence from experiments to explain why something	0	(8)	0	0	•	VH639765		
g. Used information to disagree with someone about a scientific idea	00	(8)	Ø	Φ	©	VH639770	happens g. Used information to disagree with someone	0	(8)	0	Φ	©	VH639770		
h. Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	•	•	Θ	Φ	•	VH639777	about a scientific idea h. Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	•	(1)	0	0	©	VH639777		
2018 Grade 12)							Issue: Organizatio	on of Ins	truction			ļ			
15. How likely are you to p	oursue a career	r in science?				VMeSHR71	37. How likely are you to p	oursue a caree	r in science?				VII639871	N/C	N/A
Not at all likely							Not at all likely ■								
Not likely							Not likely								
Somewhat likely							 Somewhat likely 								
Quite likely							Quite likely								
© Extremely likely							© Extremely likely								
2018 Grade 12)														1	

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

				rational Grade 12 Science					
Previous item				2019 item				D/A/ R/NC+	Rationale
16. In this school year, have you done any of the focareer in science? Select one answer choice on	llowing activities to each row.	prepare for a	V16680723	38. In this school year, have you done any of the career in science? Select one answer choice of	following activities to n each row.	prepare for a	VH540721	R	To keep student
	Yes	No			Yes	No			burden low,
a. Attended a career fair	®	•	VH6407.89	a. Spoken with a guidance counselor or	®	- CD	VH640754		
b. Answered questions on a career interest survey (for example, the Vocational-Interest Inventory, the Career Interest Test, or the Strong Interest Inventory®)	•	Ф	V36640746	teacher about science-related careers b. Spoken with a guidance counselor or teacher about science-related college programs	0	•	V21649757		b, c, d, e, h,
c. Taken a science course in addition to what you need to graduate	•	0	VII640748	c. Shadowed a person who does science-related work at his or her job	0	•	V24640773		and k were
d. Collected information about science-related careers on your own	@	0	9H640749	d. Worked as an intern or employee doing science-related work	0	®	VH640773		dropped.
e. Collected information about science-related college programs on your own	0	(1)	VH640750	SCHOOL-C-ICHICH WOIK					
f. Spoken with a guidance counselor or teacher about science-related careers	Φ	Ф	V34040754						
g. Spoken with a guidance counselor or teacher about science-related college programs	Φ	Ф	N#640747						
h. Spoken with a family member or family friend who works in a scientific field about his or her job	®	•	V164075R						
i. Shadowed a person who does science-related work at his or her job	Φ	0	VH640771						
Worked as an intern or employee doing science-related work	0	•	V11640773						
k. Other (Please specify):	(3)	Ф	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	ss with	VII743438	36. How often do you talk about things you have someone in your family?	learned in science cla	ss with	VH743438	NC	N/A
Never or hardly ever				Never or hardly ever					
Once in a while				D Once in a while					
© Sometimes				© Sometimes					
© Often				© Often					
Very often				▼ Very often					
(2018 Grade 12)				Issue: Student Factors					

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

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)	®	0	0	Œ	Ð	VH241150
b.	First-year biology	(4)	®	0	0	Œ	Ð	VH241151
c.	Second-year biology	(A)	®	0	0	Ē	Ð	VH241159
d.	Life science (other than biology)	(A)	®	0	0	Ē	(F)	VH241148
e.	First-year chemistry	(4)	®	0	0	Œ	(E)	VH241154
f.	Second-year chemistry	(A)	®	0	0	Œ	(Ē)	VH241155
g.	First-year physics	(4)	®	0	0	Œ)	Ð	VH241156
h.	Second-year physics	(A)	®	0	0	Œ	(Ē)	VH241157
i.	Physical science (other than chemistry or physics)	(4)	®	0	Φ	Œ	(F)	VH241149
j.	Earth and space science	(A)	®	0	0	Ē	(F)	VH241147
k.	Engineering and technology	Ø	®	O	0	Ē	Ē	VH241158

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

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

- **27.** Are you currently taking a science course?
 - A Yes
 - ® No

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.

		Never or hardly ever	Once in a while	Sometimes	Often	Very often	
a.	Living things (for example, plants, animals, or bacteria)	®	®	©	0	Œ	VH639072
b.	Electricity (for example, circuits, batteries, or light bulbs)	(4)	®	0	0	(L)	VH639074
c.	Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	(4)	®	0	•	©	VH639073
d.	Rocks or minerals (for example, diamond, iron, or lava rock)	(A)	®	0	0	Œ	VH639077
e.	Technology and engineering (for example, robots, pulley systems, or ramps)	(9)	(B)	0	Θ	(VH639076

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)	(A)	®	0	0	Œ	VH639313
b.	Read a book or magazine (print or digital) about science topics	(9)	®	0	Θ	(L)	VH639315
c.	Used the Internet to learn about science topics	(A)	®	0	0	Œ	VH639314
d.	Watched a short video clip, movie, or video about science topics	(8)	®	0	0	Œ	VH639312
e.	Used a magnifying glass or microscope	A	®	0	0	Œ	VH887984
f.	Used a thermometer or weighing scale for making measurements	(A)	®	0	0	Œ	VH639078

30. 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.	Came up with research questions to explore how something works	0	®	0	Φ	Œ	VH639744
b.	Made drawings that explain why or how something happens	(A)	®	0	0	Œ	VH639749
c.	Came up with experiments that you could use to answer a research question	(A)	®	0	0	©	VH639753
d.	Used tables or graphs to identify relationships between variables	(4)	®	0	•	Œ	VH639760
e.	Used math equations to explain or support scientific conclusions	(4)	®	0	0	Œ	VH639763
f.	Used evidence from experiments to explain why something happens	(4)	®	0	0	Œ	VH639765
g.	Used information to disagree with someone about a scientific idea	(A)	®	0	0	Œ	VH639770
h.	Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	(8)	®	0	©	Œ	VH639777

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.	I want other students to think I am good at science.	®	®	©	0	Œ	VH639080
b.	I want to show others that science schoolwork is easy for me.	(4)	®	0	0	(E)	VH639082
c.	I want to look smart in comparison to the other students in my science class.	(4)	®	0	0	©.	VH639084
d.	I want to get better grades than most other students in my science class.	(®	0	0	Œ	VH860366

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.	(A)	®	0	0	©.	VH639086
b.	I want to become better in science this year.	(8)	®	0	0	Œ	VH639087
c.	I want to understand as much as I can in my science class.	(8)	®	0	0	Œ	VH639089
d.	I want to master a lot of new skills in my science class.	(4)	®	0	0	©.	VH860369

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	
	njoy science ivities.	A	B	0	0	Œ	VH639117
	ook forward to my ence class.	A	B	0	0	Œ	VH639120
thi	m interested in the ngs I learn in ence class.	(A)	®	0	0	Œ	VH639122
effc	nink making an ort in science class worthwhile.	(A)	®	0	0	Œ	VH639125
hel	nink science will p me even when I not in school.		®	0	0	Œ	VH639127
to	nink it is important do well on science ignments.	(A)	B	0	0	Œ	VH639128

34. 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)	(4)	®	0	0	©.	VH859162
b.	Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	(A)	®	©	(1)	Œ	VH891927
c.	Read about science topics in books or magazines (print or digital)	(®	0	0	Œ	VH638987
d.	Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	(A)	®	0	(1)	Œ	VH893268

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.

		I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a.	Describe how the length of a vibrating string affects the sound it makes	0	(8)	0	0	Œ	VH638870
b.	Design an experiment to show how sunlight affects the growth of a plant	(4)	®	0	0	©	VH638872
c.	Decide which tool to use if you want to measure wind speed	(4)	®	0	0	Œ	VH638883
d.	Design an experiment to test how the growth of a plant is affected by light, water, and soil quality	0	(8)	0	0	Œ	VH638877
e.	Create a diagram that shows how bees and plants need each other for survival	(8)	®	0	0	Œ	VH638878
f.	Describe how the combination of parental genes can result in different traits in their offspring (for example, eye or hair color)	(4)	®	0	0	©	VH638879

36.	How often do you talk about things you have learned in science class wit	h
	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
 - Quite likely
 - © Extremely likely

VH640721

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	®	®	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	®	®	VH640771
d.	Worked as an intern or employee doing science-related work	(A)	®	VH640773

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

Previous item	2019 item	D/A/ R/NC+	Rationale
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	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		N/A
2. Who taught you most of what you know about American Indian or Alaska Native history? Description No one has taught me about American Indian or Alaska Native history. Family members Friends Teachers 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 NC	N/A
3. Who taught you most of what you know about American Indian or Alaska Native traditions (ways of life, customs)? ① No one has taught me about American Indian or Alaska Native traditions. ① Family members ① Friends ② Teachers ① Tribal representatives or elders ① Some clse (please specify): (2015 Grade 4)	3. Who taught you most of what you know about American Indian or Alaska Native traditions (ways of life, customs)? ① No one has taught me about American Indian or Alaska Native traditions. ① Family members ② Friends ① Teachers ① Tribal representatives or elders ② Someone else (please specify);	NC NC	N/A

Previous item	2019 item	D/A/ R/NC+	Rationale
4. Who taught you most of what you know about American Indian or Alaska Native arts and crafts? ① No one has taught me about American Indian or Alaska Native arts and crafts. ① Family members ② Friends ① Tribal representatives or elders ① Some else (please specify):	4. 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 NC	N/A
5. How often do you go to American Indian or Alaska Native ceremonies and gatherings? Never Every few years At least once a year Several times a year (2015 Grade 4)	5. How often do you go to American Indian or Alaska Native ceremonies and gatherings? O Never Every few years At least once a year Several times a year	NC NC	N/A
6. How often do members of your family talk to each other in your American Indian or Alaska Native language? ① Never or hardly ever ② Once or twice a month ② Once or twice a week ① Every day or almost every day (2015 Grade 4)	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 © Every day or almost every day	NC NC	N/A

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? Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day (2015 Grade 4)	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 © Every day or almost every day	NC	N/A
8. How often do you attend classes in school that are taught in an American Indian or Alaska Native language? ① My school does not offer classes that are taught in an American Indian or Alaska Native language. ③ Never or hardly ever ② Once or twice a month ① Once or twice a week ⑤ 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	NC	N/A
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) 10. How do you rate yourself in reading an American Indian or Alaska Native language? Discannot read in an American Indian or Alaska Native language. Discan read a few words or phrases. Circumstance 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)			
11. Who taught you most of what you know 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.	No one has taught me about an American Indian or Alaska Native language.		
Family members	Family members		
© Friends	© Friends		
	Teachers		
© Teachers	© Tribal representatives or elders		
Tribal representatives or elders	Someone else (please specify):		
Some else (please specify):			
(2015 Grade 4)			
NHISSASS 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? Yes No	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? ◆ Yes No	NC	N/A
(2015 Grade 4)			
13. During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people in school? The Yes, once or twice Yes, three or more times	13. During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people in school? ◆ Yes, once or twice ◆ Yes, three or more times ◆ No	NC	N/A

2019 Operational Grade 4 National Indian Education Study (NIES) Student						
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? See Yes, 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? Solves, once or twice Yes, three or more times No	NC	N/A			
(2015 Grade 4)		80142				
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? ① Yes ① No	 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? Yes No 	NC.	N/A			
(2015 Grade 4)						
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.	16. When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it. ② This is not like me. ③ This is a little like me. ③ This is a lot like me.	NC	N/A			
(2015 Grade 4)						
17. I enjoy reading about American Indian or Alaska Native people. This is not like me.	17. I enjoy reading about American Indian or Alaska Native people. This is not like me.	NC	N/A			
This is a little like me.	This is a little like me.This is a lot like me.					
© This is a lot like me.	The state of the s					
The least the life.						
(2015 Grade 4)						

Previous item	2019 item D/A/ R/NC-		D/A/ R/NC+	Rationale	
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. 	VHZ4014S	NC	N/A	
(2015 Grade 4)		VH240146	NC	N/A	
19. I put a lot of effort into my schoolwork.	19. I put a lot of effort into my schoolwork.				
This is not like me.	 This is not like me. This is a little like me. 				
This is a little like me.	This is a lot like me.				
© This is a lot like me.					
(2015 Grade 4)					
20. I want to be one of the best students in	20. I want to be one of the best students in my class.	VH2#U#7	NC	N/A	
my class.	This is not like me.				
This is not like me.	This is a little like me.				
This is a little like me.	© This is a lot like me.				
This is a lot like me.					
(2015 Grade 4)					
21. I enjoy being challenged in my classes.	21. I enjoy being challenged in my classes.	VIQUUIAN	NC	N/A	
This is not like me.	This is not like me.				
This is a little like me.	This is a little like me.				
© This is a lot like me.	© This is a lot like me.				
(2015 Grade 4)					
22. I feel that I belong at school.	22. I feel that I belong at school.	VH240149	NC	N/A	
This is not like me.	This is not like me.				
This is a little like me.	This is a little like me.				
© This is a lot like me.	This is a lot like me.				

2019 item	D/A/	Rationale
	K/NC+	
23. If I put in enough effort, I will succeed in school. Strongly disagree Disagree Agree Strongly agree	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	NC	N/A
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	NC	N/A
	23. If I put in enough effort, I will succeed in school. 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 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	23. If I put in enough effort, I will succeed in school. ② Strongly disagree ③ Disagree ③ Strongly agree 24. Trying hard in school will help me live a good life when I grow up. ③ Strongly disagree ⑤ Disagree ⑤ Disagree ⑥ Disagree ⑥ 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 protect, or go over your homework with you. ② Never or hardly ever ⑤ Once or twice a month ⑤ Once or twice a month ⑥ Once or twice a week

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. ① Never or hardly ever ① Once or twice a month ② Once or twice a week ① 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 © Every day or almost every day	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. Never or hardly ever Once or twice a month Conce or twice a week 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. ② Never or hardly ever ③ Once or twice a month ③ Once or twice a week ⑤ Every day or almost every day	NC NC	N/A
(2015 Grade 4) 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 © Every day or almost every day (2015 Grade 4)	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 Every day or almost every day	NC	N/A

2019 Operational Grade 4 National Indian Education Study (NIES) Student					
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? Not at all A little Somewhat Very much	VIQANISS	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? Yes No Tm not sure.	30. Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in? So Yes No I'm not sure.	VR240157	NC	N/A	
(2015 Grade 4) VECTION 2015 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.	VII3-22891	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. (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.	VID42832	NC	N/A	

Appendix K-1at: Operational Grade 4 NIES

1.	gro	w much do you know about your American Indian tribe or Alaska Native oup? For example, you may know about the history, traditions, or arts and crafts your tribe or group.	
	(A)	Nothing	
	®	A little	
	0	Some	
	0	A lot	
			VH240129
2.		no taught you most of what you know about American Indian or Alaska Native tory?	
	\bigcirc	No one has taught me about American Indian or Alaska Native history.	
	®	Family members	
	0	Friends	
	0	Teachers	
	Œ	Tribal representatives or elders	
	(Ē)	Someone else (please specify):	
3	W/1	no taught you most of what you know about American Indian or Alaska Native	VH240130
J.		ditions (ways of life, customs)?	
	(A)	No one has taught me about American Indian or Alaska Native traditions.	
	®	Family members	
	0	Friends	
	0	Teachers	
	Œ	Tribal representatives or elders	
	Ð	Someone else (please specify):	

			VH240131
4.		no taught you most of what you know about American Indian or Alaska Native s and crafts?	
	(A)	No one has taught me about American Indian or Alaska Native arts and crafts.	
	®	Family members	
	0	Friends	
	(Teachers	
	Œ	Tribal representatives or elders	
	(Ē)	Someone else (please specify):	
			VH240132
5.		w often do you go to American Indian or Alaska Native ceremonies and herings?	
	(A)	Never	
	®	Every few years	
	0	At least once a year	
	0	Several times a year	
			VH240133
6.		w often do members of your family talk to each other in your American Indian Alaska Native language?	
	(A)	Never or hardly ever	
	®	Once or twice a month	
	0	Once or twice a week	
	0	Every day or almost every day	

V	н	2	41	n	11	2/	ı

			VH240134
7.		w often do people in your school talk to each other in your American Indian or aska Native language?	
	(A)	Never or hardly ever	
	$^{\odot}$	Once or twice a month	
	0	Once or twice a week	
	(Every day or almost every day	
			VH240135
8.		w often do you attend classes in school that are taught in an American Indian or aska Native language?	
	(A)	My school does not offer classes that are taught in an American Indian or Alaska Native language.	
	®	Never or hardly ever	
	0	Once or twice a month	
	0	Once or twice a week	
	(E)	Every day or almost every day	
			VH240136
9.		w do you rate yourself in speaking an American Indian or Alaska Native guage?	
	\bigcirc	I cannot speak an American Indian or Alaska Native language.	
	$^{ ext{ $	I can speak a few words or phrases.	

- 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.

© I can speak well.

		VH240138
11.	Who taught you most of what you know about an American Indian or Alaska Native language?	
	No one has taught me about an American Indian or Alaska Native language.	
	® Family members	
	© Friends	
	① Teachers	
	© Tribal representatives or elders	
	© Someone else (please specify):	
		VH240139
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	
	® No	
		VH240140
13.	During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people in school ?	
	② Yes, once or twice	
	Yes, three or more times	
	© No	
		VH24014
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	

15.	-	cess to a library , media center , or resource center with aterials (including Internet resources) about American beople?	VH240142
	♠ Yes		
	® No		
			VH240143
16.	When my teacher talks a I try to read more about i	bout American Indian or Alaska Native history or culture, t.	
	This is not like me.		
	® This is a little like me	÷.	
	This is a lot like me.		
			VH240144
17.	. I enjoy reading about Am	erican Indian or Alaska Native people.	
	This is not like me.		
	® This is a little like mo	2.	
	© This is a lot like me.		
			VH240145
18.	I enjoy reading about peoplife, customs) than I have	ple who have different traditions and cultures (ways of .	V11240143
	This is not like me.		
	® This is a little like me	2.	
	This is a lot like me.		

	VH240146
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.	
	VH240147
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.	
	VH240148
I enjoy being challenged in my classes.	
This is not like me.	
® This is a little like me.	
This is a lot like me.	
	VH240149
I feel that I belong at school.	
This is not like me.	
This is a little like me.	
© This is a lot like me.	
	 This is not like me. This is a little like me. This is a lot like me. 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. This is a lot like me. I enjoy being challenged in my classes. This is not like me. This is a little like me. This is a lot like me. This is not like me. This is a little like me.

			VH240150
23.	If I	put in enough effort, I will succeed in school.	
	(A)	Strongly disagree	
	$^{ ext{ B}}$	Disagree	
	0	Agree	
	(Strongly agree	
			VH240151
24.	Try	ying hard in school will help me live a good life when I grow up.	
	(A)	Strongly disagree	
	$^{\odot}$	Disagree	
	0	Agree	
	(Strongly agree	
			VH240152
25.	sch	ow often does a parent or someone else from your family help you with your noolwork? For example, they might help you to study for a test, help you with a nool project, or go over your homework with you.	
	(A)	Never or hardly ever	
	®	Once or twice a month	
	0	Once or twice a week	
	0	Every day or almost every day	

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- **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
 - 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.
 - Never or hardly ever
 - Once or twice a month
 - Once or twice a week
 - 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
 - Every day or almost every day

VIIIO	40	154

		V11240130
29.	How much do you like school?	
	Not at all	
	A little	
	© Somewhat	
	© 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?	
	Yes	
	® 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
1. How much do you know about each of the	e followi	ng? Fill in	one oval or	each line	VC996578	How much do you know about each of the following? Select one answer choice on each row.							The in-line
	Nothing	A little	Some	A lot		T	Nothing	A little	Some	A lot			adapted from
a. Your American Indian or Alaska Native history	0	•	0	0	VC996581	Your American Indian or Alaska Native history Your American Indian or	0	•	0	0	VH241515		PBA to DBA:
b. Your American Indian or Alaska Native traditions and culture (way of life, customs)	0	•	0	0	VC996582	Alaska Native traditions and culture (way of life, customs)	®	Φ	0	0	vions)?		"Fill in one oval on each
c. Issues today that are important to American Indian or Alaska Native people	0	•	0	0	VQ996583	c. Issues today that are important to American Indian or Alaska Native people	0	0	Θ	0	VIQAISIA		line." was adapted to
(2015 Grade 8)													"Select one answer choice on each row."
2. Who taught you most of what you know history? Description No one has taught me about American Family members Friends Teachers Tribal representatives or elders Someone else (please specify): (2015 Grade 8)					V18039733	2. Who taught you most of wha history? No one has taught me about Family members Friends Teachers Tribal representatives or of Someone else (please spec	out American II				VH248129	NC	N/A
3. Who taught you most of what you know traditions (ways of life, customs)? Do no one has taught me about America Family members Friends Teachers Tribal representatives or elders Someone else (please specify):					V98339760	3. Who taught you most of wha traditions (ways of life, custor ○ No one has taught me abo ○ Family members ○ Friends ○ Teachers ○ Tribal representatives or o ○ Someone else (please spec	ns)? out American II	ndian or Alaska			VESOUSO	NC	N/A

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

4. Who taught you most of what you know about American Indian or Alaska Native people? O No one has taught me about issues today the Alaska Native people.					2019 item	D/A/ R/NC+	Rationale					
© Friends © Teachers © Tribal representatives or elders © Someone else (please specify):					4. Who taught you most of wha American Indian or Alaska N Do one has taught me about the people. Family members Friends Teachers Tribal representatives or one of the people.	NC NC	N/A					
2015 Grade 8) 5. How often have you participated in each of the	ollowing? Fi	ill in one ov	al on each	VC996584 line.	How often have you particip each row.	ated in each o	f the following? S	select one answer	choice on	VH20518	NC	The in-line
Neve	Every few years	At least once a year	Several times a year			Never	Every few years	At least once a	Several time a year	s		direction was adapted from
a. Ceremonies and gatherings for people from your American Indian tribe or Alaska Native group	(1)	0	0	VC996586	Ceremonies and gatherings for people from your American Indian tribe or Alaska Native group	0	0	0	0	VH24151#		PBA to DBA: "Fill in one
b. Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups	•	0	0	VO96587	b. Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups	٥	0	0	9	VH141521		oval on each line." was adapted to
c. Other American Indian or Alaska Native activities	0	0	0	VC996589	c. Other American Indian or Alaska Native activities	0	0	0	Φ	VH241530		"Select one answer
2015 Grade 8)												choice on each row."
6. How often do members of your family talk to e Alaska Native language?	ch other in	your Ameri	can Indian	VC750193	How often do members of you or Alaska Native language?	ur family talk	to each other ir	your American	Indian	VH240133	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						

⁺ 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
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 © 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 © Every day or almost every day	NC	N/A
(2015 Grade 8) 8. How often do you attend classes in school that are taught in an American Indian or Alaska Native language? 4. My school does not offer classes that are taught in an American Indian or Alaska Native language. 4. Dever or hardly ever 4. Once or twice a month	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	NC	N/A
© Once or twice a week © Every day or almost every day (2015 Grade 8)	© 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.	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) 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.	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

⁺ 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 Amlanguage? No one has taught me about an American Indian of Family members Friends Teachers Tribal representatives or elders Someone else (please specify):				11. Who taught you most of what you know about Native language? No one has taught me about an American I Family members Friends Teachers Tribal representatives or elders Someone else (please specify);	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? © Never or hardly ever © Once or twice a month © Once or twice a week © Every day or almost every day	s talked to s) of Americ	your class ak can Indian oi	oout the Alaska	12. During 8th grade, how often have any of your the history, traditions, and cultures (ways of lif Alaska Native people? ① Never or hardly ever ① Once or twice a month ② Once or twice a week ① Every day or almost every day	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	vHI58490 by your	During 8th grade, have you attended any of the your school? Select one answer choice on each		organized by	VH241522	NC	The in-line
school: Fill in one oval on each line.	Yes	No			Yes	No			direction was adapted from
a. Presentations by American Indian or Alaska Native people about their traditions and cultures	®	®	VH158491	Presentations by American Indian or Alaska Native people about their traditions and cultures (ways of life, customs)	•	0	VH241523-		PBA to DBA:
(ways of life, customs)	•	(1)	VHI58492	b. American Indian or Alaska Native art and craft demonstrations	⊗	0	YH241526		"Fill in one
 American Indian or Alaska Native art and craft demonstrations 	(8)	•		c. Traditional American Indian or Alaska Native music and/or dance performances	Φ	Φ	VH241525		oval on each line." was
c. Traditional American Indian or Alaska Native music and/or dance performances	(4)	•	VH158493	d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people	Ø	00	VHQ41524		adapted to
d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people (2015 Grade 8)	(4)	(3)	V71159494						"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 t your school? Fill in one oval on each line.	ne following	ctivities orga	nnized by	14. During 8th grade, have you participated in an by your school? Select one answer choice on o	NC	The in-line			
	Yes	No			Yes	No			adapted from
a. Sports team	(A)	(3)	VH040143	a. Sports team	Ø	0	VH241528		PBA to DBA:
b. Music club, orchestra, or band	(D)	(1)	VH040147	Music club, orchestra, or band Cultural dances or other American Indian	®	0	VH241592		"Fill in one
			VH040150	or Alaska Native activities (for example, drum groups)	•	•	V11241531		
 Cultural dances or other American Indian or Alaska Native activities (for example, drum groups) 	0	(8)	VH040150	d. Academic club (for example, math club)	®	•	VH241530		oval on each line." was
d. Academic club (for example, math club)	Ø	(6)	VH040152						adapted to "Select one answer choice on
(2015 Grade 8)			VM159106				VII240160		each row."
 15. During 8th grade, have you used books, videos, or resources) about American Indian or Alaska Native Yes, once or twice Yes, three or more times No 			Internet	 15. During 8th grade, have you used books, videor Internet resources) about American Indian or ◆ Yes, once or twice ◆ Yes, three or more times ♦ No 				NC	N/A
(2015 Grade 8)			-				_		
16. During 8th grade, have you used books, videos, or or resources) about American Indian or Alaska Native ③ Yes, once or twice ⑤ Yes, three or more times			Vinis9110 Internet	 During 8th grade, have you used books, video Internet resources) about American Indian or outside of school? ◆ Yes, once or twice ◆ Yes, three or more times 			V124016)	NC	N/A
© No				© No					
(2015 Grade 8)			VH151945				VII240142:		
17. In school, do you have access to a library, media ce videos, or other materials (including Internet resou Native people?			th books,	17. In school, do you have access to a library, med books, videos, or other materials (including In Indian or Alaska Native people?			VII340142	NC	N/A
				⊗ Yes					
® No				No				1	1

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

a. When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it. b. I enjoy reading about American Indian or Alaska Native history or culture.	This is not like me.	This is a little like me.	This is a lot like me.		18. Here are some sentences about re sentence describes a person like y	you.	val on each line to	show whether the	VHENISTS	NC	The in-line
or Alaska Native history or culture, I try to read more about it. b. I enjoy reading about American Indian or Alaska	not like me.	little like me.	lot like			1 may 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1				NC	The in-line direction was
or Alaska Native history or culture, I try to read more about it. b. I enjoy reading about American Indian or Alaska			me.			This is not like me.	This is a little like me.	This is a lot like me.			adapted from
		•	0	YH043704	When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about ir.	0	8	9	VH241536		PBA to DBA: "Fill in one
reative people.	0	(13)	0	VC996627	 I enjoy reading about American Indian or Alaska Native people. 	0	0	0	VH241538		oval on each
c. I enjoy reading about people who have different traditions and cultures (ways of life, customs)	®	•	0	VC996628	c. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have.	Φ	@	0	VEDALEAT		line to show whether the
than I have.					The state of the s						sentence describes a
2015 Grade 8)											person like
											you." was
											adapted to
											"Select one
											answer
											choice on
									No. Charles		each row."
 Here are some sentences about your school. Fill in the sentence describes a person like you. 	one oval o	n each line	to show v	whether	 Here are some sentences about you sentence describes a person like y 	our school. Fill in or you.	ne oval on each line	to show whether t	he VH241539	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.	1!		adapted fron
	me.	me.	me.		I put a lot of effort into my schoolwork.	©	0	0	VF£241540		PBA to DBA:
a. I put a lot of effort into my schoolwork.	0	•	0	VH040131 VH040134	b. I want to be one of the best students in my class.	0	0	0	VHZ41543		"Fill in one
 I want to be one of the best students in my class. 	0	(1)	0	V110401.54	c. I enjoy being challenged in my classes.	0	•	0	VH241542		oval on each
c. I enjoy being challenged in my classes.	0	(6)	0	V11040137	d. I feel that I belong at school.	0	₾	0	VH2/1541		line to show
d. I feel that I belong at school.	0	(1)	0	V18340138							whether the
											sentence
2015 Grade 8)											describes a person like
											you." was
											adapted to
											adapted to "Select one
											adapted to

⁺ 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 t line.	the followin	ng statemen	ts? Fill in	one oval or	viio40157 each	20. How much do you agree w choice on each row.	ith each of the	following states	ments? Select	one answer	VIII41544	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, 	8	®	0	0	V11040158	If I put in enough effort, I will succeed in school.	0	0	O	0	VH241545		PBA to DBA:
b. If I put in enough effort in school, I will get into college.	(3)	(3)	0	0	VH040160	 b. If I put in enough effort in school, I will get into college. 	•	0	0		VH241547		"Fill in one oval on each
c. If I put in enough effort in school, I will get a good job.	(A)	•	0	0	VH040161	 If I put in enough effort in school, I will get a good job. 	©	(8)	0	9	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						Not at all							
® A little						A little							
© Somewhat						SomewhatVery much							
Very much						wery mach							
e very much													
(2015 Grade 8)													
22. How much are the things you are learn to lead?	ning in scho	ool preparing	g you for t	he life you	vcsesss: want	22. How much are the things yo want to lead?	ou are learning	in school prepari	ng you for the	z life you	VH240162	NC	N/A
Not at all						Not at all							
A little						A little							
A fair amount						A fair amount							
Very much						Very much							
(2015 Grade 8)													
23. During 8th grade, how often have you class periods? For example, to get extra that matter to you, or just to visit.						23. During 8th grade, how often regular class periods? For ex- about issues that matter to y	imple, to get e	xtra help with yo			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	a des						
Every day or almost every day						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 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 © Every day or almost every day			24. How often do you help oth For example, you might hel school project, or go over th ⑤ Never or hardly ever ⑤ Once or twice a month ⑥ Once or twice a week ⑤ Every day or almost eve	p other student eir homework	s to study for a t	th their schoolw est, help them v	ork? vith a	Vidiolis	NC	N/A			
(2015 Grade 8)													
25. 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	with a school				25. How often do any of the fo example, they might help y go over your homework wi	you to study for	a test, help you	with a school pro	For oject, or	VICH548	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 parent or someone else from my family	(4)	(1)	0	0	VC996636	A parent or someone else from my family	Ø	Φ.	0	0	VHZ41549		"Fill in one
b. A teacher or another adult from my school	(6)	(10)	0	0	VC996637	b. A teacher or another adult from my school c. Another student	®	0	0	0	VH241550		oval on each line." was
c. Another student	®	(1)	0	0	VC996639	d. A tribal representative or elder	Ø	Φ	0	0	VH241553 VH241551		adapted to
d. A tribal representative or elder	•	(1)	0	Φ	V18018268								"Select one answer choice on each row."
26. During 8th grade, how many times hav about the classes you should take in hi school? Fill in one oval on each line.	e you talke gh school o	ed to each o or about wh	f the follow at you wan	wing people nt to do afte	vcsssen er high	26. During 8th grade, how man about the classes you shou high school? Select one are	ld take in high	school or about	n of the followin what you want t	g people o do after	VIDAISSA	NC	The in-line direction was
	Never	One time	Two or three times	Four or			Never	One time	Two or three times	Four or more times			adapted from PBA to DBA:
a. A family member	(A)	®	©	©	VC996645	a. A family member	0	0	0	Ф	VHZ41556		"Fill in one
	®	0			VC996646	b. A teacher c. A school counselor	9	0	0	0	VH241556 VH241557		
b. A teacher			0	0		d. Another student	0	0	0	0	VH241M1		oval on each
c. A school counselor	(4)	(1)	0	0	VC996647	e. A tribal representative or elder	•	•	0	Φ	VEI241500		line." was
d. Another student	(A)	(1)	0	Φ	VC996618	f. Someone else who lives in my community or is a	0	0	0	•	VH041558		adapted to
e. A tribal representative or elder	(4)	(B)	0	0	V10026209	friend of my family	1.0010	7.0		3.2	100		"Select one
e. A tribal representative or elder			0	(1)	VH026211							1	answer

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

Previous item 27. Which of the following would you plan to do in yo many ovals as apply. a. Go to college full time	our fîrst yea				2040:							
many ovals as apply.	ur first year				2019 item						D/A/ R/NC+	Rationale
a. Go to college full time		r after high	school? I	Fill in as	27. Do you plan to do any of the answer choice on each row		our first year afte	r high school?	Select one	YHDIISQ	R	This item was revised in
		(3)		VC996651			Yes		No	= -		item type and
b. Go to college part time		0		VC996652	a. Go to college full time		Φ		®	VH241563		sentence
c. Go to another school (for example, career training or trade/vocational) full time	ng, technica	al, ©		VC996653	B. Go to college part time Go to another school (for extraining, technical, or trade/time	ample, career vocational) full	0		0	VH241364 VH241565		structure of
d. Go to another school (for example, career trainir or trade/vocational) part time	ng, technica	al, ©		VC996654	d. Go to another school (for ex training, technical, or trade/ time	ample, career vocational) part	0		Ф	VH241566		this item based on the
e. Join the military		0		VC395655	c. Join the military		0		0	VH241572		structure for
f. Work full time		•		VC996656	f. Work full time		Φ		Φ	VHZ41548		Core
g. Work part time		0		VC996657	g. Work part time h. Travel		Ø	_	0	VH241569 VH241570		household
				VC996658	i. Care for family		0		0	V14241571		
h. Travel		0			j. 1 don't know.		(3)		•	VH241567		possession
i. Care for family		Φ		VC996659								item.
												PBA to DBA: "Fill in as many ovals a apply." was adapted to "Select one answer choice on each row."
28. To what extent is each of the following a problem i line.	in your sch	ool? Fill in	one oval	vH040216 on each	28. To what extent is each of choice on each row.	the following a p	problem in your se	chool? Select t	one answer	VIISAISTA	NC	The in-line direction was
Not at all	Small extent	Moderate extent	Large extent			Not at all	Small extent	Moderate extent	Large extent			adapted from
a. Student tardiness	1	0	0	VII040217	a. Student tardiness	•	•	©	0	VH241574		PBA to DBA:
b. Student health problems	(II)	0	0	VH040219	b. Student health problems	0	(3)	0	0	VH241575		"Fill in one
c. Student misbehavior in class	®	0	0	VH040221	 c. Student misbehaviör in class 	•	•	0	•	V11241576		oval on each
				VER040223	d. Physical conflicts among students	•	•	0	0	VH241580		
d. Physical conflicts among students	(8)	0	0		e. Bullying	Φ.	0	0	0	V15241578		line." was
e. Bullying	(II)	0	0	VH040226 VH040227	f. Low student motivation	@	00	0	Φ	VH141574		adapted to

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

2019 Operational Grade 8	8 National Indian Education Study (NIES) Stude	nt		
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? ② Yes ③ No ③ I'm not sure.	 29. Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in? Φ Yes Φ No Φ Γm not sure. 	VH240157	NC	N/A
(2015 Grade 8) 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.	ViGi281	NC	N/A
(2015 Grade 8)	2			
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.	VID498C	NC	N/A
(2015 Grade 8)				

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

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	®	0	0	VH241515
b. Your American Indian or Alaska Native traditions and culture (way of life, customs)	®	®	0	0	VH241517
c. Issues today that are important to American Indian or Alaska Native people	(©	0	0	VH241516

VH240129	
----------	--

2.	Who taught you	most of what	you know	about Amo	erican India	n or Alaska	a Native
	history?						

- No one has taught me about American Indian or Alaska Native history.
- ® Family members
- © Friends
- Teachers
- © Tribal representatives or elders

Ð	Someone	else (plea	se specify)	:
		- · · · · · · · · · · · · · · · · · · ·	I //	

- **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
 - 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?
 - One has taught me about issues today that are important to American Indian or Alaska Native people.
 - Family members
 - © Friends
 - Teachers
 - © Tribal representatives or elders
 - © Someone else (please specify):

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

		Never	Every few years	At least once a year	Several times a year	
a.	Ceremonies and gatherings for people from your American Indian tribe or Alaska Native group	(A)	®	0	0	VH241519
b.	Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups	(4)	®	0	Θ	VH241521
c.	Other American Indian or Alaska Native activities	A	®	0	0	VH241520

- **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
 - Every day or almost every day

V	н	2	10	١1	3	4

		VH240134
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	
	© Every day or almost every day	
		VH240135
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 Nativelanguage.	ve .
	Never or hardly ever	
	© Once or twice a month	
	Once or twice a week	
	© Every day or almost every day	
		VH240136
0	. How do you rate yourself in speaking an American Indian or Alaska Native	. 112 10130
7.	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?
 - ① I cannot read in an American Indian or Alaska Native language.
 - ® I can read a few words or phrases.
 - © I can read well.

V	H2	40	138

11.	Who taught you most of what you know about an American Indian or Alaska
	Native language?

- ① No one has taught me about an American Indian or Alaska Native language.
- Family members
- © Friends
- 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
 - © 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	®	®	VH241526
c. Traditional American Indian or Alaska Native music and/or dance performances	(9)	®	VH241525
d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people	(4)	®	VH241524

VH241527

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

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

	outside of school?
	Internet resources) about American Indian or Alaska Native people
16.	During 8th grade, have you used books, videos, or other materials (including

$\overline{}$	T 7			. •
(A)	Vec	Once	or	twice
$\overline{\mathbf{v}}$	100,	OHICC	OI	LWICC

- 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?
 - A Yes
 - ® 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	VH241536
b. I enjoy reading about American Indian or Alaska Native people.	(A)	B	0	VH241538
c. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have.	®	®	0	VH241537

VH241544

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.	(A)	®	0	VH241540
b. I want to be one of the best students in my class.	A	®	0	VH241543
c. I enjoy being challenged in my classes.	(A)	®	0	VH241542
d. I feel that I belong at school.	A	®	0	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.	A	®	0	0	VH241545
b. If I put in enough effort in school, I will get into college.	0	®	0	0	VH241547
c. If I put in enough effort in school, I will get a good job.	()	®	0	0	VH241546

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

V	H2	40	116	(2)

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

- **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

O Very much

- ® Once or twice a month
- Once or twice a week
- © 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)	®	0	0	VH241549
b. A teacher or another adult from my school	A	®	0	0	VH241550
c. Another student	(A)	®	0	0	VH241553
d. A tribal representative or elder	(A)	®	0	0	VH241551

VH241554

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	Ø	®	0	0	VH241555
b. A teacher	(A)	₿	0	0	VH241556
c. A school counselor	(A)	₿	0	0	VH241557
d. Another student	(A)	₿	0	0	VH241561
e. A tribal representative or elder	(A)	®	0	0	VH241560
f. Someone else who lives in my community or is a friend of my family	®	®	0	0	VH241558

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

	Yes	No	
a. Go to college full time	A	®	VH241563
b. Go to college part time	(A)	®	VH241564
c. Go to another school (for example, career training, technical, or trade/vocational) full time	0	®	VH241565
d. Go to another school (for example, career training, technical, or trade/vocational) part time	®	©	VH241566
e. Join the military	(A)	®	VH241572
f. Work full time	(A)	®	VH241568
g. Work part time	(A)	®	VH241569
h. Travel	(A)	®	VH241570
i. Care for family	(A)	®	VH241571
j. I don't know.	(A)	®	VH241567

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

	Not at all	Small extent	Moderate extent	Large extent	
a. Student tardiness	(A)	®	0	0	VH241574
b. Student health problems	(A)	®	0	0	VH241575
c. Student misbehavior in class	A	®	0	0	VH241576
d. Physical conflicts among students	(A)	®	0	0	VH241580
e. Bullying	(A)	®	0	0	VH241578
f. Low student motivation	(A)	®	0	0	VH241579

- **29.** Do you know the name of the American Indian tribe or Alaska Native group you belong to or are enrolled in?
 - A Yes
 - ® 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? S	elect one answer cho	ice on each row.	1. At home, do you have any of the following? Select one answer choice on each row.					N/A	
	Yes	No			Yes	No			
a. A laptop or desktop computer that is only for your use	0	0	VH270141	a. A laptop or desktop computer that is only	®	0	V1(27014)		
b. A laptop or desktop computer that is shared between you and others	•	(5)	VH270142	b. A laptop or desktop computer that is	Φ	0	VH270142		
c. A tablet that is only for your use	Φ	®	VH270170	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	©	•	VH270140	d. A tablet that is shared between you and	0	0	VII270140		
e. Wi-Fi or some other Internet connection	Φ.	0	VH270343	e. Wi-Fi or some other Internet connection					
f. A smartphone that is only for your use	(0)	Ф	VH270194	you can use f. A smartphone that is only for your use	0	0	VH270143 VH270144		
 ☼ I have never used one. ☼ Before I was in kindergarten ☼ When I was in kindergarten ῷ When I was in first, second, or third grade ῷ When I was in fourth grade (2017 Grade 4)			V1127/002	 ☼ I have never used one. ☼ Before I was in kindergarten ☼ When I was in kindergarten ῷ When I was in first, second, or third grade భ When I was in fourth grade 			V1070992	NC	N/A
3. When did you first use a tablet? ⚠ Never until this assessment ᠿ Before I was in kindergarten ᠿ When I was in kindergarten ᠿ When I was in first, second, or third grade ᠿ When I was in fourth grade			3. When did you first use a tablet? ② Never until this assessment ③ Before I was in kindergarten ③ When I was in kindergarten ⑤ When I was in first, second, or third grade ⑤ When I was in fourth grade						
(2017 Grade 4)			2444-120						
4. When did you first use a smartphone? □ 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 grade 			V1270101	 4. When did you first use a smartphone? 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 grade 			VH220101	NC	N/A

Previous item			VII230142	2019 item	D/A/ R/NC+	Rationale			
On a weekday, about how many hours do you u doing schoolwork, including homework?	se a laptop or deskt	op computer for	5. On a weekday, about how many hours do you u doing schoolwork, including homework?	VH270147	NC	N/A			
None				None					
D Less than an hour				Less than an hour					
© 1 to 2 hours				© 1 to 2 hours					
© 2 to 3 hours				© 2 to 3 hours					
3 to 4 hours				© 3 to 4 hours					
More than 4 hours				More than 4 hours					
(2017 Grade 4)									
(2017 Glade 4)			VH270148				VH290148	NC	NI/A
6. On a weekday, about how many hours do you u including homework?	se a tablet for doing	schoolwork,		6. On a weekday, about how many hours do you u including homework?	NC	N/A			
None				None					
D Less than an hour				Less than an hour					
O 1 to 2 hours				© 1 to 2 hours					
© 2 to 3 hours				© 2 to 3 hours					
© 3 to 4 hours				© 3 to 4 hours					
More than 4 hours				More than 4 hours					
(2017 Crada 1)									
(2017 Grade 4) 7. Were you taught any of the following at school	l? Select one answer	choice on each row.	VHS97657	Were you taught any of the following at school	17 Select one answer	choice on each row.	VH597637	NC	N/A
	Yes	No			Yes	No			
How to type on a computer keyboard using the correct fingers	0	00	VH270150	How to type on a computer keyboard using the correct fingers	•	0	VH270150		
b. How to write sentences and paragraphs using a computer	0	Φ	VH270351	b. How to write sentences and paragraphs using a computer	•	0	VH27015E		
c. How to edit text using a computer	0	Ф	VF1270104	c. How to edit text using a computer	©	⊕	VH270164		
d. How to search for information on the Internet	(3)	0	VH270152	d. How to search for information on the Internet	0	®	VH270152		
e. How to use a tablet	®	00	VT1270156	e. How to use a tablet	©	Φ	VH270156		
f. How to look up the meaning of a word using a computer	0	0	VHI2/0152	f. How to look up the meaning of a word using a computer	0	0	V1)270157		

Previous item				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	nputers at	8. Which of the following are true about the way school? Select one answer choice on each row.		ur teachers use cor	nputers at	NC	N/A
	Yes	No			Yes	No			
In most of my classes there are laptop or desktop computers that I can use for schoolwork.	•	•	VH270166	In most of my classes there are laptop or desktop computers that I can use for schoolwork.	@	®	VH270166		
b. In most of my classes there are tablets that I can use for schoolwork.	®	0	121270167	b. In most of my classes there are tablets that I can use for schoolwork.	•	0	VH270167		
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	•	•	V11270 (70)	c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	Φ	•	VH270170		
d. Most of my teachers use computers when teaching my classes.	©	0	VHI270369	d. Most of my teachers use computers when teaching my classes.	0	00	V11270169		
Most of my teachers require us to use computers in the classroom.	8	0	V1127016#	e. Most of my teachers require us to use computers in the classroom.	0	(8)	VH270168		
(2017 Grade 4) 9. Has your school assigned you a laptop or deskt No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop		y you can use?	VH270H4.	9. Has your school assigned you a laptop or deskto No Pes, but I cannot take it home with me. Yes, and I can take it home with me (laptop		y you can use?	VH270116	NC	N/A
(2017 Grade 4)			VHZRHT				VH270117	NC	N/A

Previous item	ous item 2019 item									D/A/ R/NC+	Rationale				
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.						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.								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	0	(3)	0	0	θ	VH270172	Write a short paper (less than a page) for school	®	Φ	0	9	Φ	VH270172		
b. Write a paper for school that was longer than a page	•	•	0	0	Ф	VH270175	b. Write a paper for school that was longer than a page	®	®	0	Ф	Ф	VH270173		
c. Search the Internet for a school project	®	•	0	0	Φ	V94270174	c. Search the Internet for a school project	•	0	.0	0	0	V21270174		
d. Practice things in mathematics that you were having trouble learning	Φ	(1)	0	0	θ	VH270(8)	d. Practice things in mathematics that you were having trouble	0	0	0	0	Θ	VEX.70181		
e. Practice things in reading that you were having trouble learning	0	0	0	0	Φ	VHZ?01/7	e. Practice things in reading that you were having trouble	©	9	0	0	Φ	Version??		
f. Take a test	0	(3)	Φ	0	0	VH270175	learning f. Take a test	0	Ф	0	Φ	Ф	VH270175		
	Marion	A familian	Once every	About once	More than				1	Once every	About once	More than			
	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	Never	A few times				VH27GLR3	a. Write a short paper (less than a page) for school	Never	A few times	Once every few weeks		More than once a week	VH2.7018.4		
(less than a page) for school b. Write a paper for school that was longer than a page			few weeks	a week	once a week	VH27G183	(less than a page) for	- 727	1-13 -	few weeks	a week	once a week	VH270184		
(less than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project	Ø	@	few weeks	a week	once a week		(less than a page) for school b. Write a paper for school that was longer	•	•	few weeks	a week	once a week			
dess than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble learning	0	0	few weeks	a week	©	VIII70184	(less than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble	®	®	few weeks	a week	once a week	VH270188		
dless than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble	0	© ©	few weeks	a week	© ©	V18270188	(less than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble learning e. Practice things in reading that you were having trouble	Ø Ø	6	few weeks	a week	© ©	VH270188 VH270188		
dess than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble learning e. Practice things in reading that you were having trouble	Ø Ø	•	few weeks © © ©	a week	© © ©	VH270164 VH270164 VH270165	(less than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble learning e. Practice things in reading that you were	© ©	0	few weeks	© ©	© ©	VH270184 VH270184 VH270185		
dess than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble learning e. Practice things in reading that you were having trouble learning	Ø Ø Ø	ΦΦΦ	few weeks © © © ©	a week	© © © ©	VIETO164 VIETO164 VIETO165 VIETO166	(less than a page) for school b. Write a paper for school that was longer than a page c. Search the Internet for a school project d. Practice things in mathematics that you were having trouble learning e. Practice things in reading that you were having trouble learning	Φ Φ Φ	0 0	© © ©	© ©	© © © ©	VF6270186 VF6270185 VF6270185		

Previous item						2019 item						D/A/ R/NC+	Rationale
14. Would you rather take a te Paper and pencil Computer (2017 Grade 4)	st at school using	paper and penc	il or using a con	puter?	14. Would you rather take a test at school using paper and pencil or using a computer? Paper and pencil Computer							NC	N/A
15. Do you think you would now.	Do you think you would b row.	e able to do each	of the followin	g? Select one and	swer choice on e	ach yasana	NC	N/A					
	I delimitely 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	Φ	0	9	0	V18270229	Write sentences and paragraphs using a computer	•	•	ø	0	VH270220		
b. Edit text using a computer	OD .	0	0	0	V11270218	b. Edit text using a computer	®	0	0	Ф	VIETNEIS		
c. Use a touchscreen on a computer, tablet, or smartphone	0	•	9	0	VH270230	c. Use a touchscreen on a computer, tablet, or smartphone	0	0	0	0	VID TO JO		
d. Look up the meaning of a word using a computer	00	0	9	Ф	VH270025	d. Look up the meaning of a word using a computer	®	Φ	0	•	VII270225		
e. Draw a picture using a computer	Φ	•	0	Φ	VH270216	e. Draw a picture using a computer	0	®	0	0	V14270226		
2017 Grade 4) 16. How familiar are you with	Never heard of		Heard of it often	on each row. Know it well, understand the concept	VH270166	16. How familiar are you with	Never heard of	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH607764	NC	N/A
a Wi-Fi	Φ	0	0	0	VH270197	a. Wi-Fi b. Firewall	0	00	0	9	VH270196		
a. Wi-Fi b. Firewall	0	0	0	9	VH270199	c. Neuro-digital computing	0	0	0	9	\$16270194		
		(3)	0	0	VEI270300	d. Instant messaging	9	9	0	9	VH270200		
b. Firewall	0	®	0	0	VH270203	e. Cut and paste	Ø	0	0	9	VH270203		
b. Firewall c. Neuro-digital computing	(a) (b)		0	0	V11270204	f. Pyramidal browser	Ø	(D)	0		171270204		
b. Firewall c. Neuro-digital computing d. Instant messaging		0			VH270096	g. Spreadsheet	®	0	0	9	V16276206		
b. Firewall c. Neuro-digital computing d. Instant messaging e. Cut and paste	0	_	0	9	V11270556			W					
b. Firewall c. Neuro-digital computing d. Instant messaging e. Cut and paste f. Pyramidal browser g. Spreadsheet h. Limbic wire	Ø Ø	0	0	9 9	VH270007	C		@	0	(D)	VH270207		
b. Firewall c. Neuro-digital computing d. Instant messaging e. Cut and paste f. Pyramidal browser g. Spreadsheet h. Limbic wire i. Spinalbyte	8 8 9 9	(B) (B) (B)	9	9 9	VH270007 VH270006	h. Limbic wire i. Spinalbyte	Ø	0 0	0	00	VH270207 VH270208		
b. Firewall c. Neuro-digital computing d. Instant messaging e. Cut and paste f. Pyramidal browser g. Spreadsheet h. Limbic wire	© © ©	(B)	Φ	0	VH270007	h. Limbic wire	0				-		

Appendix K-1ax: Operational Grade 4 CAFS

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

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

VH270100

2. 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 grade

VH270092

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

		VH270101
4.	When did you first use a smartphone ?	
	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 grade	
		VH270147
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	
		VH270148
6.	On a weekday, about how many hours do you use a tablet 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	

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

	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	©	®	VH270151
c. How to edit text using a computer	(A)	®	VH270164
d. How to search for information on the Internet	®	®	VH270152
e. How to use a tablet	(A)	®	VH270156
f. How to look up the meaning of a word using a computer	®	®	VH270157

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	
d	n most of my classes there are laptop or lesktop computers that I can use for choolwork.	(A)	®	VH270166
b. Iı	n most of my classes there are tablets that can use for schoolwork.	(A)	®	VH270167
	There is Wi-Fi or some other Internet connection that I can use for schoolwork.	(A)	®	VH270170
d. N	Most of my teachers use computers when eaching my classes.	(A)	®	VH270169
	Most of my teachers require us to use omputers 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?
 - No
 - ® Yes, but I cannot take it home with me.
 - © Yes, and I can take it home with me.

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	(A)	®	0	0	Œ	VH270172
b.	Write a paper for school that was longer than a page	(4)	®	0	0	Œ	VH270173
c.	Search the Internet for a school project	(A)	®	0	0	Œ	VH270174
	Practice things in mathematics that you were having trouble learning	®	®	0	0	©.	VH270181
	Practice things in reading that you were having trouble learning	0	®	0	0	©.	VH270177
f.	Take a test	A	®	©	0	Œ	VH270175

12. This school year, how often have you used a **tablet** 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	0	Œ	VH270183
b.	Write a paper for school that was longer than a page	Ø	®	0	0	Œ	VH270188
c.	Search the Internet for a school project	A	B	0	0	Œ	VH270184
d.	Practice things in mathematics that you were having trouble learning	®	®	0	0	©.	VH270185
e.	Practice things in reading that you were having trouble learning	®	®	0	Φ	Œ	VH270186
f.	Take a test	(A)	®	0	0	Œ	VH270192

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 without looking at the keyboard.

VH270132

- 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 row.

		I definitely can't.	I probably can't.	I probably can.	I definitely can.	
a.	Write sentences and paragraphs using a computer	(A)	®	0	0	VH270229
b.	Edit text using a computer	(A)	®	0	0	VH270218
c.	Use a touchscreen on a computer, tablet, or smartphone	(8)	®	0	0	VH270230
d.	Look up the meaning of a word using a computer	(A)	®	0	Θ	VH270225
e.	Draw a picture using a computer	A	®	0	0	VH270226

16. How familiar are you with each of the following? Select **one** answer choice on each 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	®	0	0	VH270196
b. Firewall	A	®	0	0	VH270197
c. Neuro-digital computing	A	®	0	0	VH270199
d. Instant messaging	A	®	0	0	VH270200
e. Cut and paste	(A)	®	0	0	VH270203
f. Pyramidal browser	A	®	0	0	VH270204
g. Spreadsheet	A	®	0	0	VH270206
h. Limbic wire	A	®	0	0	VH270207
i. Spinalbyte	A	®	0	0	VH270208
j. Server	A	®	0	0	VH270210
k. Callosum board	(A)	®	0	0	VH270214

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? Sel	ect one answer choice	ce on each row.	VH270138	1. At home, do you have any of the following? Se	NC	N/A			
	Yes	No			Yes	No			
a. A laptop or desktop computer that is only for your use	Φ	0	VH270141	a. A laptop or desktop computer that is only for your use	®	0	VH270141		
b. A laptop or desktop computer that is shared between you and others	Φ	Φ	VH270142	b. A laptop or desktop computer that is shared between you and others	0	0	VH270142		
c. A tablet that is only for your use	0	•	VH270139	c. A tablet that is only for your use	Φ.	0	VH270139		
d. A tablet that is shared between you and others	@	0	VH276190	d. A tablet that is shared between you and	•	0	VI1270140		
e. Wi-Fi or some other Internet connection you can use	0	0	VH270143	e. Wi-Fi or some other Internet connection	®	0	VH270143		
f. A smartphone that is only for your use	©	0	V10270104	f. A smartphone that is only for your use	Ø	Φ	VH270145		
(2017 Grade 8)				is it smartpusice that to only for your use					
2017 Grade 6)	The state of the s		VH270H45		7 7 0		YH270145	NC	N/A
2. When did you first use a laptop or desktop comp	outer?			2. When did you first use a laptop or desktop com	puter?			''C	11,71
I have never used one.				I have never used one.					
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				When I was in fourth or fifth grade					
 When I was in sixth, seventh, or eighth grade 				When I was in sixth, seventh, or eighth grad	le				
(2017 Grade 8)									
3. When did you first use a tablet?			V14270000	3. When did you first use a tablet?			VH276690	NC	N/A
Never until this assessment				Never until this assessment					
Before I was in kindergarten									
When I was in kindergarten				Before I was in kindergarten					
When I was in first, second, or third grade				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 sinth caseable are dishable grade.				When I was in fourth or fifth grade					
 When I was in sixth, seventh, or eighth grade 				 When I was in sixth, seventh, or eighth grad 	le				
(2017 Grade 8)			VH270146				VH270146		
4. When did you first use a smartphone?				4. When did you first use a smartphone?			100000	NC	N/A
■ 1 have never used one.				 I have never used one. 					
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				When I was in fourth or fifth grade					
When I was in sixth, seventh, or eighth grade	0			When I was in sixth, seventh, or eighth grad	le				
									1

Previous item				2019 item	D/A/ R/NC+	Rationale			
On a weekday, about how many hours do you doing schoolwork, including homework?	use a laptop or deskto	computer for	VH230147	On a weekday, about how many hours do you us doing schoolwork, including homework?	NC	N/A			
				None					
Less than an hour				D Less than an hour					
© 1 to 2 hours				© 1 to 2 hours					
© 2 to 3 hours									
© 3 to 4 hours				© 2 to 3 hours					
More than 4 hours				© 3 to 4 hours					
Whole than 4 hours				More than 4 hours					
(2017 Grade 8)									
N. A. Barrier and A. B. Barrie	34477		VH270148		12-		VH270148	NC	N/A
6. On a weekday, about how many hours do you including homework?	use a tablet for doing	schoolwork,		6. On a weekday, about how many hours do you used including homework?	se a tablet for doing	schoolwork,			.,,,,
None				None					
D Less than an hour				D Less than an hour					
© 1 to 2 hours				© 1 to 2 hours					
© 2 to 3 hours				© 2 to 3 hours					
© 3 to 4 hours				© 3 to 4 hours					
More than 4 hours				More than 4 hours					
				O More than 4 hours					
(2017 Crada 9)									
(2017 Grade 8)			VH270140				VIII2201.09		
7. Were you taught any of the following at school	ol? Select one answer	choice on each row.		Were you taught any of the following at school	l? Select one answer	choice on each row.	3112.1110	NC	N/A
	Yes	No			Yes	No			
How to type on a computer keyboard using the correct fingers	Φ	(1)	VH270150	How to type on a computer keyboard using the correct fingers	®	®	VH270150		
b. How to write sentences and paragraphs using a computer	Φ.	•	VH270156	b. How to write sentences and paragraphs using a computer	•	•	VH2.70151		
c. How to edit text using a computer	Φ.	•	VH270164	c. How to edit text using a computer	Φ	0	VH270164		
d. How to search for information on the Internet	Φ.	•	VHZ70162	d. How to search for information on the	@	(0)	VH270152		
e. How to use a tablet	•	•	VH270156	Internet					
f. How to look up the meaning of a word	0	0	VH270157	How to use a tablet How to look up the meaning of a word	0	•	VH270156		
using a computer	- W		774430127	using a computer	0	(1)	VHD70157		
g. How to create a spreadsheet using a computer	©	0	VH270154	g. How to create a spreadsheet using a	®	•	VH270154		
to the second se	00	(1)	VH2/0155	h. How to create a presentation using a			100000		
h. How to create a presentation using a	Ф	(0)	VH270159	computer	@	Φ	VH270155		
computer	~	0	VHC270146	i. How to run simulations using a computer	•	0	V10270159		
	0			 How to write a computer program or app 	@	Φ	VH270190		1
computer i. How to run simulations using a computer j. How to write a computer program or app k. How to create a graph or chart using a		0	VEILTOLOS						
i. How to run simulations using a computer j. How to write a computer program or app	9	Φ	VECTORAL VECTORAL	k. How to create a graph or chart using a computer	•	(3)	VH270161		

Previous item				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 con	nputers 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	7		
In most of my classes there are laptop or desktop computers that I can use for schoolwork.	Φ.	Œ	V11270166	a. In most of my classes there are laptop or desktop computers that I can use for schoolwork.	@	Φ.	V10270166		
b. In most of my classes there are tablets that I can use for schoolwork.	0	Φ	VH270167	b. In most of my classes there are tablets that I can use for schoolwork.	0	00	VH170167		
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	@	•	VH270170	c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	•	Φ	V21270170		
d. Most of my teachers use computers when teaching my classes.	0	0	VH1270169	d. Most of my teachers use computers when teaching my classes.	0	Ф	V81270169		
Most of my teachers require us to use computers in the classroom.	0	0	VH127016#	e. Most of my teachers require us to use computers in the classroom.	0	0	VII270166		
(2017 Grade 8) 9. Has your school assigned you a laptop or deskt No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) (2017 Grade 8)		ly you can use?	VHZP0116	 9. Has your school assigned you a laptop or deskto No Yes, but I cannot take it home with me. Yes, and I can take it home with me (laptop) 		y you can use?	VH270116	NC	N/A
10. Has your school assigned you a tablet that onl No Yes, but I cannot take it home with me. Yes, and I can take it home with me.	y you can use?		VH270117	10. Has your school assigned you a tablet that only No Yes, but I cannot take it home with me. Yes, and I can take it home with me.	you can use?		VII230117	NC	N/A

Previous item										D/A/ R/NC+	Rationale				
11. This school year, how following? Select one			p or desktop c	omputer to de	o each of the	VH270171	11. This school year, how of following? Select one an			p or desktop c	omputer to de	each of the	V11270171	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	0	•	9	0	Φ	VH276972	Write a short paper (less than a page) for school	0	0	9	9	0	VIII270172		
b. Write a paper for school that was longer than a page	•	0	Θ	0	Φ	vacanata	b. Write a paper for school that was longer than a page	@	Φ	0	0	0	V11270173		
 Search the Internet for a school project 	0	0	9	Φ	0	VH270)7a	c. Search the Internet for a school project	0	00	9	0	0	N21220174		
d. Practice things in mathematics that you were having trouble learning	Φ	Φ	9	0	Φ	VHIZTIDAT	d. Practice things in mathematics that you were having trouble learning	®	Φ.	9	0	Ф	vicinisi		
e. Practice things in reading that you were having trouble learning	©	Ф	0	6	Φ	VH12701177	c. Practice things in reading that you were having trouble learning	®	Ф	9	0	0	vecasing		
f. Take a test	0	0	Θ	0	Φ	VH270179	f. Take a test	Ø	0	0	0	•	VH270175		
g. Create a map	Ø	(0)	0	0	0	VH270178	g. Create a map	®	0	0	9	Φ	VH270178		
h. Work on a website or blog that you maintain	0	•	0	0	0	VH270179	h. Work on a website or blog that you maintain	0	0	9	0	0	VH270179		
 Create a multimedia presentation on your own 	9	•	9	0	Ф	VH270180	Create a multimedia presentation on your	@	0	0	0	Ф	V18270180		
j. Work collaboratively with a team of students to create a multimedia presentation	0	60	9	9	0	VH270176-	j. Work collaboratively with a team of students to create a multimedia	®	Φ.	0	69	00	VH270176		

Previous item							2019 item							D/A/ R/NC+	Rationale
12. This school year, how choice on each row.	often have y	ou used a table	t to do each of	the followin	g? Select one a	vinnels: answer	12. This school year, how often have you used a tablet 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	•	Ф	0	Ф	Ф	VH270163	a. Write a short paper (less than a page) for school	6	•	0	0	9	V11270183		
b. Write a paper for school that was longer than a page	0	•	0	9	0	\$71270368	b. Write a paper for school that was longer than a page	0	(3)	0	0	0	VH270184		
c. Search the Internet for a school project	0	0	9	0	0	VH270184	c. Search the Internet for a school project	@	0	0	0	©	VH270184		
d. Practice things in mathematics that you were having trouble learning	ø	0	9	6	Ф	VH270185	d. Practice things in mathematics that you were having trouble learning	•	•	0	0	0	V1/270165		
e. Practice things in reading that you were having trouble learning	8	9	9	9	0	VIIIZNII SS	e. Practice things in reading that you were having trouble	Ø	Ф	0	Φ	Ф	VFQ70186		
f. Take a test	0	0	0	0	Φ.	VR270392	f. Take a test	®	0	0	0	0	V21270192		
g. Create a map	0	•	0	0	0	\$11270189	g. Create a map	9	0	9	9	0	V31270169		
h. Work on a website or blog that you maintain	0	•	0	0	Φ	VH270190	h. Work on a website or	9	0	0	0	0	VH270190		
 Create a multimedia presentation on your own 	•	•	0	0	Φ	VH2/8091	i. Create a multimedia presentation on your	0	0	0	0	Ф	52:1270191		
 Work collaboratively with a team of students to create a multimedia presentation 	•	•	0	0	Ф	VH2/BIAF	j. Work collaboratively with a team of students to create a multimedia presentation	©	0	0	0	Θ	\$H220187		
(2017 Grade 8)						VH27nENI	presentation						VH270130	NC	N/A
13. Which best describes the □ I don't know how to □ I can type with one □ I can type with all to □ I can type with a	o type using or two finge or two finge en fingers w	a computer kers, but I have to rs, and I know hen I look at th	yboard. o search for where most one keyboard.	here the lette f the letter ke			13. Which best describes the ② I don't know how to ③ I can type with one o ③ I can type with one o ③ I can type with all te ③ I can type with all te	type using ir two finge ir two finge in 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 lette f the letter ke				
(2017 Grade 8)															
 Would you rather take a Paper and pencil Computer 	test at scho	ool using paper	and pencil or	using a comp	uter?	VH270132	14. Would you rather take a Description Paper and pencil Description	test at scho	ool using paper	and pencil or	using a comp	outer?	VH270132	NC	N/A

Previous item						2019 item						D/A/ R/NC+	Rationale	
15. Do you think you would be row.	able to do each	of the followir	ng? Select one ansv	wer choice on	vH270215 each	15. Do you think you would be row.	able to do each	of the followir	ng? Select one ans	wer choice on	vн270215 each	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	Ø	(8)	0	0	VH270229	Write sentences and paragraphs using a computer	®	•	0	Φ	VH270229			
b. Edit text using a computer	0	•	0	0	VH270218	b. Edit text using a computer	0	®	0	Φ	VH270218			
c. Use a touchscreen on a computer, tablet, or smartphone	®	•	©	•	VH270230	c. Use a touchscreen on a computer, tablet, or smartphone	(®	0	Φ	VH270230			
d. Look up the meaning of a word using a computer	®	(8)	0	Φ	VH270225	d. Look up the meaning of a word using a computer	Φ	®	0	Φ	VH270225			
e. Draw a picture using a computer	•	®	0	•	VH270226	e. Draw a picture using a computer	Ø	®	0	Φ	VH270226			
f. View or download digital media	Ø	•	0	Φ	VH270216	f. View or download digital media	0	®	0	Φ	VH270216			
g. Create a presentation using a computer	•	•	0	•	VH270228	g. Create a presentation using a computer	0	®	0	0	VH270228			
h. Create a spreadsheet using a computer	®	•	O	•	VH270231	h. Create a spreadsheet using a computer	0	®	0	Φ	VH270231			
i. Install new software or apps	®	•	0	0	VH270219	i. Install new software or apps	Ø	®	0	Φ	VH270219			
 Participate in online discussions, forums, social networking sites, or virtual communities 	0	•	Q	Φ	VH270220	j. Participate in online discussions, forums, social networking sites, or virtual	®	®	0	Φ	VH270220			
k. Maintain a website or blog	®	(B)	0	0	VH270221	communities		-130						
Search for information on the Internet	®	(B)	0	0	VH270222	k. Maintain a website or blog 1. Search for information on	Ø	®	0	0	VH270221			
m. Run simulations using a computer	Ø	(3)	0	0	VH270223	the Internet m. Run simulations using a	®	®	0	Φ	VH270222			
n. Create a graph or chart using a computer	®	•	0	•	VH270224	computer n. Create a graph or chart	Φ	(B)	0	Φ	VH270223			
o. Write a computer program or app	Ø	(8)	0	•	VH270227	using a computer o. Write a computer program	0	®	0	Φ	VH270224			
p. Troubleshoot a problem with a computer	0	(8)	0	0	VH270232	or app p. Troubleshoot a problem	0	®	0	Φ	VH270227			
 q. Figure out how to use new functions of a digital device 	0	®	0	Φ	VH270217	with a computer	Ø	(B)	0	Φ	VH270232			
that I am not yet familiar with	w .	•	, i	9	***************************************	q. Figure out how to use new functions of a digital device that I am not yet familiar with	®	®	0	•	VH270217			

Previous item	2019 item	D/A/ R/NC+	Rationale
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?	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?	NC	N/A
∞ 0	◎ 0		
© 1	Ф 1		
© 2	© 2		
(D) 3	© 3		
D 4	© 4		
© 5	Φ 5		
© 6	© 6		
® 7	© 7		
© 8			
Φ 9	© 8		
© 10	Φ 9		
	₾ 10		
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.	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.	NC	N/A
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 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 <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 Linda is?		
◎ 0	⊕ 0		
(D) 1	1		
© 2	© 2		
₾ 3			
© 4	© 3		
© 5	© 4		
© 6	© 5		
	© 6		
® 7		1	1
© 7 Ф 8	⊕ 7		
	⊕ 7 □ 8		
Ф 8			
Ф 8 Ф 9	© 8		

Previous item	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 Tom is? © 0 © 1 © 2 © 3 © 4 © 5 © 6 © 7 © 8 © 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? 0 1 2 3 4 5 6 7 8 9 10		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	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 1 2 3 4 5 6 7 8 9 10	No. 26	NC	N/A

Previous item						2019 item				D/A/ R/NC+	Rationale		
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.					VH231219	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.					VH270239	NC	N/A
On a scale from 0 to 10, w familiar with using compu						On a scale from 0 to 10, wh familiar with using compu	nere 0 is not at al						
® 0						∞ 0		, ,					
© 1													
© 2						® 1							
0 3						© 2							
						© 3							
(3) 4						© 4							
O 5						© 5							
© 6						© 6							
® 7						2 0							
60 /						Ø 7							
Φ 8						9 7							
						Φ 8							
Ф 8 Ф 9 © 10													
⊕ 8 ⊕ 9 ⊛ 10 2017 Grade 8)	h each of the follower heard of it	owing? Select on Heard of it once or twice	Heard of it	Know it well, understand	Vetziniwa	© 8 © 9	Never heard of	Heard of it	Heard of it	Know it well, understand	VICTOR OF	NC	N/A
 ⊕ 8 ⊕ 9 ⑤ 10 2017 Grade 8) 21. How familiar are you wit	Never heard of	Heard of it once or twice	Heard of it often	Know it well, understand the concept		◆ 8 ◆ 9 ◆ 10 21. How familiar are you with	Never heard of	Heard of it once or twice	Heard of it often	Know it well, understand the concept		NC	N/A
 ⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit. a. E-reaster 	Never heard of	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VHZTOHO VHZTOHO VHZTOLOS VHZTOLOS	 	Never heard of	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195	NC	N/A
 ⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit a. E-reader 	Never heard of	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195	 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 VH270196	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you with i. E-reader b. Wi-Fi c. Firewall	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 VH270196	 ⊕ 8 ⊕ 9 ⊕ 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195	NC	N/A
© 8 © 9 © 10 2017 Grade 8) 21. How familiar are you with E-reader Wi-Fi Firewall	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 VH270196 VH270197	 ⊕ 8 ⊕ 9 ⊕ 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall d. Hyperlink 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 VH270196 VH270197	NC	N/A
 ⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VHI276195 VHI276196 VHI276197 VHI276198 VHI276199 VHI276199	D 8 D 9 D 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 VH270196 VH270197 VH270198	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VHI270195 VHI270196 VHI270197 VHI270198 VHI270199 VHI270091	 ⊕ 8 ⊕ 9 ⊕ 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall d. Hyperlink 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 YH270196 YH270197 YH270198 YH270198	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit a. E-reader b. Wi-Fi c. Firewall d. Hyperlink c. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	V8276195 V99276196 V99276197 V89276199 V99276199 V99276291 V99276291 V99276200	 ⊕ 8 ⊕ 9 ⊕ 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 VH270196 VH270197 VH270199 VH270100	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit 21. How familiar are you wit 22. Firewall 23. Hyperlink 24. Neuro-digital computing 25. Instant messaging 26. CPU 26. Cut and paste 27. Pyramidal browser	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH870185 VYH870197 VH870197 VH870199 VH870199 VH870199 VH870201 VH870201 VH870201 VH870201	 ⊕ 8 ⊕ 9 ⊕ 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270195 VH270196 VH270197 VH270199 VH270100 VH270100 VH270100	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit 21. How familiar are you wit 22. Firewall 23. Hyperlink 24. Neuro-digital computing 25. CPU 26. Cut and paste 26. Pyramidal browser 26. Spreadsheet	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VIEROLIOS VVIEROLIOS VVERTOLIOS VIEROLIOS VIEROLIOS VIEROLIOS VIEROLIOS VIEROLIOS VIEROLIOS	 ⊕ 8 ⊕ 9 ⊕ 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste 	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VFI270195 VFI270196 VFI270197 VFI270199 VFI270199 VFIZ70500 VFIZ70500 VFIZ70500 VFIZ70500	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit 1. E-reader 9. Wi-Fi 2. Firewall 1. Hyperlink 2. Neuro-digital computing 1. Instant messaging 3. CPU 1. CPU 1. CPU and paste 2. Spreadsheet 3. Limbic wire	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH870185 VYH870197 VH870197 VH870199 VH870199 VH870199 VH870201 VH870201 VH870201 VH870201	D 9 D 10 21. How familiar are you with a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU h. Cut and paste i. Pyramidal browser	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	998.70193 991270199 991270199 991270199 991270199 991270100 991270503 991270503	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit 21. How familiar are you wit 22. Firewall 23. Hyperlink 24. Hyperlink 25. Neuro-digital computing 26. Instant messaging 26. CPU 27. Lyramidal browser 28. Spreadsheet 29. Limbic wire 29. Spinalbyte	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH270149 VH2701476 VH270147 VH270149 VH270164 VH270001 VH270001 VH270001 VH270001 VH270001 VH270001 VH270001 VH270001 VH270001 VH270001 VH270001 VH270001	D 9 D 10 21. How familiar are you with a. E-reader 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	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	99:270195 99:270196 99:270197 99:270199 99:270199 99:270201 99:270203 99:270204 99:270204	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit 21. How familiar are you wit 22. How familiar are you wit 23. E-reader 24. Wi-Fi 25. Firewall 26. Hyperlink 26. Neuro-digital computing 27. Instant messaging 28. CPU 29. CUt and paste 29. CPU 29. Cut and paste 29. Spreadsheet 29. Limbic wire 29. Spinalbyte 29. Cloud computing	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VILETOLIO	D 9 D 10 21. How familiar are you with a. E-reader 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	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	99:270195 99:270199 99:270197 99:270197 99:270199 99:270201 99:270201 99:270203 99:270204 99:270204 99:270204	NC	N/A
⊕ 8 ⊕ 9 ⊕ 10 2017 Grade 8) 21. How familiar are you wit a. E-reader b. Wi-Fi c. Firewall d. Hyperlink e. Neuro-digital computing f. Instant messaging g. CPU b. Cyt and paste i. Pyramidal browser i. Spreadsheet k. Limbic wire	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	VH870105 VY870107 VY870109 VY870109 VY870109 VY870001 VY870001 VY870001 VY870001 VY870001 VY870001 VY870001	D 9 D 10 21. How familiar are you with a. E-reader 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 l. Spinalbyte	Never heard of it D D D D D D D D D D D D D D D D D D	Heard of it once or twice	Heard of it often	Know it well, understand the concept	994270199 991270199 991270199 991270199 991270199 991270200 991270200 991270200 991270200 991270200 991270200	NC	N/A

Appendix K-1az: Operational Grade 8 CAFS

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

			1
	Yes	No	
a. A laptop or desktop computer that is only for your use	(a)	®	VH270141
b. A laptop or desktop computer that is shared between you and others	(A)	®	VH270142
c. A tablet that is only for your use	(A)	®	VH270139
d. A tablet that is shared between you and others	(a)	®	VH270140
e. Wi-Fi or some other Internet connection you can use	(A)	®	VH270143
f. A smartphone that is only for your use	(A)	®	VH270144

VH270145

2. 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
- (D) When I was in sixth, seventh, or eighth grade

VH270090

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

VI	270	114	6

		VH270146
4.	When did you first use a smartphone ?	
	® 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	
		VH270147
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	
		VH270148
6.	On a weekday, about how many hours do you use a tablet 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	

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

	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	®	®	VH270151
c. How to edit text using a computer	(A)	®	VH270164
d. How to search for information on the Internet	®	®	VH270152
e. How to use a tablet	(A)	®	VH270156
f. How to look up the meaning of a word using a computer	®	®	VH270157
g. How to create a spreadsheet using a computer	®	®	VH270154
h. How to create a presentation using a computer	®	®	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	®	®	VH270161
l. How to troubleshoot problems with a computer	®	®	VH270158

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.	(A)	®	VH270166
b. In most of my classes there are tablets that I can use for schoolwork.	(A)	®	VH270167
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	(A)	®	VH270170
d. Most of my teachers use computers when teaching my classes.	(A)	®	VH270169
e. Most of my teachers require us to use computers in the classroom.	(A)	®	VH270168

V	H2	70	1	1	6
		, ,	•	•	~

- 9. Has your school assigned you a laptop or desktop computer that only you can use?
 - No
 - **⑤** Yes, but I cannot take it home with me.
 - $\ \, \ \, \ \,$ Yes, and I can take it home with me (laptop only).

VH270117

- 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.

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	(A)	®	0	0	©	VH270172
b.	Write a paper for school that was longer than a page	(A)	®	0	0	©.	VH270173
c.	Search the Internet for a school project	(A)	®	0	0	Œ	VH270174
d.	Practice things in mathematics that you were having trouble learning	®	®	0	0	©.	VH270181
e.	Practice things in reading that you were having trouble learning	(8)	®	0	0	©.	VH270177
f.	Take a test	(A)	®	©	0	(E)	VH270175
g.	Create a map	(A)	®	0	0	Œ	VH270178
h.	Work on a website or blog that you maintain	(A)	®	0	0	Ē	VH270179
i.	Create a multimedia presentation <i>on your own</i>	(4)	®	0	0	Œ	VH270180
j.	Work collaboratively with a team of students to create a multimedia presentation	®	®	0	(1)	©.	VH270176

12. This school year, how often have you used a **tablet** 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	(A)	®	0	0	Œ	VH270183
b.	Write a paper for school that was longer than a page	(A)	®	0	0	©.	VH270188
c.	Search the Internet for a school project	A	B	0	0	Œ	VH270184
d.	Practice things in mathematics that you were having trouble learning	®	®	0	0	©.	VH270185
e.	Practice things in reading that you were having trouble learning	®	®	0	0	©.	VH270186
f.	Take a test	A	®	0	0	Œ	VH270192
g.	Create a map	A	®	0	0	Œ	VH270189
h.	Work on a website or blog that you maintain	A	B	0	0	Œ	VH270190
i.	Create a multimedia presentation <i>on your own</i>	(A)	®	0	0	Œ	VH270191
j.	Work collaboratively with a team of students to create a multimedia presentation	(®	0	0	Œ	VH270187

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.

 - ① 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	(A)	®	0	0	VH270229
b.	Edit text using a computer	(A)	®	0	0	VH270218
c.	Use a touchscreen on a computer, tablet, or smartphone	(A)	®	©	0	VH270230
d.	Look up the meaning of a word using a computer	(A)	®	©	0	VH270225
e.	Draw a picture using a computer	(A)	®	0	0	VH270226
f.	View or download digital media	A	®	0	0	VH270216
g.	Create a presentation using a computer	(A)	®	0	0	VH270228
h.	Create a spreadsheet using a computer	A	®	0	0	VH270231
i.	Install new software or apps	(A)	®	0	0	VH270219
j.	Participate in online discussions, forums, social networking sites, or virtual communities	(9)	®	0	0	VH270220
k.	Maintain a website or blog	(A)	®	0	0	VH270221
1.	Search for information on the Internet	(A)	®	0	0	VH270222
m	Run simulations using a computer	(A)	®	0	0	VH270223
n.	Create a graph or chart using a computer	(A)	®	0	0	VH270224
0.	Write a computer program or app	(A)	®	0	0	VH270227
p.	Troubleshoot a problem with a computer	(A)	®	0	0	VH270232
q.	Figure out how to use new functions of a digital device that I am not yet familiar with	③	(8)	0	©	VH270217

16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very fa

- **(A)** 0
- **®** 1
- © 2
- 3
- **1**
- ① 5
- © 6
- ⊕ 7
- 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
- \odot 2
- ① 3
- 4
- ① 5
- © 6
- T 7
- **O** 8
- **D** 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?

- **(A)** 0
- **®** 1
- \odot 2
- ① 3
- © 4
- ① 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 Susan is?

- **(A)** 0
- ® 1
- © 2
- ① 3
- ① 4
- ⑤ 5
- © 6
- T = 7
- **O** 8
- **O** 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 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?

- **(A)** 0
- **®** 1
- \bigcirc 2
- ① 3
- © 4
- ① 5
- © 6
- T
- **O** 8
- **D** 9
- © 10

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

	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	
a. E-reader	A	®	0	0	VH270195
b. Wi-Fi	(A)	®	0	0	VH270196
c. Firewall	(A)	®	0	0	VH270197
d. Hyperlink	A	®	0	0	VH270198
e. Neuro-digital computing	(A)	®	0	0	VH270199
f. Instant messaging	A	®	0	0	VH270200
g. CPU	(A)	®	0	0	VH270201
h. Cut and paste	(A)	®	0	0	VH270203
i. Pyramidal browser	(A)	®	0	0	VH270204
j. Spreadsheet	A	®	0	0	VH270206
k. Limbic wire	(A)	®	0	0	VH270207
1. Spinalbyte	(A)	B	0	0	VH270208
m. Cloud computing	(A)	®	0	0	VH270209
n. Server	(A)	®	0	0	VH270210
o. Compiler	(A)	B	0	0	VH270212
p. Callosum board	A	®	0	0	VH270214

Appendix K-1ba: Summary of Changes Operational Grade 12 CAFS

Previous item				2019 item				D/A/ R/NC+	Rationale
1. 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. (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.
2. At home, do you have any of the following?	Fill in one ov	al on each line.	VH155275	1. At home, do you have any of the following? Se	elect one answer cho	ice on each row.	VH270)38	NC	The in-line
	Yes	No			Yes	No			direction was
a. A laptop or desktop computer that is	0	⊕	VH155283	a. A laptop or desktop computer that is only for your use	0	0	V94270141		adapted from
			VH155284	b. A laptop or desktop computer that is shared between you and others	0	•	VH270142		PBA to DBA:
only for your use	0	®	VIII55284	c. A tablet that is only for your use	@	0	VH1270139		"Fill in one
only for your use b. A laptop or desktop computer that is shared between you and others			VH155280	d. A tablet that is shared between you and others	•	•	VI1270140		oval on each
b. A laptop or desktop computer that is shared between you and others	(A)	(1)	VF1155280						line." was
b. A laptop or desktop computer that is shared between you and others c. A tablet that is only for your use	9	•	VH155281	e. Wi-Fi or some other Internet connection	0	0	VH270143		illie. was
b. A laptop or desktop computer that is shared between you and others	ØØ	①①		e. Wi-Fi or some other Internet connection you can use f. A smartphone that is only for your use	Ø	®	V96270143 V11270144		adapted to
b. A laptop or desktop computer that is shared between you and others c. A tablet that is only for your use d. A tablet that is shared between you	- 37			you can use			11-51-51		

⁺ 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
3. 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? ① I have never used one. ① Before I was in kindergarten ① When I was in kindergarten ① When I was in first, second, or third grade ① When I was in fourth or fifth grade ① When I was in sixth, seventh, or eighth grade ② When I was in high school	YAGINGM	NC	N/A
4. When did you first use a tablet? 4. When did you first use a tablet? 5 I have never used one. 6 Before I was in kindergarten 6 When I was in kindergarten 7 When I was in first, second, or third grade 6 When I was in fourth or fifth grade 7 When I was in sixth, seventh, or eighth grade 6 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	ViCTMess	R	For DBA response option "A" is adapted to "Never until this assessment" to account for the fact that students are taking the eNAEP assessment

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

Previous item	2019 item			Rationale
5. When did you first use a smartphone? ① I have never used one. ③ Before I was in kindergarten ① When I was in kindergarten ① When I was in first, second, or third grade ② When I was in fourth or fifth grade ① When I was in sixth, seventh, or eighth grade ③ When I was in high school	4. When did you first use a smartphone? ② I have never used one. ③ Before I was in kindergarten ③ When I was in kindergarten ④ When I was in first, second, or third grade ④ When I was in fourth or fifth grade ⑤ When I was in sixth, seventh, or eighth grade ④ When I was in high school		NC	N/A
6. 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 More than 4 hours (2015 Grade 12)	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	Victor	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
7. On a weekday, about how many hours do you use a tablet for doing schoolwork, including homework?	 6. On a weekday, about how many hours do you use a tablet for doing schoolwork, including homework? None 	NC	N/A
NoneLess than an hour1 to 2 hours	© Less than an hour © 1 to 2 hours © 2 to 3 hours © 3 to 4 hours © More than 4 hours		
① 2 to 3 hours ① 3 to 4 hours ① More than 4 hours			

⁺ 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	
8. Were you taught any of the following at sc	hool? Fill in on	e oval on each line.	VH155373	7. Were you taught any of the following at school	7. Were you taught any of the following at school? Select one answer choice on each row.					
	Yes	No			Yes	No			items "f",	
How to type on a computer keyboard using the correct fingers	(A)	®	VH155375	How to type on a computer keyboard using the correct fingers	0	0	VH270150		"m", "n" were	
	-		VH155376	b. How to write sentences and paragraphs using a computer	•	•	VH270151		dropped.	
 How to write sentences and paragraphs using a computer 	(A)	®	11133070	c. How to edit text using a computer	⊕	00	VH270164			
c. How to edit text using a computer	(4)	®	VH176918	d. How to search for information on the Internet	0	0	V11270152		The in-line	
d. How to search for information on	Ø	®	VH155377	e. How to use a tablet	0	0	VH220156		direction was	
the Internet	9			How to look up the meaning of a word using a computer	®	00	VH270157		adapted from	
e. How to use a tablet	(4)	(B)	VH155378	g. How to create a spreadsheet using a computer	©	00	VH2270154		PBA to DBA:	
 f. How to draw a picture using a computer 	(4)	®	VH155379	h. How to create a presentation using a computer	©	0	VH270158		"Fill in one	
g. How to look up the meaning of a	(A)	®	VH155380	i. How to run simulations using a computer	@	•	VH270159		oval on each	
word using a computer	9	9		How to write a computer program or app k. How to create a graph or chart using a	©	Ф	VI1270160		line." was	
h. How to create a spreadsheet using a computer	(4)	(1)	VH155381	How to create a graph or chart using a computer I. How to troubleshoot problems with a	Φ	00	VH270161		adapted to	
•				computer	Φ	0	VH270158		"Select one	
 How to create a presentation using a computer 	(4)	(1)	VH155382						answer	
j. How to run simulations using a computer	(4)	(1)	VH155384						choice on each row."	
k. How to write a computer program or app	(A)	(B)	VH155385						each row."	
How to create a graph or chart using a computer	(4)	(B)	VH155386							
m. How to maintain a website or blog	(A)	®	VH155387							
n. How to install new software or apps	(A)	®	VH155388							
o. How to troubleshoot problems with a computer	(A)	®	VH155383							

⁺ 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. Which of the following are true about the wa computers at school? Fill in one oval on each		you and your tea	vinissi77 chers use	Which of the following are true about the way school? Select one answer choice on each row	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.	(4)	•	VH155479	a. In most of my classes there are laptop or desktop computers that I can use for schoolwork.	©	•	VH270166		PBA to DBA: "Fill in one
b. In most of my classes there are	(3)	•	YH155482	b. In most of my classes there are tablets that I can use for schoolwork.	•	(3)	VH270167		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.	Ø	•	VH2.70170		line." was
c. There is Wi-Fi or some other Internet connection that I can use	0	0	VH182383	 d. Most of my teachers use computers when teaching my classes. 	0	0	VH270169		adapted to
for schoolwork.				e. Most of my teachers require us to use computers in the classroom.	0	•	VH270168		"Select one
 d. Most of my teachers use computers when teaching my classes. 	(A)	(1)	VH155484				•		answer
e. Most of my teachers require us to use computers in the classroom.	(4)	•	VHI55485						choice on each row."
2015 Grade 12) O. Has your school assigned you a laptop or desktop computer that only you can use? O No Yes, but I cannot take it home with me.				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).					N/A
© Yes, and I can take it home with me (laptop only).									
2015 Grade 12)									
1. Has your school assigned you a tablet that only you can use?				10. Has your school assigned you a tablet that only	y you can use?		VH230117	NC	N/A
♠ No				 No Yes, 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.					
								1	

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⁺ 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
21. This school year, how often have you used a laptop or desktop computer to do each of the following? Fill in one oval on each line.							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.								The in-line direction wa
	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 fron
a. Write a short paper (less than a page) for school	(A)	(1)	0	0		VH155496	Write a short paper (less than a page) for school	•	0	0	0	Φ	VH2703 F2		PBA to DBA: "Fill in one
b. Write a paper for school that was longer than a page	®	1	0	•	0	VH155497	 Write a paper for school that was longer than a page 	0	®	0	9	Φ	VH270178		oval on each
c. Search the Internet for a	(A)	(1)	0	•	0	VH155498	c. Search the Internet for a school project	•	19	0	0	Φ	VIII270174		line." was
d. Practice things in mathematics that you were	0	•	0	0	©	VH176943	d. Practice things in mathematics that you were having trouble learning	0	Œ	0	0	θ	VH2701AT		adapted to "Select one
having trouble learning e. Practice things in reading that you were having trouble	⊗	₿	0	0	©	VH176945	e. Practice things in reading that you were having trouble learning	®	0	0	0	θ	V11270177		choice on each row."
learning							f. Take a test	0	0	0	0	Φ	VH270175		each low.
f. Take a test	(4)	(B)	0	0	0	VH176946	g. Create a map	0	00	0	Θ	Θ	VIII270176		
g. Create a map	0	(B)	0	0	0	VH224684	 Work on a website or blog that you maintain 	Œ)	•	0	0	Ф	VH270179		
h. Work on a website or blog that you maintain	(4)	0	0	0	0	VH224685	 Create a multimedia presentation on your own 	0	0	0	0	00	VH270160		
i. Create a multimedia presentation on your own	(3)	•	0	0	Φ	VH224686	j. Work collaboratively with a team of students to create a	®	•	0	0	Ф	YH270176-		
i. Work collaboratively with a team of students to create a multimedia presentation	®	0	0	0	0	VH224690	multimedia presentation								

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

2019 Operational Grade 12 Computer and Familiarity Study (CAFS) Student Previous item 2019 item D/A/ Rationale R/NC+ NC 12. This school year, how often have you used a tablet to do each of the following? Select one answer The in-line 13. This school year, how often have you used a tablet to do each of the following? Fill in one oval on each line. direction was More than About Once every About once More than A few times adapted from Never A few Once every once a once a few weeks once a week a week week Never few weeks week times Write a short paper PBA to DBA: 0 VH155525 a. Write a short paper (less 0 1 0 0 (less than a page) for O db 0 0 school "Fill in one than a page) for school Write a paper for b. Write a paper for school that 0 1 0 0 1 VH155528 oval on each school that was longer 0 0 0 0 Θ was longer than a page than a page line." was Search the Internet for 0 VH155527 0 1 0 0 0 c. Search the Internet for a A 0 (1) 0 a school project adapted to school project d. Practice things in mathematics that you "Select one 0 0 1 VH176938 d. Practice things in 1 0 3 0 0 0 D were having trouble mathematics that you were learning answer having trouble learning Practice things in reading that you were VIII76925 choice on e. Practice things in reading 0 1 0 0 1 0 0 0 D 0 having trouble that you were having trouble learning. each row." Take a test 0 00 0 0 1 VIII26927 0 Create a map f. Take a test O 0 0 0 (3) 1 0 0 D Work on a website or 0 0 0 0 0 VH224714 0 0 1 g. Create a map 0 0 blog that you maintain Create a multimedia ▼H1224720 h. Work on a website or blog 0 presentation on your 0 0 0 0 0 that you maintain own Work collaboratively VH224722 i. Create a multimedia with a team of presentation on your own 0 0 0 0 0 students to create a multimedia j. Work collaboratively with a (1 0 0 0 VH1224725 presentation team of students to create a multimedia presentation (2015 Grade 12) N/A NC 14. Which best describes the way you type 13. Which best describes the way you type on a computer keyboard? on a computer keyboard? D I don't know how to type using a computer keyboard. @ I don't know how to type using a D I can type with one or two fingers, but I have to search for where the letter keys are, computer keyboard. O I can type with one or two fingers, and I know where most of the letter keys are. ® I can type with one or two fingers, D I can type with all ten fingers when I look at the keyboard but I have to search for where the D I can type with all ten fingers without looking at the keyboard. letter keys are. O I can type with one or two fingers, and I know where most of the letter keys are. 1 can type with all ten fingers when I look at the keyboard. © I can type with all ten fingers without looking at the keyboard. (2015 Grade 12)

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

2019 Operation	nal Grade 12 Computer and Familiarity Study (CAFS) Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
15. Compared to other students in your English/language arts class, how fast do you type on a computer keyboard? ② I am slower than most students. ③ I type about the same speed as others. ② I am faster than most students. ③ 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.
16. Would you rather take a test at school using paper and pencil or using a computer? ② Paper and pencil ③ Computer (2015 Grade 12)	14. Would you rather take a test at school using paper and pencil or using a computer? Description Paper and pencil Computer	NC NC	N/A

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

Prev	rious item						2019 item						D/A/ R/NC+	Rationale
17. Do	you think you would be able to do	each of the f	ollowing?	Fill in one o	oval on ea	v _{H155799} ch line.	15. Do you think you would be row.	able to do each	of the followin	g? Select one ans	wer choice on e	ун270215 each	NC	The in-line
		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.			adapted from
a.	Write sentences and paragraphs using a computer	®	(B)	0	•	VH176967	Write sentences and paragraphs using a computer	0	®	0	Φ	VH270229		PBA to DBA:
Ъ.	Edit text using a computer	(A)	B	0	0	VH155803	b. Edit text using a computer	®	8	0	•	VH270218		"Fill in one
c.	Use a touchscreen on a computer, tablet, or smartphone	®	(B)	0	•	VH176970	c. Use a touchscreen on a computer, tablet, or smartphone	0	®	0	•	VH270230		oval on each line." was
d.	Look up the meaning of a word using a computer	(A)	®	0	0	VH155810	d. Look up the meaning of a word using a computer	®	®	0	•	VH270225		adapted to
				-	-	VH155811	Draw a picture using a computer	0	®	0	•	VH270226		"Select one
	Draw a picture using a computer View or download digital media	(a)(b)(c)(d)(d)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)(e)<l< td=""><td>® ®</td><td>0</td><td>0</td><td>VH155800</td><td>f. View or download digital media</td><td>®</td><td>(8)</td><td>0</td><td>•</td><td>VH270216</td><td></td><td>answer</td></l<>	® ®	0	0	VH155800	f. View or download digital media	®	(8)	0	•	VH270216		answer
	Create a presentation using a	(a)	®	0	0	VH155820	g. Create a presentation using a computer	0	(3)	0	•	VH270228		choice on
	computer						h. Create a spreadsheet using a computer	0	•	0	0	VH270231		each row."
h.	Create a spreadsheet using a computer	(4)	®	0	0	VH155802	i. Install new software or apps	®	®	0	•	VH270219		
i.	Install new software or apps Participate in online discussions,	®	®	0 0	Φ	VH155804 VH155805	participate in online discussions, forums, social networking sites, or virtual	@	®	0	•	VH270220		
1-	forums, social networking sites, or	•	•				communities k. Maintain a website or blog	Ø	•	0	Φ	VH270221		
k.	virtual communities Maintain a website or blog	®	®	0	•	VH155806	Search for information on the Internet	0	•	0	Φ	VH270222		
	Search for information on the	(A)	®	0	0	VH155807	m. Run simulations using a computer	0	®	0	Φ	VH270223		
2.	Internet						n. Create a graph or chart using a computer	®	®	0	•	VH270224		
m	Run simulations using a computer	(4)	(B)	0	0	VH155808	o. Write a computer program or app	0	®	0	Φ	VH270227		
n.	Create a graph or chart using a computer	(A)	(1)	0	0	VH155809	p. Troubleshoot a problem with a computer	®	®	0	Φ	VH270232		
0.	Write a computer program or app	(3)	®	0	0	VH155812	 q. Figure out how to use new functions of a digital device 			13.	T. Land			
p.	Troubleshoot a problem with a computer	(3)	(B)	0	0	VH196843	that I am not yet familiar with	@	®	.0	•	VH270217		
q.	Figure out how to use new function of a digital device that I am not yet familiar with	s 👁	(B)	0	•	VH224738								

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

2019 Operational Grade 12 Computer and Familiarity Study (CAFS) Student Previous item 2019 item D/A/ Rationale R/NC+ NC N/A 18. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar 16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how with using computers and other digital devices are you? familiar with using computers and other digital devices are you? 1 1 D 0 2 O 2 O 3 O 4 @ 6 D 5 @ 6 0 8 D 7 O 8 ® 10 0 9 ® 10 (2015 Grade 12) NC N/A Please read the descriptions of the following four twelfth-grade students. After you read 17. Please read the descriptions of the following four twelfth-grade students. After you each description, you will be asked to answer a question about each student based on the read each description, you will be asked to answer a question about each student information provided. based on the information provided. VH153887 Linda often uses apps to talk to her friends or to play games. She does some of her 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 homework on her laptop and knows how to write and create tables using a computer. computer. Linda cannot type with 10 fingers but is pretty fast with two fingers and Linda cannot type with 10 fingers but is pretty fast with two fingers and mostly finds the mostly finds the right keys. right keys. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, how familiar familiar with using computers and other digital devices do you think Linda is? with using computers and other digital devices do you think Linda is? @ O (D) D 1 1 D 0 2 @ 3 D 4 O 5 (D) 4 @ 6 D 5 0 8 OD 7 O 8 ® 10 0 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.	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	
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?	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			
1	© 1			
© 2	© 2			
© 3	© 3			
Φ 4	© 4			
	⊕ 5			
◆ 5	© 6			
© 6	® 7			
⊕ 7	Φ 8			
Φ 8	© 9 © 10			
Φ 9	W 10			

⁺ 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
21. 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?	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	VICRES	NC	N/A
22. 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? © 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 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? 0 0 1 2 3 4 5 6 7 8 9 9 10	VIENES	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
23. How familiar are you with each of	the following? I	Fill in one o	oval on eac	ch line.	VH155750	21. How familiar are you with	each of the follo	wing? Select on	e answer choice	on each row.	VIEWHA	R	Previous sub
	Never heard of it	Heard of it once or twice	Heard of	Know it well, understand the concept			Never heard of	Heard of it once or twice	Heard of it often	Know it well, understand the concept			items "h", "k", "q", "s"
					VH155751	a. E-reader	®	0	Ф	0	VH270195		were
a. E-reader	(A)	®	0	0	***********	b. Wi-Fi	@	•	0	0	VH279196		dropped.
b. Wi-Fi	(A)	®	0	0	VH155752	c. Firewall d. Hyperlink	Ø	0	0	0	VH270197 VH270198		uroppeu.
c. Firewall	(A)	®	0	0	VH155753	e. Neuro-digital computing	0	0	0	0	VH270199		
					VH155756	f. Instant messaging	⊕	(D)	0	0	VHZ 70200		The in-line
d. Hyperlink	(4)	(B)	0	0		g. CPU	•	0	0	0	VH270201		direction wa
e. Neuro-digital computing	(4)	(B)	0	0	VH155757	h. Cut and paste	@	0	0	0	VH270203		
f. Instant messaging	(A)	(B)	0	0	VH155758	Pyramidal browser Spreadsheet	Φ	0	0	0	VH270204 VH270204		adapted from
	_				VH155759	k. Limbic wire	9		0	9	V16270207		PBA to DBA:
g. CPU	(A)	(B)	0	0		I. Spinalbyte	®	◎	0	0	VH27006		"Fill in one
h. Track changes	(A)	(B)	0	0	VH155760	m. Cloud computing	0	0	0	0	V11270209		oval on each
i. Cut and paste	(A)	(B)	0	0	VH155761	n. Server	@	®	0	0	VHE/70212		
j. Pyramidal browser	(A)	®	0	0	VH155762	o. Compiler p. Callosum board	Ø	0	0	0	VHII/HILI		line." was
k. Pivot table	0	®	0	0	VH155763	9				-			adapted to
Spreadsheet	9	®	0	0	VH155765								"Select one
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1													answer
m. Limbic wire	(4)	(1)	0	0	VH155766								choice on
n. Spinalbyte	(4)	(B)	0	0	VH155767								each row."
o. Cloud computing	(4)	B	0	0	VH155768								
p. Server	(A)	®	0	(1)	VH155769								
q. Root directory	(A)	(13)	0	•	VH155770								
r. Compiler	(A)	(B)	0	0	VHI55771								
s. ASCII	(4)	(B)	0	•	VH155772								
t. Callosum board	(A)	(B)	0	0	VH155779								

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

Appendix K-1bb: Operational Grade 12 CAFS

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

	Yes	No	
a. A laptop or desktop computer that is only for your use	(A)	(8)	VH270141
b. A laptop or desktop computer that is shared between you and others	(A)	®	VH270142
c. A tablet that is only for your use	(A)	®	VH270139
d. A tablet that is shared between you and others	(A)	®	VH270140
e. Wi-Fi or some other Internet connection you can use	(a)	®	VH270143
f. A smartphone that is only for your use	(A)	B	VH270144

VH270234

2. 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
- (D) When I was in sixth, seventh, or eighth grade
- © When I was in high school

VH270089

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
- (D) When I was in sixth, seventh, or eighth grade
- When I was in high school

VI	27	022	5

			VH27023
4.	Wł	nen did you first use a smartphone ?	
	(A)	I have never used one.	
	B	Before I was in kindergarten	
	0	When I was in kindergarten	
	(When I was in first, second, or third grade	
	Œ	When I was in fourth or fifth grade	
	Ð	When I was in sixth, seventh, or eighth grade	
	©	When I was in high school	
			VH27014
5.		a weekday, about how many hours do you use a laptop or desktop computer for ing schoolwork, including homework?	
	(A)	None	
	B	Less than an hour	
	0	1 to 2 hours	
	(2 to 3 hours	
	Œ	3 to 4 hours	
	Ð	More than 4 hours	
			VH27014
6.		a a weekday, about how many hours do you use a tablet for doing schoolwork, cluding homework?	
	(A)	None	
	®	Less than an hour	
	0	1 to 2 hours	
	0	2 to 3 hours	
	(E)	3 to 4 hours	
	(Ē)	More than 4 hours	

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

	Yes	No	
a. How to type on a computer keyboard using the correct fingers	0	®	VH270150
b. How to write sentences and paragraphs using a computer	(A)	®	VH270151
c. How to edit text using a computer	(A)	®	VH270164
d. How to search for information on the Internet		®	VH270152
e. How to use a tablet	(A)	®	VH270156
f. How to look up the meaning of a word using a computer	(A)	®	VH270157
g. How to create a spreadsheet using a computer	(A)	®	VH270154
h. How to create a presentation using a computer	(A)	®	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	(A)	®	VH270161
l. How to troubleshoot problems with a computer	@	®	VH270158

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.	(9)	®	VH270166
b. In most of my classes there are tablets that I can use for schoolwork.	(9)	®	VH270167
c. There is Wi-Fi or some other Internet connection that I can use for schoolwork.	(4)	®	VH270170
d. Most of my teachers use computers when teaching my classes.	(9)	®	VH270169
e. Most of my teachers require us to use computers in the classroom.	(A)	®	VH270168

V	H2	70	1	1	6
		, ,	•	•	~

- 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.

VH270117

- 10. Has your school assigned you a tablet that only you can use?
 - No
 - ® Yes, but I cannot take it home with me.
 - O Yes, and I can take it home with me.

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	(A)	®	0	0	©	VH270172
b.	Write a paper for school that was longer than a page	(A)	®	0	0	Œ	VH270173
c.	Search the Internet for a school project	(A)	®	0	0	Œ	VH270174
d.	Practice things in mathematics that you were having trouble learning	®	®	0	0	©.	VH270181
e.	Practice things in reading that you were having trouble learning	®	®	0	0	©.	VH270177
f.	Take a test	A	®	0	0	Œ	VH270175
g.	Create a map	A	®	0	0	Œ	VH270178
h.	Work on a website or blog that you maintain	(A)	®	0	0	Œ	VH270179
i.	Create a multimedia presentation on your own	(A)	®	0	0	Œ	VH270180
j.	Work collaboratively with a team of students to create a multimedia presentation	(®	0	0	©.	VH270176

12. This school year, how often have you used a **tablet** 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	(8)	®	0	0	Œ	VH270183
b.	Write a paper for school that was longer than a page	(A)	®	0	0	Œ	VH270188
c.	Search the Internet for a school project	A	B	0	0	Œ	VH270184
d.	Practice things in mathematics that you were having trouble learning	®	®	0	0	©.	VH270185
e.	Practice things in reading that you were having trouble learning	®	®	0	0	©.	VH270186
f.	Take a test	A	®	0	0	Œ	VH270192
g.	Create a map	A	®	0	0	Œ	VH270189
h.	Work on a website or blog that you maintain	A	B	0	0	Œ	VH270190
i.	Create a multimedia presentation on your own	Ø	®	0	0	Œ	VH270191
j.	Work collaboratively with a team of students to create a multimedia presentation	®	®	0	0	Œ	VH270187

- 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.
 - ① 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	(A)	®	0	0	VH270229
b.	Edit text using a computer	A	®	0	0	VH270218
c.	Use a touchscreen on a computer, tablet, or smartphone	(A)	®	0	0	VH270230
d.	Look up the meaning of a word using a computer	(A)	®	©	0	VH270225
e.	Draw a picture using a computer	(A)	®	0	0	VH270226
f.	View or download digital media	A	®	0	0	VH270216
g.	Create a presentation using a computer	(A)	®	0	0	VH270228
h.	Create a spreadsheet using a computer	A	®	0	0	VH270231
i.	Install new software or apps	(A)	®	0	0	VH270219
j.	Participate in online discussions, forums, social networking sites, or virtual communities	(A)	©	©	•	VH270220
k.	Maintain a website or blog	(A)	₿	0	0	VH270221
1.	Search for information on the Internet	(8)	®	0	0	VH270222
m	. Run simulations using a computer	A	®	0	0	VH270223
n.	Create a graph or chart using a computer	A	®	0	(D)	VH270224
0.	Write a computer program or app	(A)	®	0	0	VH270227
p.	Troubleshoot a problem with a computer	(A)	®	0	(D)	VH270232
q.	Figure out how to use new functions of a digital device that I am not yet familiar with	(A)	®	©	•	VH270217

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
- **®** 1
- © 2
- **1** 3
- © 4
- ① 5
- © 6
- ⊕ 7
- **O** 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?

- **®** 1
- © 2
- ① 3
- © 4
- ① 5
- © 6
- ① 7
- **O** 8
- **D** 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?

- **(A)** 0
- **®** 1
- \odot 2
- ① 3
- © 4
- ① 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 Susan is?

- **(A)** 0
- B 1
- © 2
- **3**
- ① 4
- ⑤ 5
- © 6
- ⊕ 7
- **O** 8
- **O** 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 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?

- **(A)** 0
- **®** 1
- \bigcirc 2
- ① 3
- © 4
- ① 5
- © 6
- ① 7
- **O** 8
- **D** 9
- ® 10

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

	Never heard of it	Heard of it once or twice	Heard of it often	Know it well, understand the concept	
a. E-reader	A	®	0	0	VH270195
b. Wi-Fi	A	®	0	0	VH270196
c. Firewall	A	®	0	0	VH270197
d. Hyperlink	A	B	0	0	VH270198
e. Neuro-digital computing	A	®	0	0	VH270199
f. Instant messaging	A	B	0	0	VH270200
g. CPU	A	®	0	0	VH270201
h. Cut and paste	A	B	0	0	VH270203
i. Pyramidal browser	A	B	0	0	VH270204
j. Spreadsheet	A	®	0	0	VH270206
k. Limbic wire	A	B	0	0	VH270207
1. Spinalbyte	A	®	0	0	VH270208
m. Cloud computing	A	®	0	0	VH270209
n. Server	A	®	0	0	VH270210
o. Compiler	A	®	0	0	VH270212
p. Callosum board	A	®	0	0	VH270214

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	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.) ② Zero homes ③ One home ⑤ Two homes ⑤ Three or more homes Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.	
N/A	How many adults 18 years and older live with you? 1 2 More than 2 Issue: Socioeconomic Status	Α	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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? © 0 © 1 © 2 © More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 2 More than 2 Issue: Socioeconomic Status	894202 A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 socioeconomic 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? 1 2 3 4 More than 4 Issue: Socioeconomic Status	A A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 socioeconomic 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 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 socioeconomic 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	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.
N/A	Issue: Socioeconomic Status 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 Grandmother or female relative Other female adult (Please specify:) Father Second father Second 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 socioeconomic 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 as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.

Previous item	19 Operational Grade 4 Extended Student Questionna 2019 item	D/A/	Rationale
		R/NC+	
N/A	In the last month, has your mother worked for pay? Yes No I don't know.	УНВ65386 ³ А	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 provide 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

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student					
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? ② One job ① Two or more jobs ② I don't know. Issue: Socioeconomic Status		This item was added a part of the ESQ specia 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 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 relative relative, the male adult relative relative, respectively.		

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	
	One home	
	© Two homes	
	① 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 0	
	© 2	
	© More than 2	
		VH894196
3.	How many adults 18 years and older live with you?	
	1	
	3 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?	VH894198
	② 0	
	® 1	
	© 2	
	© More than 2	

		VH894202
5.	How many adults 18 years and older live with you in Home #1?	
	(A) 1	
	® 2	
	© More than 2	
		VH894204
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?	
	(A) 0	
	B 1	
	© 2	
	More than 2	
		VH894209
7.	How many adults 18 years and older live with you in Home #2?	
	® 2	
	© More than 2	
		VH863933
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 ?	
	® 2	
	© 3	
	① 4	
	© More than 4	

9.	You	You said one adult is taking care of you. Who is this adult?			
	(A)	Mother			
	®	Stepmother			
	0	Foster mother			
	© Grandmother or female relative				
	(E)	Other female adult (Please specify:)			
	(E)				
	©				
	\oplus	Foster father			
	○ Grandfather or male relative				
	Other male adult (Please specify:)				
			VH863781		
10.	0. 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?				
	\bigcirc	Mother			
	®	Stepmother			
	0	Foster mother			
	0	Grandmother or female relative			
	(E)	Other female adult (Please specify:)			
	Ð	Father			
	©				
	-				
	\oplus	Stepfather Foster father			
	(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)(H)<l< th=""><th></th><th></th></l<>				

11.		ink about the second adult taking care of you. We will call them Adult #2. Who Adult #2?
	(A)	Mother
	B	Second mother
	0	Stepmother
	(Foster mother
	Œ	Grandmother or female relative
	Ð	Other female adult (Please specify:)
	©	Father
	\oplus	Second father
	Ф	Stepfather
	Э	Foster father
	⊗	Grandfather or male relative
	(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?				
	(A)	Mother				
	$^{ ext{ $	Second mother				
	0	Stepmother				
	0	Foster mother				
	Œ	Grandmother or female relative				
	Ð	Other female adult (Please specify:)				
	©	Father				
	\oplus	Second father				
	\bigcirc	Stepfather				
	Θ	Foster father				
	€	Grandfather or male relative				
	Φ	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?		
	(A)	Mother	
	®	Second mother	
	0	Stepmother	
	(Foster mother	
	(E)	Grandmother or female relative	
	Ð	Other female adult (Please specify:)	
	©	Father	
	\oplus	Second father	
	Φ	Stepfather	
	Ф	Foster father	
	⊗	Grandfather or male relative	
	(Other male adult (Please specify:)	
			VH863863
14.	In	the last month, has your mother worked for pay?	
	lack	Yes	
	®	No	
	0	I don't know.	
			VH863875
15.	In	the last month, has your second mother worked for pay?	
	(A)	Yes	
	®	No	
	0	I don't know.	

VH86386	

	In the last month, has your stepmother worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863871
17.	In the last month, has your foster mother worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863873
18.	In the last month, has your grandmother or female relative worked for pay?	
18.	In the last month, has your grandmother or female relative worked for pay? ① Yes	
18.		
18.	YesNo	VH863877
	 Yes No I don't know. 	VH863877
	 Yes No I don't know. In the last month, has the female adult taking care of you worked for pay?	VH863877
	 Yes No I don't know. In the last month, has the female adult taking care of you worked for pay? Yes	VH863877
	 Yes No I don't know. In the last month, has the female adult taking care of you worked for pay? Yes No 	VH863877
	 Yes No I don't know. In the last month, has the female adult taking care of you worked for pay? Yes	VH863877
	 Yes No I don't know. In the last month, has the female adult taking care of you worked for pay? Yes No 	VH863877

20.	In the last month, has your father worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863898
21.	In the last month, has your second father worked for pay?	
	Yes	
	® No	
	© I don't know	
		VH863885
22.	In the last month, has your stepfather worked for pay?	
	Yes	
	® No	
	® No© I don't know.	
		VH863890
23.		VH863890
23.	© I don't know. In the last month, has your foster father worked for pay?	VH863890
23.	© I don't know.	VH863890
23.	 ✓ I don't know. In the last month, has your foster father worked for pay? ✓ Yes 	VH863890
23.	© I don't know. In the last month, has your foster father worked for pay? ② Yes ③ No	VH863890
23.	© I don't know. In the last month, has your foster father worked for pay? ② Yes ③ No	VH863890

VL	06	20	20	1

		VH863894
24.	In the last month, has your grandfather or male relative worked for pay?	
	Yes	
	® No	
	© I don't know	
		VH863899
25.	In the last month, has the male adult taking care of you worked for pay?	
	① Yes	
	® No	
	© I don't know.	
		VH863907
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.	
		VH863916
27.	In the last month, did your second mother work at one job, or did this adult work at two or more jobs?	V11603910
	One job	
	Two or more jobs	
	© I don't know.	

17	ш	260	200	no

			VH863909
28.		the last month, did your stepmother work at one job, or did this adult work at o or more jobs?	
	\bigcirc	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863911
29.		the last month, did your foster mother work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863913
30.		the last month, did your grandmother or female relative work at one job, or did s adult work at two or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863918
31.		the last month, did the female adult taking care of you work at one job, or did s adult work at two or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	

VIL	106	:20	10

			VH863919
32.		the last month, did your father work at one job, or did this adult work at two or ore jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863929
33.		the last month, did your second father work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863920
34.		the last month, did your stepfather work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863924
35.		the last month, did your foster father work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	

V/L	106	:20	27

36.	In the last month, did your	grandfather	or male	relative	work	at one	job, o	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	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.) ② Zero homes ③ One home ② Two homes ③ Three or more homes Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.
N/A	issue: Socioeconomic Status	1192 A	This item was added as
	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		part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.
N/A	How many adults 18 years and older live with you? 1 2 More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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? ① 0 ① 1 ② 2 ② More than 2 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 2 More than 2 Issue: Socioeconomic Status	894202 A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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	A A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 socioeconomic 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? 1 2 3 4 More than 4 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 socioeconomic 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 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 socioeconomic 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	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.
N/A	Issue: Socioeconomic Status 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 Grandmother or female relative Other female adult (Please specify:) Father Second father Second father 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 socioeconomic 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 as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.

Previous item	2019 item	D/A/	Rationale
Previous item	2019 item	R/NC-	
N/A	How far in school did your 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. Issue: Socioeconomic Status	VHSASSIO A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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 stepfather / your grandfather or male relative / the male adult taking care of

Previous item	19 Operational Grade 8 Extended Student Questionna 2019 item	, , ,	D/A/	Rationale
N/A	In the last month, has your mother worked for pay? Yes No Idon't know. Issue: Socioeconomic Status	3/119/29/2	R/NC+	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, 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

20	2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student					
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? 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 socioeconomic 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 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

		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.)	
	② Zero homes	
	® One home	
	© Two homes	
	① 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	
	© More than 2	
		VH894196
3.	How many adults 18 years and older live with you?	
	② 1	
	© 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?	VH894198
	, and the second	
	© More than 2	

		VH894202
5.	How many adults 18 years and older live with you in Home #1?	
	® 2	
	© More than 2	
		VH894204
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?	
	(A) 0	
	® 1	
	© 2	
	More than 2	
		VH894209
7.	How many adults 18 years and older live with you in Home #2?	
	② 1	
	® 2	
	© More than 2	
		VH863933
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 ?	
	① 1	
	® 2	
	© 3	
	① 4	
	© More than 4	

9.	You	u said one adult is taking care of you. Who is this adult?	
	(A)	Mother	
	$^{ ext{ $	Stepmother	
	0	Foster mother	
	0	Grandmother or female relative	
	(E)	Other female adult (Please specify:)	
	(Ē)	Father	
	©	Stepfather	
	\oplus	Foster father	
	Ф	Grandfather or male relative	
	Ф	Other male adult (Please specify:)	
			VH863781
10.		u said more than one adult is taking care of you. Think about the first adult (you tell us about up to four adults). We will call them Adult #1. Who is Adult #1?	
	(A)	Mother	
	$^{ ext{ $	Stepmother	
	0	Foster mother	
	(Grandmother or female relative	
	(E)	Other female adult (Please specify:)	
	Ð	Father	
	©		
		Stepfather	
	\oplus	Stepfather Foster father	
	\oplus	_	

11.		ink about the second adult taking care of you. We will call them Adult #2. Who Adult #2?
	(A)	Mother
	®	Second mother
	0	Stepmother
	(Foster mother
	(E)	Grandmother or female relative
	Ð	Other female adult (Please specify:)
	©	Father
	\oplus	Second father
	Ф	Stepfather
	Э	Foster father
	⊗	Grandfather or male relative
	(Other male adult (Please specify:)

12.	Think about the third adult taking care of you. We will call them Adult #3. Who i Adult #3?									
	(A)	Mother								
	®	Second mother								
	0	Stepmother								
	0	Foster mother								
	(E)	Grandmother or female relative								
	Ē	Other female adult (Please specify:)								
	©	Father								
	\oplus	Second father								
	0	Stepfather								
	Ф	Foster father								
	€	Grandfather or male relative								
	(Other male adult (Please specify:)								

13.		and about the fourth adult taking care of you. We will call them Adult #4. Who Adult #4?	
	(A)	Mother	
	®	Second mother	
	0	Stepmother	
	(Foster mother	
	(E)	Grandmother or female relative	
	(Ē)	Other female adult (Please specify:)	
	©	Father	
	\oplus	Second father	
	0	Stepfather	
	Ф	Foster father	
	⊗	Grandfather or male relative	
	0	Other male adult (Please specify:)	
			VH8638
14.	Но	w far in school did your mother go?	
	(A)	She did not finish high school.	
	®	She graduated from high school or has a high school degree.	
	0	She had some college but did not graduate.	

① She graduated from college.

© I don't know.

V	$\mathbf{H}^{\mathbf{g}}$	26	3	Q1	2

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.
- 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.

VH863816

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.

17	H	26	2	22	0

18.	How	far	in	school	did	your	grandmother	or	femal	e rel	lative	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.

19. How far in school did the female adult taking care of you 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.

VH863841

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.

V	ш	Q	6	2	Q	5	6

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.
- O 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.
- The 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.

VH863849

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.

171	LIQ	62	95

		VH863851
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.	
		VH863859
25.	How far in school did the male adult taking care of you 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.	
	① He graduated from college.	
	© I don't know.	
		VH863863
26.	In the last month, has your mother worked for pay?	
	① Yes	
	® No	
	© I don't know.	
		VH863875
27.	In the last month, has your second mother worked for pay?	
	Yes	
	® No	
	© I don't know.	

28.	In the last month, has your stepmother worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863871
29.	In the last month, has your foster mother worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863873
30.	In the last month, has your grandmother or female relative worked for pay?	
	® No	
	© I don't know.	
		VH863877
31.	In the last month, has the female adult taking care of you worked for pay?	
	® No	
	© I don't know.	

32.	In	the last month, has your father worked for pay?	
	(A)	Yes	
	$^{\odot}$	No	
	0	I don't know.	
			VH863898
33.	In	the last month, has your second father worked for pay?	
	(A)	Yes	
	®	No	
	0	I don't know	
			VH863885
34.	In	the last month, has your stepfather worked for pay?	
	(A)	Yes	
	®	No	
	0	I don't know.	
			VH863890
35.	In	the last month, has your foster father worked for pay?	
	(A)	Yes	
	®	No	
		I don't know.	

17	LIC	62	200	14

2 (VH863894
36.	In the last month, has your grandfather or male relative worked for pay?	
	Yes	
	® No	
	© I don't know	
		VH863899
37.	In the last month, has the male adult taking care of you worked for pay?	
	A Yes	
	® No	
	© I don't know.	
		VH863907
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.	
		VH863916
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.	

VL	100	:20	nnn

			VH863909
40.		the last month, did your stepmother work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	B	Two or more jobs	
	0	I don't know.	
			VH863911
41.		the last month, did your foster mother work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	B	Two or more jobs	
	0	I don't know.	
			VH863913
42.		the last month, did your grandmother or female relative work at one job, or did s adult work at two or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863918
43.		the last month, did the female adult taking care of you work at one job, or did s adult work at two or more jobs?	
	(A)	One job	
	B	Two or more jobs	
	0	I don't know.	

171	UQ	62	01	0

		VH863919
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.	
		VH863929
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.	
		VH863920
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.	
		VH863924
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.	

- **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.

Appendix K-1bg: Summary of Changes Operational Grade 12 ESQ

203	2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student		
Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	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.) ② Zero homes ③ One home ② Two homes ③ Three or more homes	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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	A A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.
N/A	Not including you, how many adults 18 years and older live with you? 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 socioeconomic 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? © 0 © 1 © 2 © More than 2	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.

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	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic 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	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.
N/A	Not including you, 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 socioeconomic 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? 1 2 3 4 More than 4 Issue: Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
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 socioeconomic 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 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 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	This item was added as part of the ESQ special study for enhanced measurement of socioeconomic status and household composition.
N/A	Issue: Socioeconomic Status 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 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 socioeconomic 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 as part of the ESQ special study for enhanced measurement of socioeconomic 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. 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. Issue: Socioeconomic Status	VIRGISIO A	This item was added as part of the ESQ special study for enhanced measurement of sociole 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 grandmother or female relative / the female adult taking care of you / your father / your stepfather / your stepfather / your grandfather or male relative / the male adult taking care of the male adult taking care of the male adult taking care of

Previous item	2019 item	D/A/ R/NC	Rationale -
	In the last month, has your mother worked for pay? Yes No I don't know. Issue: Socioeconomic Status	VHBGSGG 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 provide 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

Previous item	9 Operational Grade 12 Extended Student Questionnaire (ESQ) 2019 item	D/A/	Rationale
N/A	In the last month, did your mother work at one job, or did this adult work at two or more jobs? ② One job ③ Two or more jobs ② I don't know. Issue: Socioeconomic Status	R/NC+	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: 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 adultaking care of you

Appendix K-1bh: Operational Grade 12 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	
	® One home	
	© Two homes	
	① 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?	
	② 0	
	® 1	
	© 2	
	© More than 2	
		VH894194
3.	Not including you, how many adults 18 years and older live with you?	
	® 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?	
	® 1	
	© 2	
	© More than 2	

		VH894200
5.	Not including you, how many adults 18 years and older live with you in Home #1?	
	® 2	
	© More than 2	
		VH894204
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?	
	(A) 0	
	® 1	
	© 2	
	More than 2	
		VH894207
7.	Not including you, how many adults 18 years and older live with you in Home #2?	
	② 1	
	® 2	
	© More than 2	
		VH863933
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 ?	
	1	
	® 2	
	© 3	
	① 4	
	© More than 4	

9.	You	u said one adult is taking care of you. Who is this adult?	
	(A)	Mother	
	®	Stepmother	
	0	Foster mother	
	(Grandmother or female relative	
	(E)	Other female adult (Please specify:)	
	Ð	Father	
	©	Stepfather	
	\oplus	Foster father	
	Ф	Grandfather or male relative	
	Э	Other male adult (Please specify:)	
10.		u said more than one adult is taking care of you. Think about the first adult (you tell us about up to four adults). We will call them Adult #1. Who is Adult #1?	VH86378
	lack	Mother	
	®	Stepmother	
	0	Foster mother	
	0	Grandmother or female relative	
	Œ	Other female adult (Please specify:)	
	Ð		
		Father	
	©	Father Stepfather	
	⊕ ⊕		
	_	Stepfather	

11.		ink about the second adult taking care of you. We will call them Adult #2. Who Adult #2?
	\bigcirc	Mother
	®	Second mother
	0	Stepmother
	0	Foster mother
	Œ	Grandmother or female relative
	(Ē)	Other female adult (Please specify:)
	©	Father
	\oplus	Second father
	0	Stepfather
	Ф	Foster father
	⊗	Grandfather or male relative
	Φ	Other male adult (Please specify:)

12.		ink about the third adult taking care of you. We will call them Adult #3. Who is ult #3?
	(A)	Mother
	®	Second mother
	0	Stepmother
	0	Foster mother
	(E)	Grandmother or female relative
	Ē	Other female adult (Please specify:)
	©	Father
	\oplus	Second father
	0	Stepfather
	Ф	Foster father
	€	Grandfather or male relative
	(Other male adult (Please specify:)

13.		Adult #4?	
	(A)	Mother	
	®	Second mother	
	0	Stepmother	
	0	Foster mother	
	Œ	Grandmother or female relative	
	(Ē)	Other female adult (Please specify:)	
	©	Father	
	\oplus	Second father	
	Ф	Stepfather	
	Ф	Foster father	
	⊗	Grandfather or male relative	
	0	Other male adult (Please specify:)	
1.4			VH86381
14.		w far in school did your mother go?	
	lack	She did not finish high school.	
	₿	She graduated from high school or has a high school degree.	
	0	She had some college but did not graduate.	

① She graduated from college.

© I don't know.

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15.	How	far in	school	did	your	second	mother	go
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- 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.
- 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.

VH863816

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.

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18.	How	far	in	school	did	your	grandmother	or	femal	e rel	lative	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.

19. How far in school did the female adult taking care of you 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.

VH863841

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.

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21.	How	far	in	school	did	your	second	father	go
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- 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.
- The 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.

VH863849

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.

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		VH863851
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.	
	① He graduated from college.	
	© I don't know.	
		VH863859
25.	How far in school did the male adult taking care of you 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.	
		VH863863
26.	In the last month, has your mother worked for pay?	V11005005
_0.	 Yes 	
	® No	
	© I don't know.	
	C I doil t know.	
27		VH863875
27.	In the last month, has your second mother worked for pay?	
	♠ Yes	
	® No	
	© I don't know.	

	In the last month, has your stepmother worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863871
29.	In the last month, has your foster mother worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863873
30.	In the last month, has your grandmother or female relative worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863877
31.		VH863877
31.	© I don't know.	VH863877
31.	© I don't know. In the last month, has the female adult taking care of you worked for pay?	VH863877
31.	© I don't know. In the last month, has the female adult taking care of you worked for pay? ④ Yes ⑤ No	VH863877
31.	© I don't know. In the last month, has the female adult taking care of you worked for pay? ② Yes ③ No	VH863877
31.	© I don't know. In the last month, has the female adult taking care of you worked for pay? ④ Yes ⑤ No	VH863877

32.	In	the last month, has your father worked for pay?	
	lack	Yes	
	$^{ ext{ $	No	
	0	I don't know.	
			VH863898
33.	In	the last month, has your second father worked for pay?	
	lack	Yes	
	$^{ ext{ B}}$	No	
	0	I don't know	
			VH863885
34.	In	the last month, has your stepfather worked for pay?	
	(A)	Yes	
	$^{\odot}$	No	
	0	I don't know.	
			VH863890
35.	In	the last month, has your foster father worked for pay?	
	(A)	Yes	
	$^{ ext{ B}}$	No	
	0	I don't know.	

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36.	In the last month, has your grandfather or male relative worked for pay?	
	Yes	
	® No	
	◎ I don't know	
		VH863899
37.	In the last month, has the male adult taking care of you worked for pay?	
	Yes	
	® No	
	© I don't know.	
		VH863907
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.	
		VH863916
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.	

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			VH863909
40.		the last month, did your stepmother work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863911
41.		the last month, did your foster mother work at one job, or did this adult work at o or more jobs?	
	\bigcirc	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863913
42.		the last month, did your grandmother or female relative work at one job, or did s adult work at two or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863918
43.		the last month, did the female adult taking care of you work at one job, or did s adult work at two or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	

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			VH863919
44.		the last month, did your father work at one job, or did this adult work at two or ore jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863929
45.		the last month, did your second father work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863920
46.		the last month, did your stepfather work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	
			VH863924
47.		the last month, did your foster father work at one job, or did this adult work at o or more jobs?	
	(A)	One job	
	®	Two or more jobs	
	0	I don't know.	

- **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.