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

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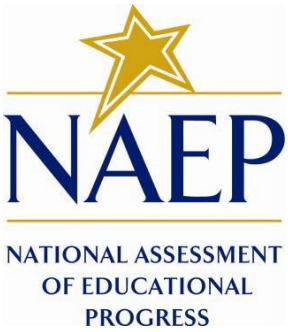

September 2018

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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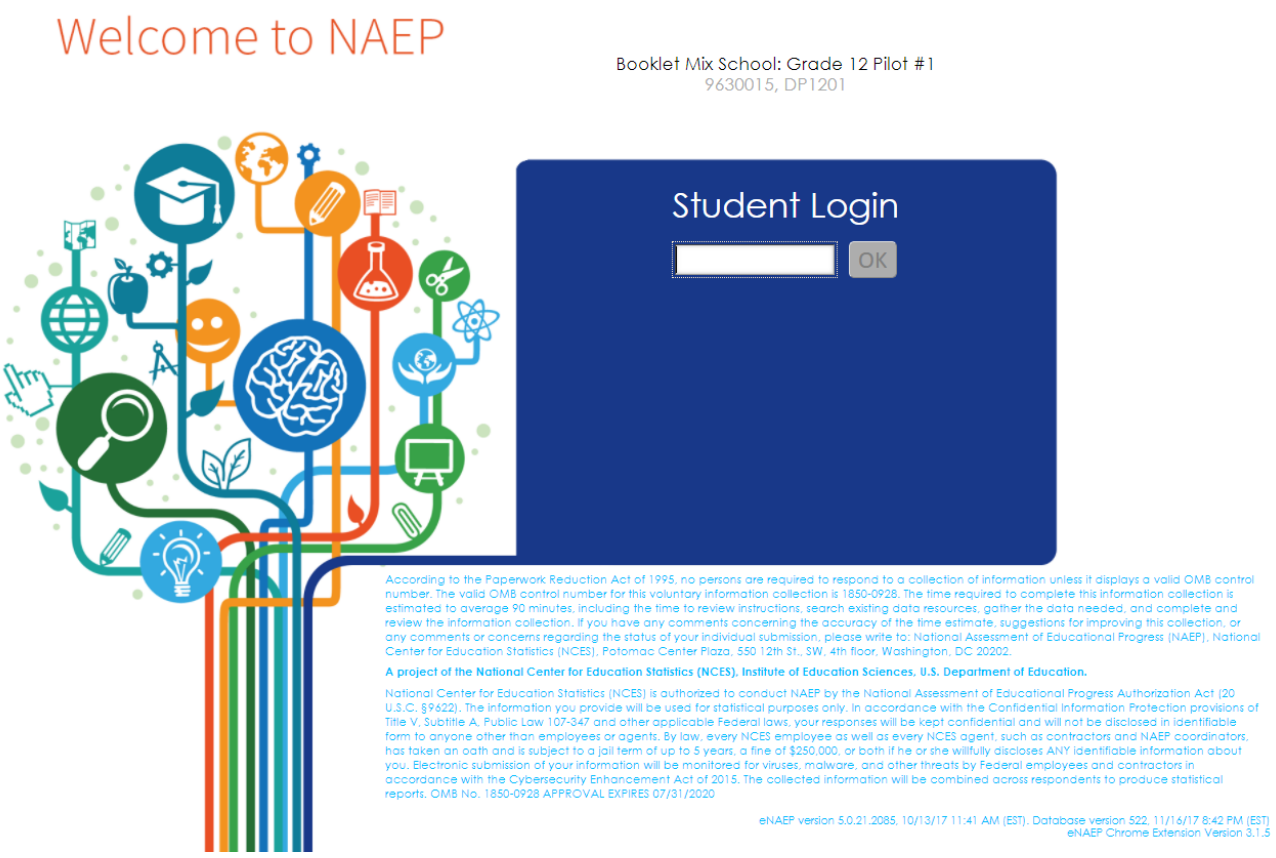
Student Login Screen



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

2019 Operational and Pilot Grade 4, 8, and 12 Debrief Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
1. How important was it to you to do well on this test? Ⓐ Not very important Ⓑ Somewhat important Ⓒ Important Ⓓ Very important (2018 Grade 4, 8, and 12)	N/A	D	To keep student burden low, this item was dropped.
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)	1. How easy or difficult was this test? Ⓐ Extremely difficult Ⓑ Quite difficult Ⓒ Somewhat difficult Ⓓ Somewhat easy Ⓔ Quite easy Ⓕ Extremely easy **Issue: Debrief**	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)	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 **Issue: Debrief**	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)	N/A	D	To keep student burden low, this item was dropped.

2019 Operational and Pilot Grade 4, 8, and 12 Debrief Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
VH133661 5. How much time pressure did you feel when taking this test? Ⓐ No time pressure at all Ⓑ A little bit of time pressure Ⓒ Some time pressure Ⓓ Quite a bit of time pressure Ⓔ A lot of time pressure (2018 Grade 4, 8, and 12)	N/A	D	To keep student burden low, this item was dropped.

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

VH260313

1. How easy or difficult was this test?

Ⓐ Extremely difficult

Ⓑ Quite difficult

Ⓒ Somewhat difficult

Ⓓ Somewhat easy

Ⓔ Quite easy

Ⓕ Extremely easy

VH333658

2. How much effort did you apply to succeed on this test?

Ⓐ No effort at all

Ⓑ Very little effort

Ⓒ Some effort

Ⓓ Quite a bit of effort

Ⓔ A lot of effort

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

2019 Operational Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH240387 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. (2018 Grade 4)	VH240387 3. Are you Hispanic or Latino? Select **one or more** answer choices. Ⓐ No, I am not Hispanic or Latino. Ⓑ Yes, I am Mexican, Mexican American, or Chicano. Ⓒ Yes, I am Puerto Rican or Puerto Rican American. Ⓓ Yes, I am Cuban or Cuban American. Ⓔ Yes, I am from some other Hispanic or Latino background. **Issue:** Race/Ethnicity	NC	N/A
VH240388 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)	VH240388 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	NC	N/A
VH240186 8. About how many books are there in your home? Ⓐ Few (0–10) Ⓑ Enough to fill one shelf (11–25) Ⓒ Enough to fill one bookcase (26–100) Ⓓ Enough to fill several bookcases (more than 100) (2018 Grade 4)	VH240186 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	NC	N/A

2019 Operational Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH271104 9. Do you have any of the following in your home? Select **one** answer choice on each row. (2018 Grade 4)	VH271104 6. Do you have any of the following in your home? Select **one** answer choice on each row. **Issue:** Socioeconomic Status	R	Due to concerns about content relevance and to keep student burden low, sub-items b and c were dropped.
VH354591 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 (2018 Grade 4)	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 **Issue:** Technology Use	NC	N/A
VH240190 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 (2018 Grade 4)	VH240190 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 **Issue:** School Climate	NC	N/A
VH240189 12. 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 (2018 Grade 4)	VH240189 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 **Issue:** Socioeconomic Status	NC	N/A

2019 Operational Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH271144 13. Do any of the following people live in your home? Select one answer choice on each row. (2018 Grade 4)	VH271144 10. Do any of the following people live in your home? Select one answer choice on each row. **Issue:** Socioeconomic Status	NC	N/A
VH591969 14. 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 4)	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 **Issue:** Technology Use	NC	N/A
VH271276 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 (2018 Grade 4)	VH271276 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 **Issue:** Technology Use	NC	N/A

2019 Operational Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
16. How much does each of the following statements describe a person like you? Select one answer choice on each row. VH271337 17. How much does each of the following statements describe you? Select one answer choice on each row. (2018 Grade 4)	13. How much does each of the following statements describe you? Select one answer choice on each row. VH733141 **Issue:** Grit	R	After examining data from the two versions of this item that were administered in the pilot, one version of the item was dropped.
18. In this school year, how often have you done each of the following? Select one answer choice on each row. VH271367 (2018 Grade 4)	15. In this school year, how often have you done each of the following? Select one answer choice on each row. VH271367 **Issue:** Grit	NC	N/A

2019 Operational Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
19. How much does each of the following statements describe a person like you? Select one answer choice on each row. VH271749 20. How much does each of the following statements describe you? Select one answer choice on each row. VH733149 (2018 Grade 4)	14. How much does each of the following statements describe you? Select one answer choice on each row. VH733149 **Issue:** Desire for Learning	R	After examining data from the two versions of this item that were administered in the pilot, one version of the item was dropped.
21. 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 (2018 Grade 4)	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. VH271934 **Issue:** School Climate	NC	N/A

Appendix K-1d: Operational Grade 4 Core

VH260313

1. How easy or difficult was this test?

Ⓐ Extremely difficult

Ⓑ Quite difficult

Ⓒ Somewhat difficult

Ⓓ Somewhat easy

Ⓔ Quite easy

Ⓕ Extremely easy

VH333658

2. How much effort did you apply to succeed on this test?

Ⓐ No effort at all

Ⓑ 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.

Ⓑ 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.

VH240388

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

VH240186

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)

VH271104

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	Ⓐ	Ⓑ	VH271105
b. Your own bedroom	Ⓐ	Ⓑ	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

VH240190

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

VH240189

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

Ⓐ Never or hardly ever

Ⓑ Once every few weeks

Ⓒ About once a week

Ⓓ Two or three times a week

Ⓔ Every day

VH271144

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

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

VH271276

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

VH733141

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

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

VH733149

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733150
b. I like activities that challenge my thinking abilities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733151
c. I enjoy situations where I will have to think about something.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733155
d. I enjoy thinking about new solutions to problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271370
b. I paid attention and resisted distractions.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271372
c. I stayed on task without reminders from my teacher.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271374
d. I paid attention in class even when I was not interested.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271375

VH271934

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271942
b. I felt happy at school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271944
c. I felt that I learned something that I can use in my daily life.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH336903

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

2019 Pilot Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH240387 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. (2017 Grade 4)	VH240387 13. Are you Hispanic or Latino? Select **one or more** answer choices. Ⓐ No, I am not Hispanic or Latino. Ⓑ Yes, I am Mexican, Mexican American, or Chicano. Ⓒ Yes, I am Puerto Rican or Puerto Rican American. Ⓓ Yes, I am Cuban or Cuban American. Ⓔ Yes, I am from some other Hispanic or Latino background. **Issue:** Race/Ethnicity	NC	N/A
VH240388 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 (2017 Grade 4)	VH240388 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 **Issue:** Race/Ethnicity	NC	N/A
VH240186 8. About how many books are there in your home? Ⓐ Few (0–10) Ⓑ Enough to fill one shelf (11–25) Ⓒ Enough to fill one bookcase (26–100) Ⓓ Enough to fill several bookcases (more than 100) (2017 Grade 4)	VH240186 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) **Issue:** Socioeconomic Status	NC	N/A
VH271104 9. Do you have any of the following in your home? Select **one** answer choice on each row. a. Access to the Internet — Yes Ⓐ / No Ⓑ — VH271105 b. Clothes dryer just for your family — Yes Ⓐ / No Ⓑ — VH336756 c. Dishwasher — Yes Ⓐ / No Ⓑ — VH336759 d. Your own bedroom — Yes Ⓐ / No Ⓑ — VH336762 e. A desktop or laptop computer (including Chromebooks) that you can use — Yes Ⓐ / No Ⓑ — VH591976 f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use — Yes Ⓐ / No Ⓑ — VH271110 g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use — Yes Ⓐ / No Ⓑ — VH271112 (2017 Grade 4)	VH880711 2. Do you have any of the following in your home? Select **one** answer choice on each row. a. Access to the Internet — Yes Ⓐ / No Ⓑ — VH271105 b. Your own bedroom — Yes Ⓐ / No Ⓑ — VH336762 c. Your own desktop or laptop computer (including Chromebooks) — Yes Ⓐ / No Ⓑ — VH853088 d. Your own tablet (for example, Surface Pro, iPad, or Kindle Fire) — Yes Ⓐ / No Ⓑ — VH853090 e. Your own smartphone (for example, iPhone, Samsung Galaxy, or HTC One) — Yes Ⓐ / No Ⓑ — VH853089 **Issue:** Socioeconomic Status	R	Sub-items b and c were dropped to keep student burden low, and sub-items e, f, and g were revised to examine performance of alternative item wording.

2019 Pilot Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH354591 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 (2017 Grade 4)	VH354591 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	NC	N/A
VH240190 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 4)	VH240190 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	NC	N/A
VH240189 12. 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 (2017 Grade 4)	VH240189 5. How often do you talk about things you have studied in school with someone in your family? Ⓐ Never or hardly ever Ⓑ Once every few weeks Ⓒ About once a week Ⓓ Two or three times a week Ⓔ Every day **Issue:** Socioeconomic Status	NC	N/A
VH271144 13. Do any of the following people live in your home? Select one answer choice on each row. a. Mother — Ⓐ Ⓑ VH271145 b. Stepmother — Ⓐ Ⓑ VH271146 c. Foster mother or other female legal guardian — Ⓐ Ⓑ VH271147 d. Father — Ⓐ Ⓑ VH271148 e. Stepfather — Ⓐ Ⓑ VH271149 f. Foster father or other male legal guardian — Ⓐ Ⓑ VH271150 (2017 Grade 4)	VH271144 6. Do any of the following people live in your home? Select one answer choice on each row. a. Mother — Ⓐ Ⓑ VH271145 b. Stepmother — Ⓐ Ⓑ VH271146 c. Foster mother or other female legal guardian — Ⓐ Ⓑ VH271147 d. Father — Ⓐ Ⓑ VH271148 e. Stepfather — Ⓐ Ⓑ VH271149 f. Foster father or other male legal guardian — Ⓐ Ⓑ VH271150 **Issue:** Socioeconomic Status	NC	N/A

2019 Pilot Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH591969 14. 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 (2017 Grade 4)	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 **Issue:** Technology Use	NC	N/A
VH271276 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)	VH271276 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	N/A
VH271337 16. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. a. I finish whatever I begin. (VH271338) b. I try very hard even after making mistakes. (VH271339) c. I keep working hard even when I feel like quitting. (VH271342) d. I keep trying to improve myself, even when it takes a long time to get there. (VH271345) Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Very much like me (2017 Grade 4)	VH733141 9. How much does each of the following statements describe you? Select one answer choice on each row. a. I finish whatever I begin. (VH733142) b. I try very hard even after making mistakes. (VH733143) c. I keep working hard even when I feel like quitting. (VH733145) d. I keep trying to improve myself, even when it takes a long time to get there. (VH733144) Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Very much like me **Issue:** Grit	R	The stem of this item was revised for clarity.

2019 Pilot Grade 4 Core Student

<table>
<tr><th>Previous item</th><th>2019 item</th><th>D/A/ R/NC+</th><th>Rationale</th></tr>
<tr>
<td>17. In this school year, how often have you done each of the following? Select one answer choice on each row. VH271367
<table><tr><th></th><th>Never or hardly ever</th><th>Less than half of the time</th><th>About half of the time</th><th>More than half of the time</th><th>All or almost all of the time</th><th></th></tr><tr><td>a. I started working on assignments right away rather than waiting until the last minute.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271370</td></tr><tr><td>b. I paid attention and resisted distractions.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271372</td></tr><tr><td>c. I stayed on task without reminders from my teacher.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271374</td></tr><tr><td>d. I paid attention in class even when I was not interested.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271375</td></tr></table>(2017 Grade 4)</td>
<td>10. In this school year, how often have you done each of the following? Select one answer choice on each row. VH271367
<table><tr><th></th><th>Never or hardly ever</th><th>Less than half of the time</th><th>About half of the time</th><th>More than half of the time</th><th>All or almost all of the time</th><th></th></tr><tr><td>a. I started working on assignments right away rather than waiting until the last minute.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271370</td></tr><tr><td>b. I paid attention and resisted distractions.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271372</td></tr><tr><td>c. I stayed on task without reminders from my teacher.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271374</td></tr><tr><td>d. I paid attention in class even when I was not interested.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271375</td></tr></table>Issue: Grit</td>
<td>NC</td>
<td>N/A</td>
</tr>
<tr>
<td>18. How much does each of the following statements describe a person like you? Select one answer choice on each row. VH271749
<table><tr><th></th><th>Not at all like me</th><th>A little bit like me</th><th>Somewhat like me</th><th>Quite a bit like me</th><th>Very much like me</th><th></th></tr><tr><td>a. I like complex problems more than easy problems.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271750</td></tr><tr><td>b. I like activities that challenge my thinking abilities.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271752</td></tr><tr><td>c. I enjoy situations where I will have to think about something.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271753</td></tr><tr><td>d. I enjoy thinking about new solutions to problems.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH271756</td></tr></table>(2017 Grade 4)</td>
<td>11. How much does each of the following statements describe you? Select one answer choice on each row. VH733149
<table><tr><th></th><th>Not at all like me</th><th>A little bit like me</th><th>Somewhat like me</th><th>Quite a bit like me</th><th>Very much like me</th><th></th></tr><tr><td>a. I like complex problems more than easy problems.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH733150</td></tr><tr><td>b. I like activities that challenge my thinking abilities.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH733151</td></tr><tr><td>c. I enjoy situations where I will have to think about something.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH733155</td></tr><tr><td>d. I enjoy thinking about new solutions to problems.</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>VH733154</td></tr></table>Issue: Desire for Learning</td>
<td>R</td>
<td>The stem of this item was revised for clarity.</td>
</tr>
</table>

2019 Pilot Grade 4 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH271934 19. 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. — VH271942 b. I felt happy at school. — VH271944 c. I felt that I learned something that I can use in my daily life. — VH336903 (2017 Grade 4)	VH271934 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 out of place at school. — VH271942 b. I felt happy at school. — VH271944 c. I felt that I learned something that I can use in my daily life. — VH336903 d. I worried about crime and violence at my school. — VH271940 e. I felt my teachers treated me fairly. — VH853117 f. I felt safe on my way to or from school. — VH853118 **Issue:** School Climate	R	New sub-items (d, e, and f) were added to expand measurement of this content.
VH254028 20. Write the ZIP code of your home address in the box. □□□□□ (2017 Grade 4)	N/A	D	Due to the time burden associated with completing this item and to keep student burden low, this item was dropped.

Appendix K-1f: Pilot Grade 4 Core

VH240186

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)

VH880711

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

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

VH354591

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. 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

VH240189

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

Ⓐ Never or hardly ever

Ⓑ Once every few weeks

Ⓒ About once a week

Ⓓ Two or three times a week

Ⓔ Every day

VH271144

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

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

VH271276

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

VH733141

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733142
b. I try very hard even after making mistakes.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733143
c. I keep working hard even when I feel like quitting.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	
a. I started working on assignments right away rather than waiting until the last minute.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271370
b. I paid attention and resisted distractions.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271372
c. I stayed on task without reminders from my teacher.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271374
d. I paid attention in class even when I was not interested.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271375

VH733149

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	
a. I like complex problems more than easy problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733150
b. I like activities that challenge my thinking abilities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733151
c. I enjoy situations where I will have to think about something.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733155
d. I enjoy thinking about new solutions to problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733154

VH271934

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 out of place at school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271942
b. I felt happy at school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271944
c. I felt that I learned something that I can use in my daily life.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH336903
d. I worried about crime and violence at my school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271940
e. I felt my teachers treated me fairly.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853117
f. I felt safe on my way to or from school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853118

VH240387

13. 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.

VH240388

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

Appendix K-1g: Spiral Map Grade 4 Core

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

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

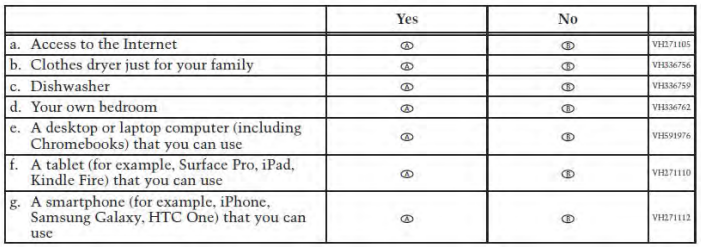
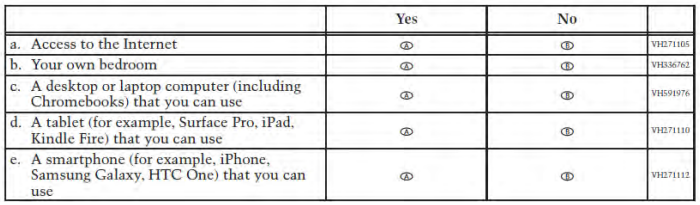
Appendix K-1h: Summary of Changes Operational Grade 8 Core

2019 Operational Grade 8 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH240387 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. (2018 Grade 8)	VH240387 3. Are you Hispanic or Latino? Select **one or more** answer choices. Ⓐ No, I am not Hispanic or Latino. Ⓑ Yes, I am Mexican, Mexican American, or Chicano. Ⓒ Yes, I am Puerto Rican or Puerto Rican American. Ⓓ Yes, I am Cuban or Cuban American. Ⓔ Yes, I am from some other Hispanic or Latino background. **Issue:** Race/Ethnicity	NC	N/A
VH240388 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 8)	VH240388 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	NC	N/A
VH240186 8. About how many books are there in your home? Ⓐ Few (0–10) Ⓑ Enough to fill one shelf (11–25) Ⓒ Enough to fill one bookcase (26–100) Ⓓ Enough to fill several bookcases (more than 100) (2018 Grade 8)	VH240186 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	NC	N/A

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

2019 Operational Grade 8 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH271104 9. Do you have any of the following in your home? Select one answer choice on each row.  (2018 Grade 8)	VH271104 6. Do you have any of the following in your home? Select one answer choice on each row.  **Issue:** Socioeconomic Status	R	Due to concerns about content relevance and to keep student burden low, sub-items b and c were dropped.
VH354591 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 (2018 Grade 8)	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 **Issue:** Technology Use	NC	N/A
VH240190 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 (2018 Grade 8)	VH240190 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 **Issue:** School Climate	NC	N/A
VH240189 12. 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 (2018 Grade 8)	VH240189 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 **Issue:** Socioeconomic Status	NC	N/A

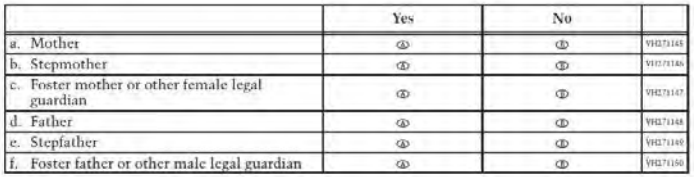
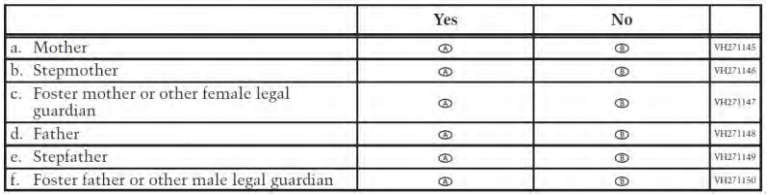
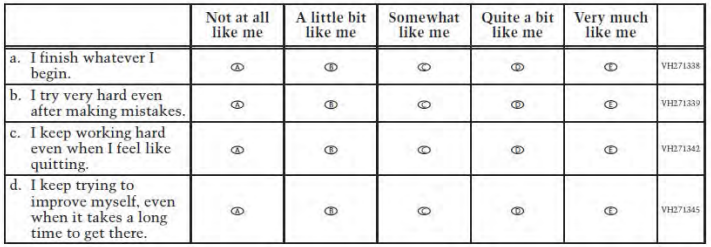
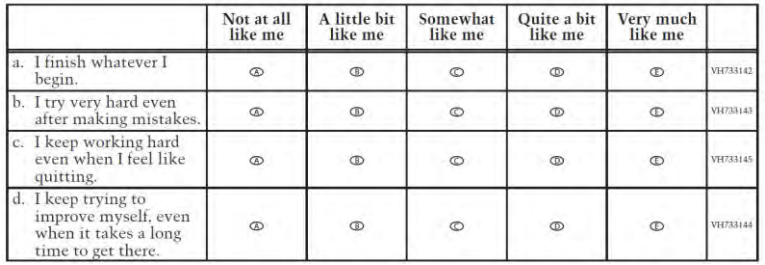
+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

2019 Operational Grade 8 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH240192 13. How far in school did **your mother** go? Ⓐ She did not finish high school. Ⓑ She graduated from high school. Ⓒ She had some education after high school. Ⓓ She graduated from college. Ⓔ I don't know. (2018 Grade 8)	VH240192 10. How far in school did **your mother** go? Ⓐ She did not finish high school. Ⓑ She graduated from high school. Ⓒ She had some education after high school. Ⓓ She graduated from college. Ⓔ I don't know. **Issue:** Socioeconomic Status	NC	N/A
VH240193 14. 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. (2018 Grade 8)	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. **Issue:** Socioeconomic Status	NC	N/A
VH336776 15. Does **your mother** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. (2018 Grade 8)	VH336776 12. Does **your mother** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	NC	N/A
VH336779 16. Does **your father** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. (2018 Grade 8)	VH336779 13. Does **your father** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	NC	N/A

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

2019 Operational Grade 8 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH271141 17. Do any of the following people live in your home? Select **one** answer choice on each row.  (2018 Grade 8)	VH271144 14. Do any of the following people live in your home? Select **one** answer choice on each row.  **Issue:** Socioeconomic Status	NC	N/A
VH591969 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)	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 **Issue:** Technology Use	NC	N/A
VH271276 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 more than half of the classes Ⓔ In all or almost all classes (2018 Grade 8)	VH271276 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 Ⓒ In about half of the classes Ⓓ In more than half of the classes Ⓔ In all or almost all classes **Issue:** Technology Use	NC	N/A
VH271337 20. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. 	VH733141 17. How much does each of the following statements describe you? Select **one** answer choice on each row. 	R	After examining data from the two versions of this item that were administered in the pilot, one version

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

2019 Operational Grade 8 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
21. How much does each of the following statements describe you? Select one answer choice on each row. VH733141 (2018 Grade 8)	**Issue:** Grit		of the item was dropped.
22. In this school year, how often have you done each of the following? Select one answer choice on each row. VH271367 (2018 Grade 8)	19. In this school year, how often have you done each of the following? Select **one** answer choice on each row. VH271367 **Issue:** Grit	NC	N/A
23. How much does each of the following statements describe a person like you? Select one answer choice on each row. VH271749	18. How much does each of the following statements describe you? Select **one** answer choice on each row. VH733149	R	After examining data from the two versions of this item that were administered in the pilot, one version

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

2019 Operational Grade 8 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
24. How much does each of the following statements describe you? Select one answer choice on each row. VH733149 Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Very much like me a. I like complex problems more than easy problems. VH733150 b. I like activities that challenge my thinking abilities. VH733151 c. I enjoy situations where I will have to think about something. VH733155 d. I enjoy thinking about new solutions to problems. VH733154 (2018 Grade 8)	**Issue:** Desire for Learning		of the item was dropped.
25. 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. VH271942 b. I felt happy at school. VH271944 c. I felt that I learned something that I can use in my daily life. VH336903 (2018 Grade 8)	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. VH271942 b. I felt happy at school. VH271944 c. I felt that I learned something that I can use in my daily life. VH336903 **Issue:** School Climate	NC	N/A
26. Write the ZIP code of your home address in the box. VH254028 ☐☐☐☐☐ (2018 Grade 8)	N/A	D	Due to the time burden associated with completing this item 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).

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

VH260313

1. How easy or difficult was this test?

Ⓐ Extremely difficult

Ⓑ Quite difficult

Ⓒ Somewhat difficult

Ⓓ Somewhat easy

Ⓔ Quite easy

Ⓕ Extremely easy

VH333658

2. How much effort did you apply to succeed on this test?

Ⓐ No effort at all

Ⓑ 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.

Ⓑ 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.

VH240388

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

VH240186

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)

VH271104

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	Ⓐ	Ⓑ	VH271105
b. Your own bedroom	Ⓐ	Ⓑ	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

VH240190

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

VH240189

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

VH240192

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.

VH336776

12. Does **your mother** work?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH336779

13. Does **your father** work?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH271144

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

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

VH271276

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

Ⓒ In about half of the classes

Ⓓ In more than half of the classes

Ⓔ In all or almost all classes

VH733141

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733142
b. I try very hard even after making mistakes.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733143
c. I keep working hard even when I feel like quitting.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733150
b. I like activities that challenge my thinking abilities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733151
c. I enjoy situations where I will have to think about something.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733155
d. I enjoy thinking about new solutions to problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733154

VH271367

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271370
b. I paid attention and resisted distractions.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271372
c. I stayed on task without reminders from my teacher.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271374
d. I paid attention in class even when I was not interested.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271375

VH271934

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

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

VH852900

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

Ⓐ Yes

Ⓑ No

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

2019 Pilot Grade 8 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH240387 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. (2017 Grade 8)	VH240387 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. **Issue:** Race/Ethnicity	NC	N/A
VH240388 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 (2017 Grade 8)	VH240388 21. 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	NC	N/A
VH240186 8. About how many books are there in your home? Ⓐ Few (0–10) Ⓑ Enough to fill one shelf (11–25) Ⓒ Enough to fill one bookcase (26–100) Ⓓ Enough to fill several bookcases (more than 100) (2017 Grade 8)	VH240186 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) **Issue:** Socioeconomic Status	NC	N/A
VH271104 9. Do you have any of the following in your home? Select **one** answer choice on each row. (2017 Grade 8)	VH880711 2. Do you have any of the following in your home? Select **one** answer choice on each row. **Issue:** Socioeconomic Status	R	Sub-items b and c were dropped to keep student burden low, and sub-items e, f, and g were revised to examine performance of alternative item wording.

	Yes	No	
a. Access to the Internet	Ⓐ	Ⓑ	VH271105
b. Clothes dryer just for your family	Ⓐ	Ⓑ	VH336756
c. Dishwasher	Ⓐ	Ⓑ	VH336759
d. Your own bedroom	Ⓐ	Ⓑ	VH336762
e. A desktop or laptop computer (including Chromebooks) that you can use	Ⓐ	Ⓑ	VH591976
f. A tablet (for example, Surface Pro, iPad, Kindle Fire) that you can use	Ⓐ	Ⓑ	VH271110
g. A smartphone (for example, iPhone, Samsung Galaxy, HTC One) that you can use	Ⓐ	Ⓑ	VH271112

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

+ 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
VH354591 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 (2017 Grade 8)	VH354591 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	NC	N/A
VH240190 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)	VH240190 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	NC	N/A
VH240189 12. 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 (2017 Grade 8)	VH240189 5. How often do you talk about things you have studied in school with someone in your family? Ⓐ Never or hardly ever Ⓑ Once every few weeks Ⓒ About once a week Ⓓ Two or three times a week Ⓔ Every day **Issue:** Socioeconomic Status	NC	N/A
VH240192 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. (2017 Grade 8)	VH240192 6. How far in school did **your mother** go? Ⓐ She did not finish high school. Ⓑ She graduated from high school. Ⓒ She had some education after high school. Ⓓ She graduated from college. Ⓔ I don't know. **Issue:** Socioeconomic Status	NC	N/A

+ 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
VH240193 **14.** 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. (2017 Grade 8)	VH240193 **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. **Issue:** Socioeconomic Status	NC	N/A
VH336776 **15.** Does **your mother** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. (2017 Grade 8)	VH336776 **8.** Does **your mother** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	NC	N/A
VH336779 **16.** Does **your father** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. (2017 Grade 8)	VH336779 **9.** Does **your father** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	NC	N/A
VH271144 **17.** Do any of the following people live in your home? Select **one** answer choice on each row. a. Mother — Ⓐ Yes Ⓑ No — VH271145 b. Stepmother — Ⓐ Yes Ⓑ No — VH271146 c. Foster mother or other female legal guardian — Ⓐ Yes Ⓑ No — VH271147 d. Father — Ⓐ Yes Ⓑ No — VH271148 e. Stepfather — Ⓐ Yes Ⓑ No — VH271149 f. Foster father or other male legal guardian — Ⓐ Yes Ⓑ No — VH271150 (2017 Grade 8)	VH271144 **10.** Do any of the following people live in your home? Select **one** answer choice on each row. a. Mother — Ⓐ Yes Ⓑ No — VH271145 b. Stepmother — Ⓐ Yes Ⓑ No — VH271146 c. Foster mother or other female legal guardian — Ⓐ Yes Ⓑ No — VH271147 d. Father — Ⓐ Yes Ⓑ No — VH271148 e. Stepfather — Ⓐ Yes Ⓑ No — VH271149 f. Foster father or other male legal guardian — Ⓐ Yes Ⓑ No — VH271150 **Issue:** Socioeconomic Status	NC	N/A
VH591969 **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 (2017 Grade 8)	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 **Issue:** Technology Use	NC	N/A

+ 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
VH271276 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 more than half of the classes Ⓔ In all or almost all classes (2017 Grade 8)	VH271276 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 **Issue:** Technology Use	NC	N/A
VH271337 20. How much does each of the following statements describe a person like you? Select one answer choice on each row. (2017 Grade 8)	VH733141 13. How much does each of the following statements describe you? Select one answer choice on each row. **Issue: Grit**	R	The stem of this item was revised for clarity.
VH271367 21. In this school year, how often have you done each of the following? Select one answer choice on each row. (2017 Grade 8)	VH271367 14. In this school year, how often have you done each of the following? Select **one** answer choice on each row. **Issue:** Grit	NC	N/A

+ 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
22. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. VH271749 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. VH271750 b. I like activities that challenge my thinking abilities. VH271752 c. I enjoy situations where I will have to think about something. VH271753 d. I enjoy thinking about new solutions to problems. VH271756 (2017 Grade 8)	15. How much does each of the following statements describe you? Select **one** answer choice on each row. VH733149 Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Very much like me a. I like complex problems more than easy problems. VH733150 b. I like activities that challenge my thinking abilities. VH733151 c. I enjoy situations where I will have to think about something. VH733155 d. I enjoy thinking about new solutions to problems. VH733154 **Issue:** Desire for Learning	R	The stem of this item was revised for clarity.
23. 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. VH271942 b. I felt happy at school. VH271944 c. I felt that I learned something that I can use in my daily life. VH336903 (2017 Grade 8)	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. 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. VH271942 b. I felt happy at school. VH271944 c. I felt that I learned something that I can use in my daily life. VH336903 d. I worried about crime and violence at my school. VH271940 e. I felt my teachers treated me fairly. VH853117 f. I felt safe on my way to or from school. VH853118 **Issue:** School Climate	R	New sub-items (d, e, and f) were added to expand measurement of this content.
24. Write the ZIP code of your home address in the box. VH254028 ☐☐☐☐☐ (2017 Grade 8)	N/A	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	VH852895 17. Are you taking a language course other than English this school year (for example, Spanish, French, or Chinese)? Ⓐ Yes Ⓑ 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? Ⓐ Yes Ⓑ No (2016 grade 8)	VH852900 18. Are you taking an art course this school year (for example, drawing, painting, or studio art)? Ⓐ Yes Ⓑ No **Issue:** Educational Experiences	A	This item was added to assess student involvement in art coursework.
N/A	VH852901 19. Are you taking a music course this school year (for example, choir, band, or orchestra)? Ⓐ Yes Ⓑ No **Issue:** Educational Experiences	A	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

VH240186

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)

VH880711

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

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

VH354591

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. 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

VH240189

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

Ⓐ Never or hardly ever

Ⓑ Once every few weeks

Ⓒ About once a week

Ⓓ Two or three times a week

Ⓔ Every day

VH240192

6. 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

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. Does **your mother** work?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH336779

9. Does **your father** work?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH271144

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

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

VH271276

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

VH733141

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

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Very much like me	
a. I finish whatever I begin.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733142
b. I try very hard even after making mistakes.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733143
c. I keep working hard even when I feel like quitting.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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. I started working on assignments right away rather than waiting until the last minute.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271370
b. I paid attention and resisted distractions.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271372
c. I stayed on task without reminders from my teacher.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271374
d. I paid attention in class even when I was not interested.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271375

VH733149

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733150
b. I like activities that challenge my thinking abilities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733151
c. I enjoy situations where I will have to think about something.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733155
d. I enjoy thinking about new solutions to problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733154

VH271934

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

VH852895

17. Are you taking a language course other than English this school year (for example, Spanish, French, or Chinese)?

Ⓐ Yes

Ⓑ No

VH852900

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

Ⓐ Yes

Ⓑ No

VH852901

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

Ⓐ Yes

Ⓑ No

VH240387

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.

VH240388

21. 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

Appendix K-1l: Spiral Map Grade 8 Core

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

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

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

2019 Operational Grade 12 Core Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH240387 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. (2018 Grade 12)	VH240387 3. Are you Hispanic or Latino? Select **one or more** answer choices. Ⓐ No, I am not Hispanic or Latino. Ⓑ Yes, I am Mexican, Mexican American, or Chicano. Ⓒ Yes, I am Puerto Rican or Puerto Rican American. Ⓓ Yes, I am Cuban or Cuban American. Ⓔ Yes, I am from some other Hispanic or Latino background. **Issue:** Race/Ethnicity	NC	N/A
VH240388 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 (2018 Grade 12)	VH240388 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	NC	N/A
VH240186 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) (2018 Grade 12)	VH240186 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	NC	N/A

+ 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
VH271104 8. Do you have any of the following in your home? Select one answer choice on each row. (2018 Grade 12)	VH271104 6. Do you have any of the following in your home? Select one answer choice on each row. **Issue:** Socioeconomic Status	R	Due to concerns about content relevance and to keep student burden low, sub-items b and c were dropped.
VH354591 9. 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 (2018 Grade 12)	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 **Issue:** Technology Use	NC	N/A
VH240190 10. 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 (2018 Grade 12)	VH240190 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 **Issue:** School Climate	NC	N/A
VH240189 11. 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 (2018 Grade 12)	VH240189 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 **Issue:** Socioeconomic Status	NC	N/A

+ 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
VH240192 12. How far in school did **your mother** go? Ⓐ She did not finish high school. Ⓑ She graduated from high school. Ⓒ She had some education after high school. Ⓓ She graduated from college. Ⓔ I don't know. (2018 Grade 12)	VH240192 10. How far in school did **your mother** go? Ⓐ She did not finish high school. Ⓑ She graduated from high school. Ⓒ She had some education after high school. Ⓓ She graduated from college. Ⓔ I don't know. **Issue:** Socioeconomic Status	NC	N/A
VH240193 13. 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. (2018 Grade 12)	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. **Issue:** Socioeconomic Status	NC	N/A
VH336776 14. Does **your mother** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. (2018 Grade 12)	VH336776 12. Does **your mother** work? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	NC	N/A

+ 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
VH336878 15. What does **your mother** do for work? Select the choice that most closely describes what she does at work. 01 Accountant 02 Artist 03 Athlete 04 Carpenter 05 Cashier 06 Cleaner 07 Clerk 08 College professor 09 Construction worker 10 Cook 11 Customer service 12 Day care worker 13 Dental hygienist 14 Dentist 15 Designer 16 Doctor 17 Education administrator 18 Electrician 19 Engineer 20 Executive 21 Factory worker 22 Farmer 23 Firefighter 24 Grounds worker 25 Health aide 26 Helper 27 Housekeeper 28 Janitor 29 Lawyer 30 Librarian 31 Manager 32 Marketing 33 Mechanic 34 Medical technician 35 Military 36 Miner 37 Nurse 38 Office support 39 Painter 40 Pharmacist 41 Police 42 Receptionist 43 Religious worker 44 Repair technician 45 Salesperson 46 Scientist 47 Secretary 48 Security guard 49 Server 50 Social worker 51 Software developer 52 Stocker 53 Supervisor 54 Surgeon 55 Surveyor 56 Taxi driver 57 Teacher 58 Therapist 59 Transportation 60 Truck driver 61 Veterinarian 62 Writer 63 Other (Please specify): _____ (2018 Grade 12)	N/A	D	Due to the substantial time burden associated with completing this item and to keep student burden low, this item was dropped.
VH336779 16. Does your father work? A Yes B No C I don't know. (2018 Grade 12)	VH336779 13. Does your father work? A Yes B No C I don't know. **Issue:** Socioeconomic Status	NC	N/A

+ 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
VH336885 17. What does **your father** do for work? Select the choice that most closely describes what he does at work. 01 Accountant 02 Artist 03 Athlete 04 Carpenter 05 Cashier 06 Cleaner 07 Clerk 08 College professor 09 Construction worker 10 Cook 11 Customer service 12 Day care worker 13 Dental hygienist 14 Dentist 15 Designer 16 Doctor 17 Education administrator 18 Electrician 19 Engineer 20 Executive 21 Factory worker 22 Farmer 23 Firefighter 24 Grounds worker 25 Health aide 26 Helper 27 Housekeeper 28 Janitor 29 Lawyer 30 Librarian 31 Manager 32 Marketing 33 Mechanic 34 Medical technician 35 Military 36 Miner 37 Nurse 38 Office support 39 Painter 40 Pharmacist 41 Police 42 Receptionist 43 Religious worker 44 Repair technician 45 Salesperson 46 Scientist 47 Secretary 48 Security guard 49 Server 50 Social worker 51 Software developer 52 Stocker 53 Supervisor 54 Surgeon 55 Surveyor 56 Taxi driver 57 Teacher 58 Therapist 59 Transportation 60 Truck driver 61 Veterinarian 62 Writer 63 Other (Please specify): _____ (2018 Grade 12)	**N/A**	D	Due to the substantial time burden associated with completing this item and to keep student burden low, this item was dropped.
VH271144 18. Do any of the following people live in your home? Select **one** answer choice on each row. (2018 Grade 12)	VH271144 14. Do any of the following people live in your home? Select **one** answer choice on each row. **Issue:** Socioeconomic Status	NC	N/A

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

	Yes	No	
a. Mother	①	⓪	VH271145
b. Stepmother	①	⓪	VH271146
c. Foster mother or other female legal guardian	①	⓪	VH271147
d. Father	①	⓪	VH271148
e. Stepfather	①	⓪	VH271149
f. Foster father or other male legal guardian	①	⓪	VH271150

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

	Yes	No	
a. Mother	①	⓪	VH271145
b. Stepmother	①	⓪	VH271146
c. Foster mother or other female legal guardian	①	⓪	VH271147
d. Father	①	⓪	VH271148
e. Stepfather	①	⓪	VH271149
f. Foster father or other male legal guardian	①	⓪	VH271150

+ 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
VH591969 19. 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 12)	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 **Issue:** Technology Use	NC	N/A
VH271276 20. 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 (2018 Grade 12)	VH271276 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 Ⓒ In about half of the classes Ⓓ In more than half of the classes Ⓔ In all or almost all classes **Issue:** Technology Use	NC	N/A
VH271337 21. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. a. I finish whatever I begin. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH271338 b. I try very hard even after making mistakes. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH271339 c. I keep working hard even when I feel like quitting. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH271342 d. I keep trying to improve myself, even when it takes a long time to get there. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH271345 (Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Very much like me)	VH733141 17. How much does each of the following statements describe you? Select **one** answer choice on each row. a. I finish whatever I begin. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH733142 b. I try very hard even after making mistakes. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH733143 c. I keep working hard even when I feel like quitting. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH733145 d. I keep trying to improve myself, even when it takes a long time to get there. — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH733144 (Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Very much like me) **Issue:** Grit	R	After examining data from the two versions of this item that were administered in the pilot, one version of the item was dropped.

+ 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
22. How much does each of the following statements describe you? Select **one** answer choice on each row. VH733141 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. VH733142 b. I try very hard even after making mistakes. VH733143 c. I keep working hard even when I feel like quitting. VH733144 d. I keep trying to improve myself, even when it takes a long time to get there. VH733145 (2018 Grade 12)			
23. In this school year, how often have you done each of the following? Select **one** answer choice on each row. VH271367 Never or hardly ever / Less than half of the time / About half of the time / More than half of the time / All or almost all of the time a. I started working on assignments right away rather than waiting until the last minute. VH271370 b. I paid attention and resisted distractions. VH271372 c. I stayed on task without reminders from my teacher. VH271374 d. I paid attention in class even when I was not interested. VH271375 (2018 Grade 12)	19. In this school year, how often have you done each of the following? Select **one** answer choice on each row. VH271367 Never or hardly ever / Less than half of the time / About half of the time / More than half of the time / All or almost all of the time a. I started working on assignments right away rather than waiting until the last minute. VH271370 b. I paid attention and resisted distractions. VH271372 c. I stayed on task without reminders from my teacher. VH271374 d. I paid attention in class even when I was not interested. VH271375 **Issue:** Grit	NC	N/A
24. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. VH271749 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. VH271750 b. I like activities that challenge my thinking abilities. VH271752 c. I enjoy situations where I will have to think about something. VH271753 d. I enjoy thinking about new solutions to problems. VH271756	18. How much does each of the following statements describe you? Select **one** answer choice on each row. VH733149 Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Very much like me a. I like complex problems more than easy problems. VH733150 b. I like activities that challenge my thinking abilities. VH733151 c. I enjoy situations where I will have to think about something. VH733153 d. I enjoy thinking about new solutions to problems. VH733154 **Issue:** Desire for Learning	R	After examining data from the two versions of this item that were administered in the pilot, one version of the item was dropped.

+ 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
25. How much does each of the following statements describe you? Select **one** answer choice on each row. VH733149 (2018 Grade 12)			
26. 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 (2018 Grade 12)	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 **Issue:** School Climate	NC	N/A
27. During this school year, which of the following have you done? Select **one** answer on each row. VH740697 (2018 Grade 12)	22. During this school year, which of the following have you done? Select **one** answer on each row. VH740697 **Issue:** Post High School Preparation	NC	N/A

25.

	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733150
b. I like activities that challenge my thinking abilities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733151
c. I enjoy situations where I will have to think about something.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733153
d. I enjoy thinking about new solutions to problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733154

26.

	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271942
b. I felt happy at school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271944
c. I felt that I learned something that I can use in my daily life.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH336903

20.

	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271942
b. I felt happy at school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271944
c. I felt that I learned something that I can use in my daily life.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH336903

27.

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

22.

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

+ 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**
VH240194 28. Which of the following best describes your high school program? Ⓐ General Ⓑ Academic or college preparatory Ⓒ Vocational or technical (2018 Grade 12)	VH240194 23. Which of the following best describes your high school program? Ⓐ General Ⓑ Academic or college preparatory Ⓒ Vocational or technical **Issue:** Post High School Preparation	NC	N/A
VH254028 29. Write the ZIP code of your home address in the box. □□□□□ (2018 Grade 12)	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? Ⓐ Yes Ⓑ No (2016 Grade 8)	VH852900 21. Are you taking an art course this school year (for example, drawing, painting, or studio art)? Ⓐ Yes Ⓑ No **Issue:** Educational Experiences	A	This item was adapted from the arts questionnaire to assess student participation in arts coursework.

+ 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

VH260313

1. How easy or difficult was this test?

Ⓐ Extremely difficult

Ⓑ Quite difficult

Ⓒ Somewhat difficult

Ⓓ Somewhat easy

Ⓔ Quite easy

Ⓕ Extremely easy

VH333658

2. How much effort did you apply to succeed on this test?

Ⓐ No effort at all

Ⓑ 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.

Ⓑ 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.

VH240388

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

VH240186

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)

VH271104

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	Ⓐ	Ⓑ	VH271105
b. Your own bedroom	Ⓐ	Ⓑ	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

VH240190

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

VH240189

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

VH240192

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.

VH336776

12. Does **your mother** work?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH336779

13. Does **your father** work?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH271144

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

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

VH271276

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

Ⓒ In about half of the classes

Ⓓ In more than half of the classes

Ⓔ In all or almost all classes

VH733141

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733142
b. I try very hard even after making mistakes.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733143
c. I keep working hard even when I feel like quitting.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733145
d. I keep trying to improve myself, even when it takes a long time to get there.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733150
b. I like activities that challenge my thinking abilities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733151
c. I enjoy situations where I will have to think about something.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733155
d. I enjoy thinking about new solutions to problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH733154

VH271367

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271370
b. I paid attention and resisted distractions.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271372
c. I stayed on task without reminders from my teacher.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271374
d. I paid attention in class even when I was not interested.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH271375

VH271934

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

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

VH852900

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

Ⓐ Yes

Ⓑ No

VH740697

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	Ⓐ	Ⓑ	VH740702
b. Submitted the Free Application for Federal Student Aid (FAFSA)	Ⓐ	Ⓑ	VH740703
c. Applied to a 2-year college	Ⓐ	Ⓑ	VH740704
d. Been accepted to a 2-year college	Ⓐ	Ⓑ	VH740705
e. Applied to a 4-year college	Ⓐ	Ⓑ	VH740706
f. Been accepted to a 4-year college	Ⓐ	Ⓑ	VH740708
g. Applied to a certificate or diploma program at a school that provides occupational training (such as electrician, beautician, mechanic, computer programmer, etc.)	Ⓐ	Ⓑ	VH740709
h. Been accepted to a technical training program	Ⓐ	Ⓑ	VH740710
i. Talked with a military recruiter	Ⓐ	Ⓑ	VH740711
j. Enlisted in the military	Ⓐ	Ⓑ	VH740712
k. Applied for a full-time job	Ⓐ	Ⓑ	VH740713
l. Been interviewed for a full-time job	Ⓐ	Ⓑ	VH740714

VH240194

23. Which of the following best describes your high school program?

Ⓐ General

Ⓑ Academic or college preparatory

Ⓒ Vocational or technical

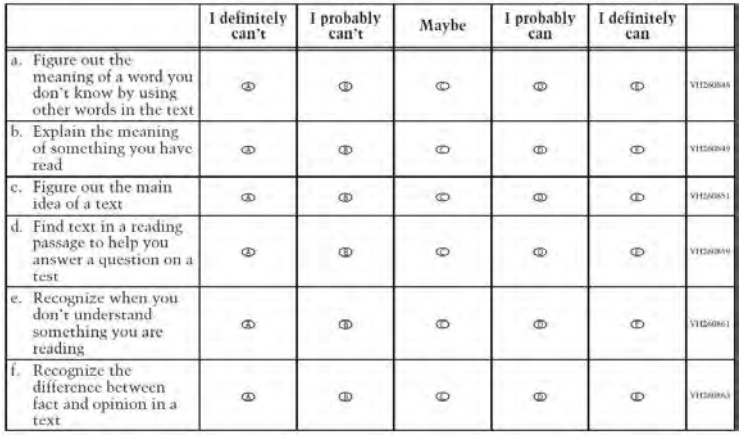
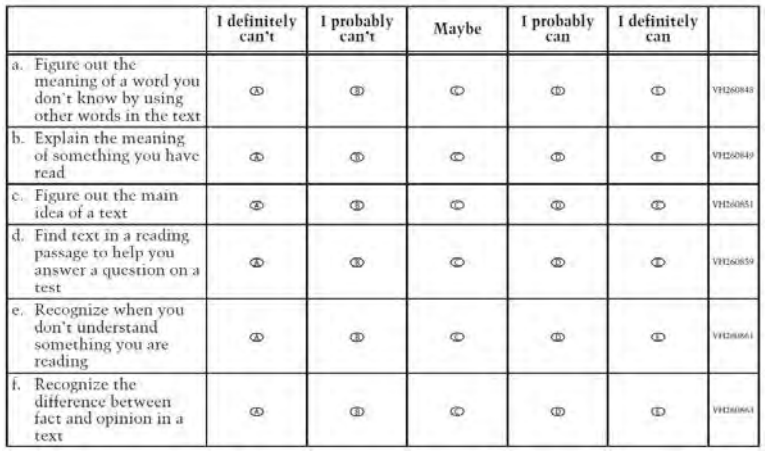
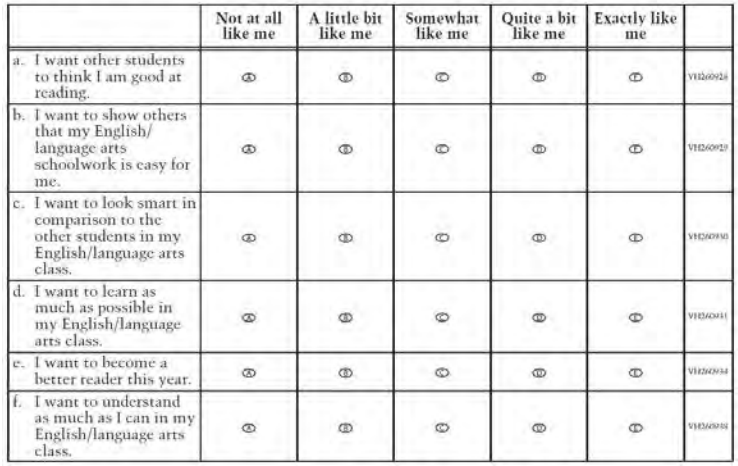
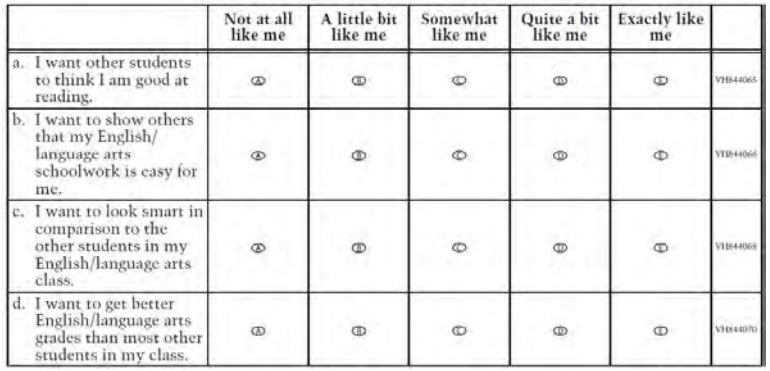
Appendix K-1o: Summary of Changes Operational Grade 4 Reading

2019 Operational Grade 4 Reading Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
VH032850 1. 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 keep student burden low and create opportunity for future development.
VH032853 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)	VH032858 17. 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 **Issue:** Organization of Instruction	NC	N/A
VH032862 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)	VH032862 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	NC	N/A
VH032871 4. 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)	VH032871 19. For school this year, how often do you have a class discussion about something that the class has read? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day **Issue:** Organization of Instruction	NC	N/A

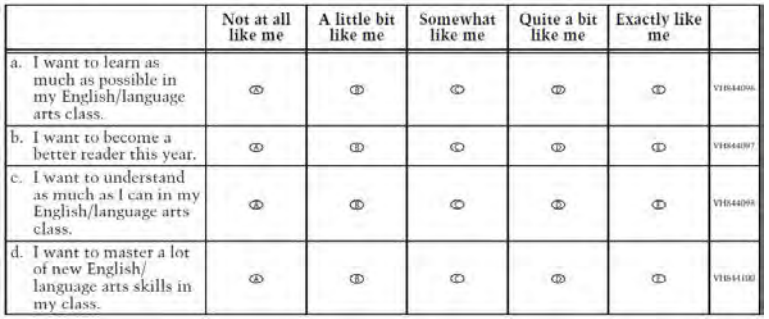
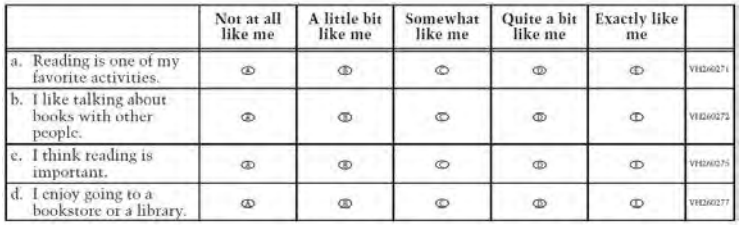
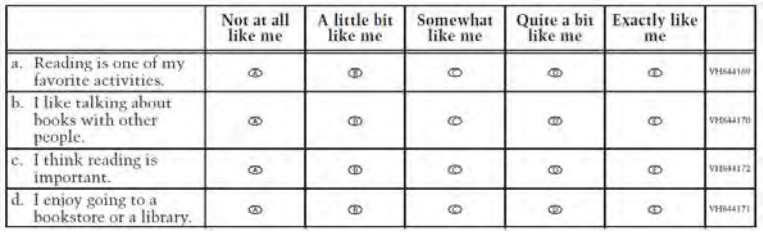
2019 Operational Grade 4 Reading Student

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 (2017 Grade 4)	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 **Issue:** Organization of Instruction	NC	N/A
6. On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork and homework? Ⓐ Less than 30 minutes Ⓑ About 30 minutes Ⓒ About 1 hour Ⓓ About 2 hours Ⓔ About 3 hours Ⓕ 4 or more hours (2017 Grade 4)	21. On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork? Ⓐ Less than 30 minutes Ⓑ About 30 minutes Ⓒ About 1 hour Ⓓ About 2 hours Ⓔ About 3 hours Ⓕ 4 or more hours **Issue:** Resources for Learning and Instruction	R	The word “homework” was removed.
7. In this school year, how often do you borrow reading materials (such as books or magazines) from your school library or media center? Ⓐ 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)	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	R	The phrase “classroom library” was added.

2019 Operational Grade 4 Reading Student

<table>
<tr><th>Previous item</th><th>2019 item</th><th>D/A/ R/NC+</th><th>Rationale</th></tr>
<tr>
<td>8. Do you think you would be able to do each of the following when reading? Select one answer choice on each row.
 
(2017 Grade 4)</td>
<td>23. Do you think you would be able to do each of the following when reading? Select one answer choice on each row.
 
Issue: Student Factors</td>
<td>NC</td>
<td>N/A</td>
</tr>
<tr>
<td>9. How much does each of the following statements describe a person like you? Select one answer choice on each row.
 
(2017 Grade 4)</td>
<td>24. How much does each of the following statements describe you? Select one answer choice on each row.
  </td>
<td>R</td>
<td>The phrase “a person like” was removed and two sub-items were added.</td>
</tr>
</table>

2019 Operational Grade 4 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
	25. How much does each of the following statements describe you? Select **one** answer choice on each row.  **Issue:** Student Factors		
10. How much does each of the following statements describe a person like you? Select **one** answer choice on each row.  (2017 Grade 4)	26. How much does each of the following statements describe you? Select **one** answer choice on each row.  **Issue:** Student Factors	R	The phrase "a person like" was removed.
11. 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 (2017 Grade 4)	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 **Issue:** Student Factors	NC	N/A

2019 Operational Grade 4 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
12. 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 (2017 Grade 4)	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 **Issue:** Resources for Learning and Instruction	NC	N/A
13. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row. (2017 Grade 4)	29. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row. **Issue:** Student Factors	NC	N/A

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day
a. Talk about books (print or online) with other people	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
b. Go to my local library to borrow books (print or online)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
c. Read blogs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
d. Use social media (for example, Facebook, Twitter, Instagram)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
e. Help friends with reading homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

Appendix K-1p: Operational Grade 4 Reading

VH332853

17. 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

VH332862

18. For school this year, how often do you work in pairs or small groups to talk about something that you have read?

Ⓐ Never

Ⓑ About once or twice a year

Ⓒ About once or twice a month

Ⓓ About once or twice a week

Ⓔ Every day or almost every day

VH332871

19. For school this year, how often do you have a class discussion about something that the class has read?

Ⓐ Never

Ⓑ About once or twice a year

Ⓒ About once or twice a month

Ⓓ About once or twice a week

Ⓔ Every day or almost every day

VH588774

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

VH598636

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?

Ⓐ Less than 30 minutes

Ⓑ About 30 minutes

Ⓒ About 1 hour

Ⓓ About 2 hours

Ⓔ About 3 hours

Ⓕ 4 or more hours

VH460301

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

VH337050

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260848
b. Explain the meaning of something you have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260849
c. Figure out the main idea of a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260851
d. Find text in a reading passage to help you answer a question on a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260859
e. Recognize when you don't understand something you are reading	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260861
f. Recognize the difference between fact and opinion in a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260863

VH844052

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	
a. I want other students to think I am good at reading.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844065
b. I want to show others that my English/ language arts schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844066
c. I want to look smart in comparison to the other students in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844068
d. I want to get better English/language arts grades than most other students in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844070

VH844081

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

VH844168

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844169
b. I like talking about books with other people.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844170
c. I think reading is important.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844172
d. I enjoy going to a bookstore or a library.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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

VH332820

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

Ⓐ Never

Ⓑ About once or twice a year

Ⓒ About once or twice a month

Ⓓ About once or twice a week

Ⓔ Every day or almost every day

VH260906

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260907
b. Go to my local library to borrow books (print or online)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260911
c. Read blogs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260913
d. Use social media (for example, Facebook, Twitter, Instagram)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333261
e. Help friends with reading homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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 (2017 Grade 4)	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 **Issue:** Organization of Instruction	NC	N/A
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 (2017 Grade 4)	2. For school this year, how often do you work in pairs or small groups to talk about something that you have read? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day **Issue:** Organization of Instruction	NC	N/A
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 **Issue:** Organization of Instruction	NC	N/A

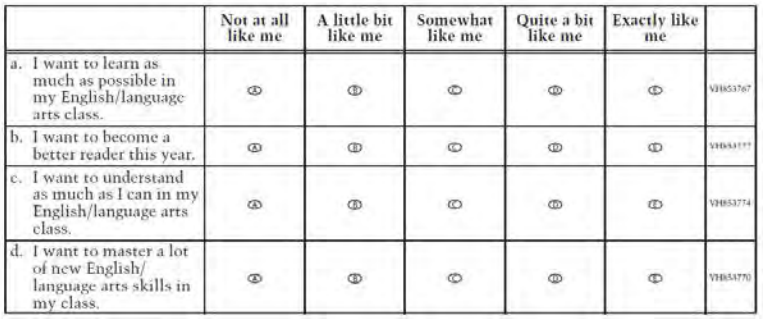
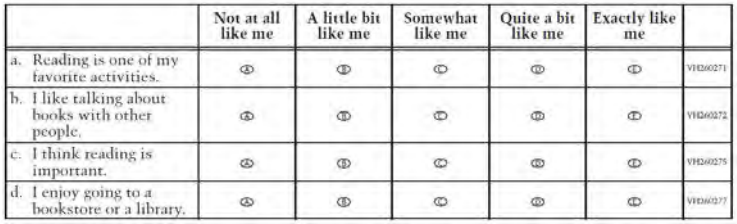
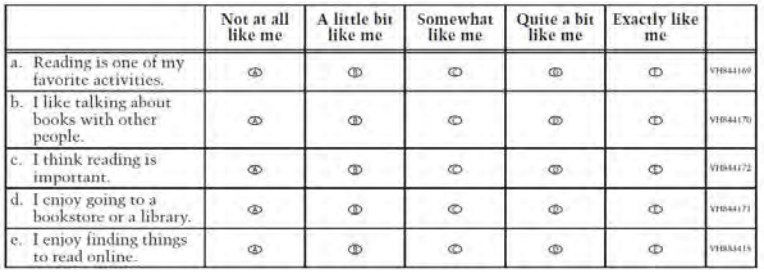
2019 Pilot Grade 4 Reading Student

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)	6. On a typical school day, how much time do you use a computer or other digital device to do your **English/language arts** schoolwork? Ⓐ Less than 30 minutes Ⓑ About 30 minutes Ⓒ About 1 hour Ⓓ About 2 hours Ⓔ About 3 hours Ⓕ 4 or more hours **Issue:** Resources for Learning and Instruction	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 Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 4)	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 **Issue:** Resources for Learning and Instruction	R	The phrase “classroom library” was added and “classroom library, school library, media center” was bolded.

2019 Pilot Grade 4 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
28. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row. (2017 Grade 4)	4. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row. **Issue:** Student Factors	R	A sub-item was added.
29. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. (2017 Grade 4)	13. How much does each of the following statements describe you? Select **one** answer choice on each row.	R	The phrase "a person like" was removed and two sub-items were added.

2019 Pilot Grade 4 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
	14. How much does each of the following statements describe you? Select **one** answer choice on each row.  **Issue:** Student Factors		
30. How much does each of the following statements describe a person like you? Select **one** answer choice on each row.  (2017 Grade 4)	10. How much does each of the following statements describe you? Select **one** answer choice on each row.  **Issue:** Student Factors	R	The phrase "a person like" was removed and a sub-item was added.
31. 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 (2017 Grade 4)	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 **Issue:** Student Factors	NC	N/A

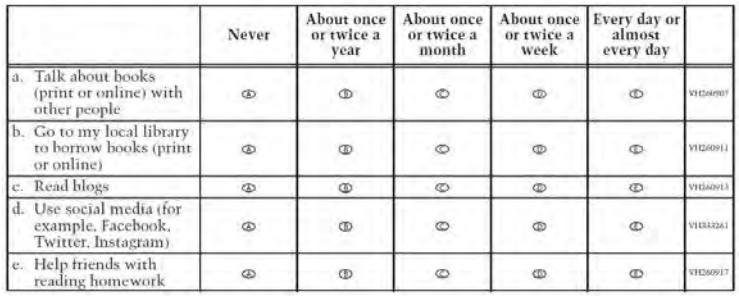
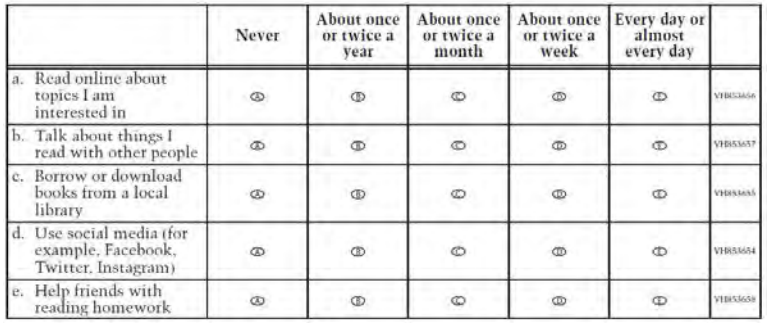
2019 Pilot Grade 4 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH032020 32. 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 (2017 Grade 4)	N/A	D	This item was dropped to reduce student burden and create opportunity for future development.
N/A	VH031176 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. **Issue:** Resources for Learning and Instruction	A	This item was added.
N/A	VH031270 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. **Issue:** Resources for Learning and Instruction	A	This item was added.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH031190
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH031192
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH031196
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH031200

	Not useful at all	Somewhat useful	Very useful	I don't receive that type of help.	
a. Help from a teacher	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH031287
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH031291
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH031302
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH031304

2019 Pilot Grade 4 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
33. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row.  (2017 Grade 4)	12. How often do you typically do each of the following activities **outside of school**? Select **one** answer choice on each row.  **Issue:** Student Factors	R	In the item stem, "things" was replaced with "activities". In sub-item "c", "Read blogs" was replaced with "Read online about topics I 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".

Appendix K-1r: Pilot Grade 4 Reading

VH332853

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

VH332862

2. For school this year, how often do you work in pairs or small groups to talk about something that you have read?

Ⓐ Never

Ⓑ About once or twice a year

Ⓒ About once or twice a month

Ⓓ About once or twice a week

Ⓔ Every day or almost every day

VH332871

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

VH337050

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260848
b. Explain the meaning of something you have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260849
c. Figure out the main idea of a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260851
d. Find text in a reading passage to help you answer a question on a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260859
e. Recognize when you don't understand something you are reading	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260861
f. Recognize the difference between fact and opinion in a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260863
g. Use evidence from a text to support your answer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811215

VH588774

5. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?

Ⓐ Never

Ⓑ Once

Ⓒ Two or three times

Ⓓ Four or five times

Ⓔ More than five times

VH598636

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

VH598686

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

VH811176

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811190
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811192
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811196
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH811287
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH811291
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH811302
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH811304

VH844168

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844169
b. I like talking about books with other people.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844170
c. I think reading is important.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844172
d. I enjoy going to a bookstore or a library.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844171
e. I enjoy finding things to read online.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853415

VH853176

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

VH853652

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

VH853747

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

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

VH853763

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853777
c. I want to understand as much as I can in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853774
d. I want to master a lot of new English/ language arts skills in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	12_02	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	4, 8	04_01	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

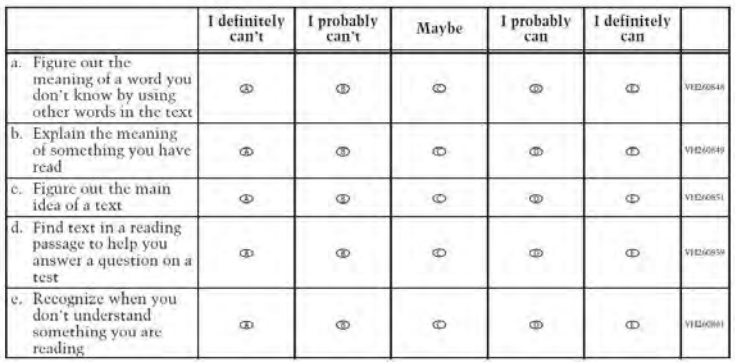
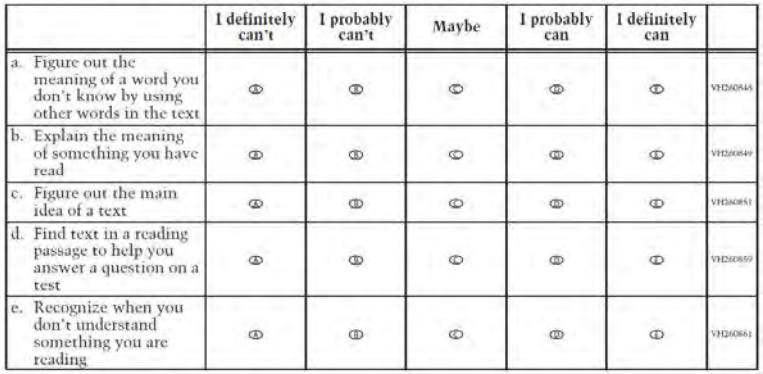
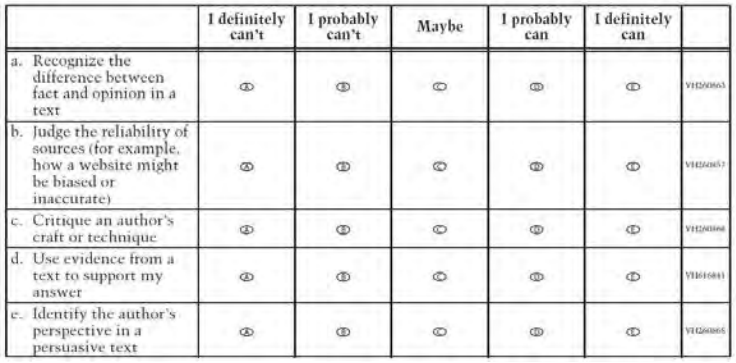
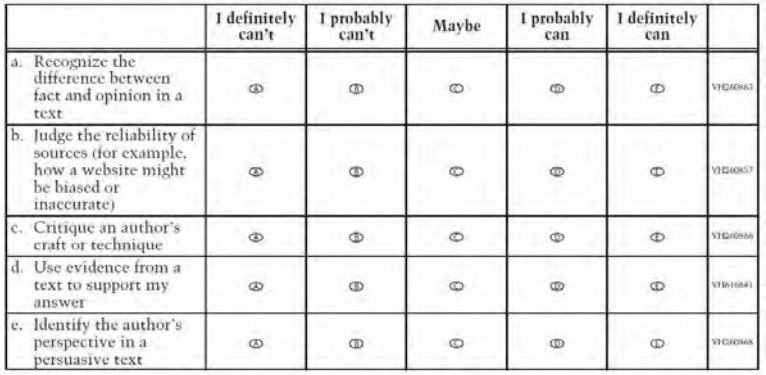
2019 Operational Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
1. For your English/language arts class this year, how often do you do each of the following? Select **one** answer choice on each row. (2017 Grade 8)	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. **Issue:** Organization of Instruction	NC	N/A
2. 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. (2017 Grade 8)	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. **Issue:** Organization of Instruction	R	A sub-item was dropped.
3. 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. (2017 Grade 8)	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. **Issue:** Organization of Instruction	R	A sub-item was dropped.

2019 Operational 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? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times (2017 Grade 8)	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 **Issue:** Organization of Instruction	NC	N/A
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? Ⓐ Less than 30 minutes Ⓑ About 30 minutes Ⓒ About 1 hour Ⓓ About 2 hours Ⓔ About 3 hours Ⓕ 4 or more hours (2017 Grade 8)	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 Ⓒ About 1 hour Ⓓ About 2 hours Ⓔ About 3 hours Ⓕ 4 or more hours **Issue:** Resources for Learning and Instruction	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? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	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 **Issue:** Resources for Learning and Instruction	NC	N/A

2019 Operational Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
7. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.  (2017 Grade 8)	28. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.  **Issue:** Student Factors	NC	N/A
8. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.  (2017 Grade 8)	29. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.  **Issue:** Student Factors	NC	N/A

2019 Operational Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
9. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. (2017 Grade 8)	30. How much does each of the following statements describe you? Select **one** answer choice on each row. 31. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	R	The phrase "a person like" was removed and two sub-items were added.
10. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. (2017 Grade 8)	32. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	R	The phrase "a person like" was removed.

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

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want other students to think I am good at reading.	A	B	C	D	E	VH260928
b. I want to show others that my English/ language arts schoolwork is easy for me.	A	B	C	D	E	VH260929
c. I want to look smart in comparison to the other students in my English/language arts class.	A	B	C	D	E	VH260930
d. I want to learn as much as possible in my English/language arts class.	A	B	C	D	E	VH260931
e. I want to become a better reader this year.	A	B	C	D	E	VH260934
f. I want to understand as much as I can in my English/language arts class.	A	B	C	D	E	VH260938

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.	A	B	C	D	E	VH844055
b. I want to show others that my English/ language arts schoolwork is easy for me.	A	B	C	D	E	VH844066
c. I want to look smart in comparison to the other students in my English/language arts class.	A	B	C	D	E	VH844068
d. I want to get better English/language arts grades than most other students in my class.	A	B	C	D	E	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 learn as much as possible in my English/language arts class.	A	B	C	D	E	VH844096
b. I want to become a better reader this year.	A	B	C	D	E	VH844097
c. I want to understand as much as I can in my English/language arts class.	A	B	C	D	E	VH844099
d. I want to master a lot of new English/ language arts skills in my class.	A	B	C	D	E	VH844100

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

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. Reading is one of my favorite activities.	A	B	C	D	E	VH260271
b. I like talking about books with other people.	A	B	C	D	E	VH260272
c. I think reading is important.	A	B	C	D	E	VH260275
d. I enjoy going to a bookstore or a library.	A	B	C	D	E	VH260277

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	B	C	D	E	VH844169
b. I like talking about books with other people.	A	B	C	D	E	VH844170
c. I think reading is important.	A	B	C	D	E	VH844172
d. I enjoy going to a bookstore or a library.	A	B	C	D	E	VH844171

2019 Operational Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
11. 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 (2017 Grade 8)	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 **Issue:** Student Factors	NC	N/A
12. 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 (2017 Grade 8)	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 **Issue:** Resources for Learning and Instruction	NC	N/A
13. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row. a. Stories or novels b. Poems c. Plays d. Biographies e. Comic books f. Magazines g. E-mails h. Text messages (2017 Grade 8)	34. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row. a. Stories or novels b. E-mails c. Text messages d. Biographies **Issue:** Student Factors	R	Sub-items were removed.

2019 Operational Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
14. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row. (2017 Grade 8)	36. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row. **Issue:** Student Factors	NC	N/A

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Talk about books (print or online) with other people	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
b. Go to my local library to borrow books (print or online)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
c. Read blogs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
d. Use social media (for example, Facebook, Twitter, Instagram)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
e. Help friends with reading homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	

Appendix K-1u: Operational Grade 8 Reading

VH332887

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH332888
b. Work in pairs or small groups to talk about something that you have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260256
b. Analyze the author's organization of information in a passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333142

VH333074

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333075
b. Interpret the meaning of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333076
c. Question the motives or feelings of the characters	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333079
d. Identify the main ideas of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333078
e. Identify the themes of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333094

VH588774

25. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?

Ⓐ Never

Ⓑ Once

Ⓒ Two or three times

Ⓓ Four or five times

Ⓔ More than five times

VH598636

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

Ⓐ Less than 30 minutes

Ⓑ About 30 minutes

Ⓒ About 1 hour

Ⓓ About 2 hours

Ⓔ About 3 hours

Ⓕ 4 or more hours

VH460301

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

VH260847

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260848
b. Explain the meaning of something you have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260849
c. Figure out the main idea of a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260851
d. Find text in a reading passage to help you answer a question on a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260859
e. Recognize when you don't understand something you are reading	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260861

VH611300

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

VH844052

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844065
b. I want to show others that my English/ language arts schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844066
c. I want to look smart in comparison to the other students in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844068
d. I want to get better English/language arts grades than most other students in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844070

VH844081

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 learn as much as possible in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844096
b. I want to become a better reader this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844097
c. I want to understand as much as I can in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844098
d. I want to master a lot of new English/ language arts skills in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844100

VH844168

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844169
b. I like talking about books with other people.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844170
c. I think reading is important.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844172
d. I enjoy going to a bookstore or a library.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844171

VH598686

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

VH261065

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261066
b. E-mails	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261074
c. Text messages	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261075
d. Biographies	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH617043

VH332820

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

VH260906

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260907
b. Go to my local library to borrow books (print or online)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260911
c. Read blogs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260913
d. Use social media (for example, Facebook, Twitter, Instagram)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333261
e. Help friends with reading homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260917

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

2019 Pilot Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
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. (2017 Grade 8)	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. **Issue:** Organization of Instruction	NC	N/A
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. (2017 Grade 8)	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. **Issue:** Organization of Instruction	NC	N/A
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. (2017 Grade 8)	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. **Issue:** Organization of Instruction	R	A sub-item was removed.

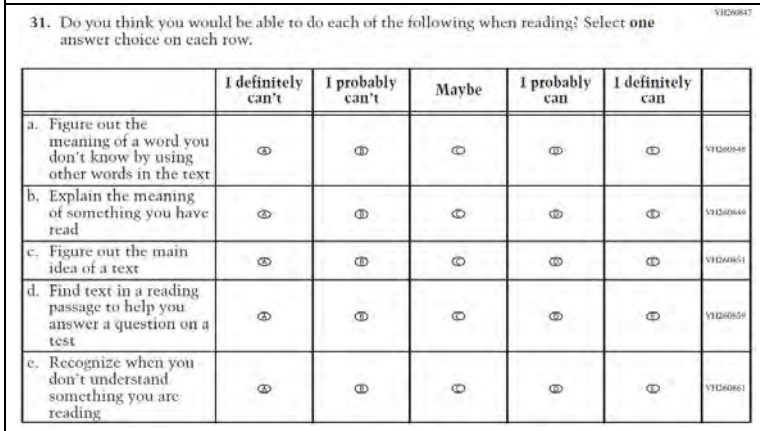
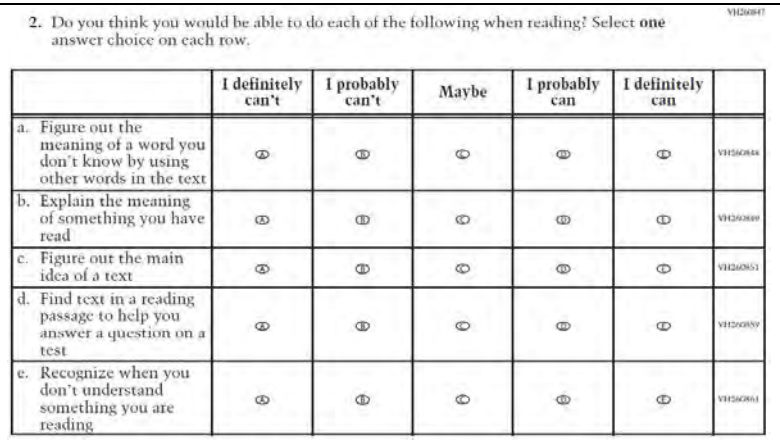
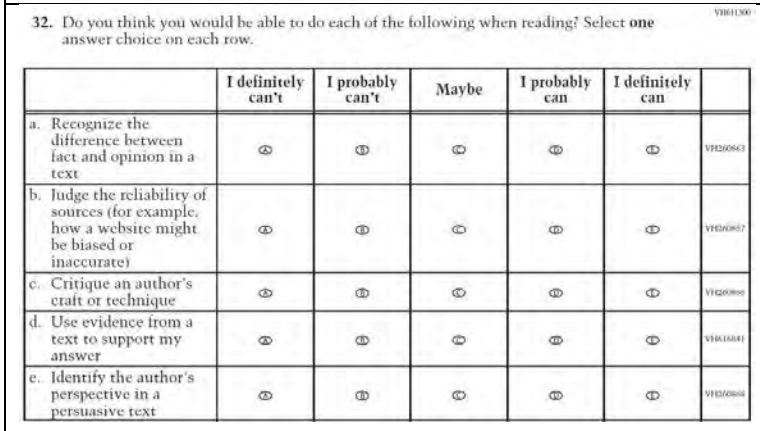
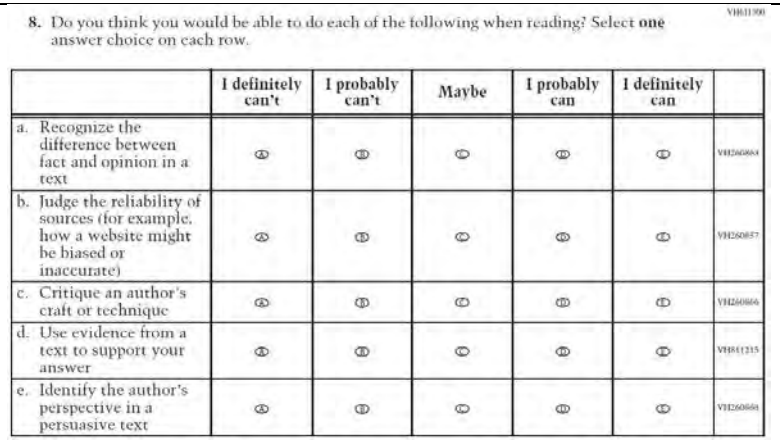
+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

2019 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? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ 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 hours (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 Ⓕ 4 or more hours **Issue:** Resources for Learning and Instruction	R	The word "homework" was removed.
30. In this school year, how often do you borrow reading materials (such as books or magazines) from your school library or media center? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	13. In this school year, how often do you borrow reading materials (such as books or magazines) from your school (for example, a **classroom library**, **school library**, or **media center**)? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day **Issue:** Resources for Learning and Instruction	R	The phrase "classroom library" was added and "classroom library, school library, media center" was bolded.

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

2019 Pilot Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
 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 b. Explain the meaning of something you have read c. Figure out the main idea of a text d. Find text in a reading passage to help you answer a question on a test e. Recognize when you don't understand something you are reading (2017 Grade 8)	 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 b. Explain the meaning of something you have read c. Figure out the main idea of a text d. Find text in a reading passage to help you answer a question on a test e. Recognize when you don't understand something you are reading **Issue:** Student Factors	NC	N/A
 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 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 craft or technique d. Use evidence from a text to support my answer e. Identify the author's perspective in a persuasive text (2017 Grade 8)	 8. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row. I definitely can't / I probably can't / Maybe / I probably can / I definitely can a. Recognize the difference between fact and opinion in a text b. Judge the reliability of sources (for example, how a website might be biased or inaccurate) c. Critique an author's craft or technique d. Use evidence from a text to support your answer e. Identify the author's perspective in a persuasive text **Issue:** Student Factors	R	In sub-item "d", "my answer" was replaced with "your answer".

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

2019 Pilot Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
33. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. (2017 Grade 8)	15. How much does each of the following statements describe you? Select **one** answer choice on each row. 16. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	R	The previous matrix was separated into two matrices of achievement goals items (performance and mastery). In order to create indices for both performance and mastery goals based on a total of at least 4 items, VH844052 and VH844081 were added. The stem was revised from "describe a person like you" to "describe you".

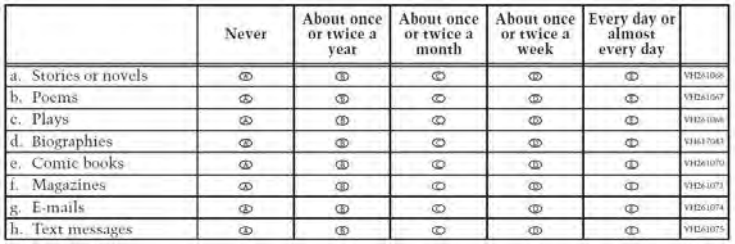
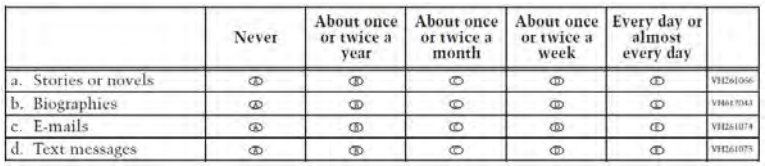
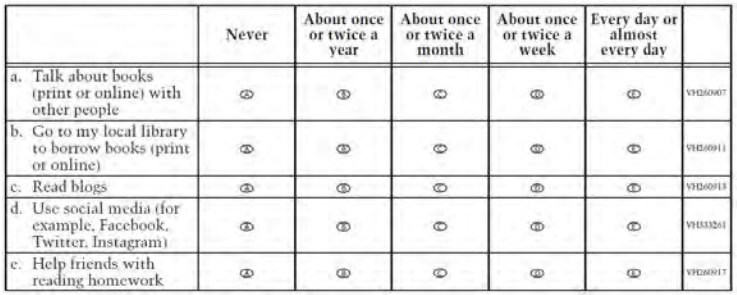
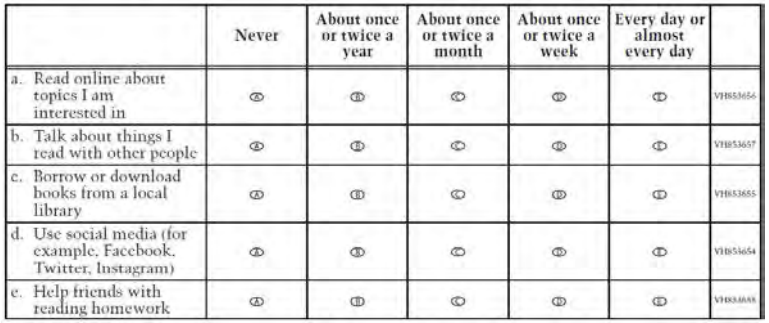
+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

2019 Pilot Grade 8 Reading Student

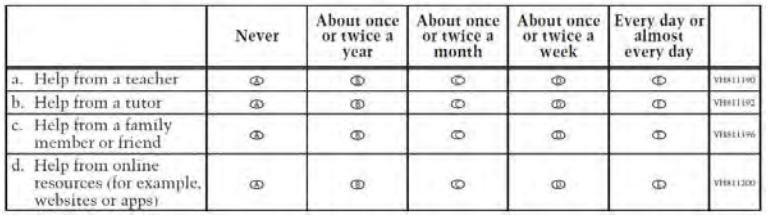
Previous item	2019 item	D/A/ R/NC+	Rationale
34. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Exactly like me a. Reading is one of my favorite activities. 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 8)	12. How much does each of the following statements describe you? Select **one** answer choice on each row. Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Exactly like me a. Reading is one of my favorite activities. b. 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 Factors	R	The phrase "a person like" was removed and a sub-item was added.
35. 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 (2017 Grade 8)	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 **Issue:** Student Factors	NC	N/A
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 (2017 Grade 8)	N/A	D	This item was dropped to reduce student burden and create opportunity for future development.

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

2019 Pilot Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
37. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row.  (2017 Grade 8)	3. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row.  **Issue:** Student Factors	R	Sub-items were removed.
38. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row.  (2017 Grade 8)	14. How often do you typically do each of the following activities **outside of school**? Select **one** answer choice on each row.  **Issue:** Student Factors	R	In the item stem, “things” was replaced with “activities”. In sub item “a”, “Talk about books (print or online) with other people” was replaced with “Talk about things I read with other people” and was moved to sub-item “b”. In sub-item “c”, “Read blogs” was replaced with “Read online about topics I

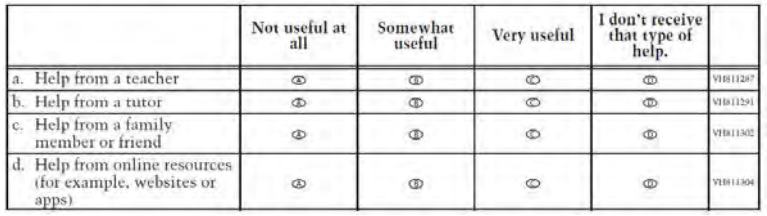
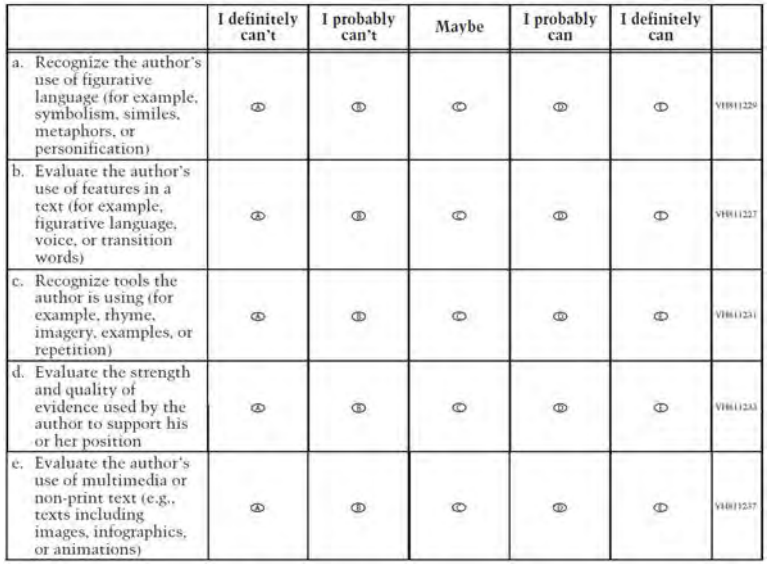
+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

2019 Pilot Grade 8 Reading Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
			am interested in" and moved to sub-item "a". In sub-item "b", "Go to my local library to borrow books (print or online)" was replaced with "Borrow or download books from a local library" and moved to sub-item "c".
N/A	9. How often do you receive the following types of help with English/language arts schoolwork **outside of school or after school**? Select **one** answer choice on each row. VH01176  **Issue:** Resources for Learning and Instruction	A	This item was added.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH011190
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH011192
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH011196
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH011200

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

2019 Pilot Grade 8 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
N/A	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.  **Issue:** Resources for Learning and Instruction	A	This item was added.
N/A	10. Do you think you would be able to do each of the following when reading? Select **one** answer choice on each row.  **Issue:** Student Factors	A	This item was added.

+ 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

VH260254

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260256
b. Analyze the author's organization of information in a passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260848
b. Explain the meaning of something you have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260849
c. Figure out the main idea of a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260851
d. Find text in a reading passage to help you answer a question on a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260859
e. Recognize when you don't understand something you are reading	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260861

VH261065

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261066
b. Biographies	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH617043
c. E-mails	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261074
d. Text messages	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH332888
b. Work in pairs or small groups to talk about something that we have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH652035

VH333074

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333075
b. Interpret the meaning of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333076
c. Question the motives or feelings of the characters	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333079
d. Identify the main ideas of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333078
e. Identify the themes of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333094

VH598636

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

VH598686

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

VH611300

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

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Recognize the difference between fact and opinion in a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260863
b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260857
c. Critique an author's craft or technique	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260866
d. Use evidence from a text to support your answer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811215
e. Identify the author's perspective in a persuasive text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811190
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811192
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811196
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811200

VH811222

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)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811229
b. Evaluate the author's use of features in a text (for example, figurative language, voice, or transition words)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811227
c. Recognize tools the author is using (for example, rhyme, imagery, examples, or repetition)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811231
d. Evaluate the strength and quality of evidence used by the author to support his or her position	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811233
e. Evaluate the author's use of multimedia or non-print text (e.g., texts including images, infographics, or animations)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH811237

VH811276

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH811287
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH811291
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH811302
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844169
b. I like talking about books with other people.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844170
c. I think reading is important.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844172
d. I enjoy going to a bookstore or a library.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844171
e. I enjoy finding things to read online.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853415

VH853176

13. In this school year, how often do you borrow reading materials (such as books or magazines) from your school (for example, a **classroom library**, **school library**, or **media center**)?

Ⓐ Never

Ⓑ About once or twice a year

Ⓒ About once or twice a month

Ⓓ About once or twice a week

Ⓔ Every day or almost every day

VH853652

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

VH853747

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 other students to think I am good at reading.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853764
b. I want to show others that my English/ language arts schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853765
c. I want to look smart in comparison to the other students in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853766
d. I want to get better English/language arts grades than most other students in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853776

VH853763

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 want to learn as much as possible in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853767
b. I want to become a better reader this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853777
c. I want to understand as much as I can in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853774
d. I want to master a lot of new English/ language arts skills in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853770

VH588774

17. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?

Ⓐ Never

Ⓑ Once

Ⓒ 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	14_01	2	1, 2
VH853657	4, 8	14_02	2	1, 2
VH853655	4, 8	14_03	2	1, 2
VH853654	4, 8	14_04	2	1, 2
VH853658	4, 8	14_05	2	1, 2
VH598636	4, 8	06_00	3	1, 2, 3
VH844168	4, 8	12_00	2	1, 2
VH844169	4, 8	12_01	2	1, 2
VH844170	4, 8	12_02	2	1, 2
VH844172	4, 8	12_03	2	1, 2
VH844171	4, 8	12_04	2	1, 2
VH853415	4, 8	12_05	2	1, 2
VH811176	4, 8	09_00	2	1, 2
VH811190	4, 8	09_01	2	1, 2
VH811192	4, 8	09_02	2	1, 2
VH811196	4, 8	09_03	2	1, 2
VH811200	4, 8	09_04	2	1, 2
VH811276	4, 8	11_00	2	1, 2
VH811287	4, 8	11_01	2	1, 2
VH811291	4, 8	11_02	2	1, 2
VH811302	4, 8	11_03	2	1, 2
VH811304	4, 8	11_04	2	1, 2
VH598686	4, 8	07_00	1	3
VH332887	8	04_00	1	3
VH332888	8	04_01	1	3
VH652035	8	04_02	1	3
VH260254	8	01_00	1	3

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

2019 Operational Grade 12 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
1. 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. (2018 Grade 12)	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. **Issue:** Organization of Instruction	NC	N/A
2. For your English/language arts class this year, how often do you do each of the following? Select **one** answer choice on each row. (2018 Grade 12)	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. **Issue:** Organization of Instruction	NC	N/A
3. 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. (2018 Grade 12)	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. **Issue:** Organization of Instruction	NC	N/A

2019 Operational Grade 12 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
4. 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. (2018 Grade 12)	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. **Issue:** Organization of Instruction	NC	N/A
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 (2018 Grade 12)	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 **Issue:** Organization of Instruction	NC	N/A
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 (2018 Grade 12)	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 Ⓒ About 1 hour Ⓓ About 2 hours Ⓔ About 3 hours Ⓕ 4 or more hours **Issue:** Resources for Learning and Instruction	NC	N/A

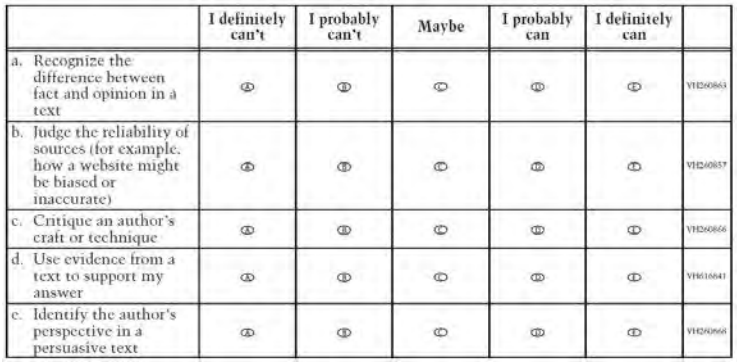
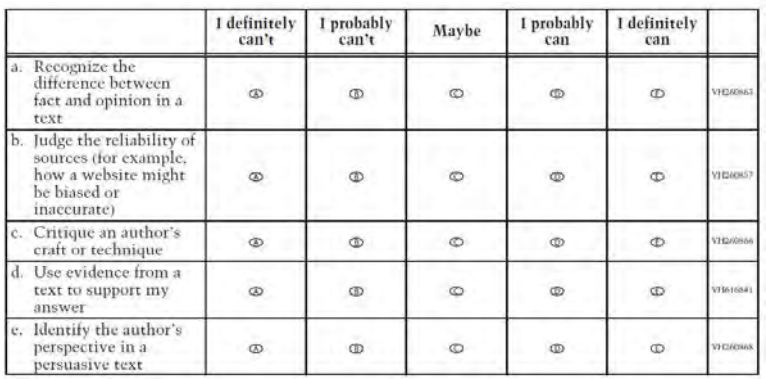
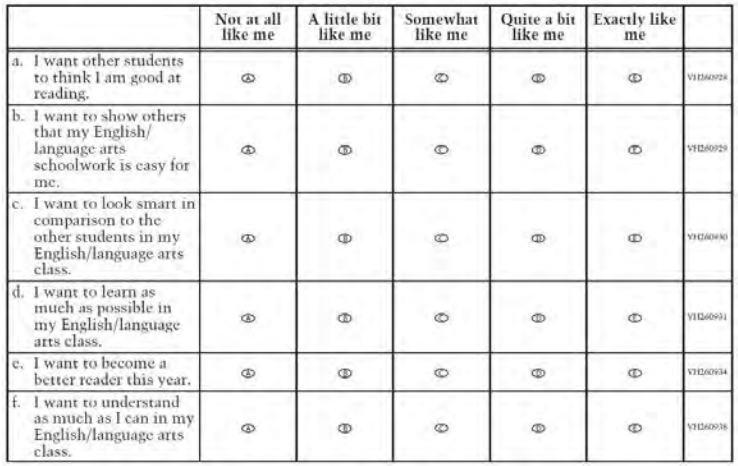
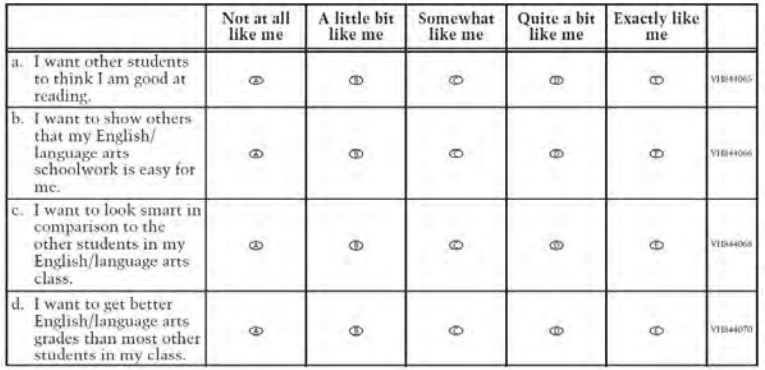
2019 Operational Grade 12 Reading Student

<table>
<tr><th>Previous item</th><th>2019 item</th><th>D/A/ R/NC+</th><th>Rationale</th></tr>
<tr><td>7. 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

(2018 Grade 12)</td><td>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

Issue: Resources for Learning and Instruction</td><td>NC</td><td>N/A</td></tr>
<tr><td>8. Do you think you would be able to do each of the following when reading? Select one answer choice on each row.
<table><tr><th></th><th>I definitely can't</th><th>I probably can't</th><th>Maybe</th><th>I probably can</th><th>I definitely can</th></tr><tr><td>a. Figure out the meaning of a word you don't know by using other words in the text</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>b. Explain the meaning of something you have read</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>c. Figure out the main idea of a text</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>d. Find text in a reading passage to help you answer a question on a test</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>e. Recognize when you don't understand something you are reading</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr></table>
(2018 Grade 12)</td><td>31. Do you think you would be able to do each of the following when reading? Select one answer choice on each row.
<table><tr><th></th><th>I definitely can't</th><th>I probably can't</th><th>Maybe</th><th>I probably can</th><th>I definitely can</th></tr><tr><td>a. Figure out the meaning of a word you don't know by using other words in the text</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>b. Explain the meaning of something you have read</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>c. Figure out the main idea of a text</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>d. Find text in a reading passage to help you answer a question on a test</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr><tr><td>e. Recognize when you don't understand something you are reading</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td></tr></table>
Issue: Student Factors</td><td>NC</td><td>N/A</td></tr>
</table>

2019 Operational Grade 12 Reading Student

<table>
<tr><th>Previous item</th><th>2019 item</th><th>D/A/ R/NC+</th><th>Rationale</th></tr>
<tr>
<td>9. Do you think you would be able to do each of the following when reading? Select one answer choice on each row.
 
(2018 Grade 12)</td>
<td>32. Do you think you would be able to do each of the following when reading? Select one answer choice on each row.
 
Issue: Student Factors</td>
<td>NC</td>
<td>N/A</td>
</tr>
<tr>
<td>10. How much does each of the following statements describe a person like you? Select one answer choice on each row.
 
(2018 Grade 12)</td>
<td>33. How much does each of the following statements describe you? Select one answer choice on each row.
  </td>
<td>R</td>
<td>The phrase “a person like” was removed and two sub-items were added.</td>
</tr>
</table>

2019 Operational Grade 12 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
	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. 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 class. d. I want to master a lot of new English/ language arts skills in my class. **Issue:** Student Factors		
11. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Exactly like me 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)	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. 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 Factors	R	The phrase "a person like" was removed.
12. 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 (2018 Grade 12)	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 About 1 hour a day About 2 hours a day About 3 hours a day 4 or more hours a day **Issue:** Student Factors	NC	N/A

2019 Operational Grade 12 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
13. 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 (2018 Grade 12)	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 **Issue:** Resources for Learning and Instruction	NC	N/A
14. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row. (2018 Grade 12)	38. How often do you typically read each of the following **outside of school** (print or online)? Select **one** answer choice on each row. **Issue:** Student Factors	NC	N/A
15. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row. (2018 Grade 12)	39. How often do you typically do each of the following things **outside of school**? Select **one** answer choice on each row. **Issue:** Student Factors	NC	N/A

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Stories or novels	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
b. Poems	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
c. Plays	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
d. Biographies	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
e. Comic books	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
f. Magazines	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
g. E-mails	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
h. Text messages	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	

	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 or online)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
c. Read blogs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
d. Use social media (for example, Facebook, Twitter, Instagram)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
e. Help friends with reading homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	

2019 Operational Grade 12 Reading Student

Previous item	2019 item	D/A/ R/NC+	Rationale
16. Are you currently enrolled in or have you taken an Advanced Placement (AP®) course in English/language arts? Select **all** that apply. Ⓐ Yes, I am enrolled in or have taken Advanced Placement (AP) English **Language** and Composition. Ⓑ Yes, I am enrolled in or have taken Advanced Placement (AP) English **Literature** and Composition. Ⓒ No, I have never taken an Advanced Placement (AP) English/language arts course. (2018 Grade 12)	40. Are you currently enrolled in or have you taken an Advanced Placement (AP®) course in English/language arts? Select **all** that apply. Ⓐ Yes, I am enrolled in or have taken Advanced Placement (AP) English **Language** and Composition. Ⓑ Yes, I am enrolled in or have taken Advanced Placement (AP) English **Literature** and Composition. Ⓒ No, I have never taken an Advanced Placement (AP) English/language arts course. **Issue:** Organization of Instruction	NC	N/A
17. Are you currently enrolled in or have you taken the International Baccalaureate® (IB) Language A1 course? Ⓐ Yes Ⓑ No (2018 Grade 12)	41. Are you currently enrolled in or have you taken the International Baccalaureate® (IB) Language A1 course? Ⓐ Yes Ⓑ No **Issue:** Organization of Instruction	NC	N/A
18. Are you currently enrolled in or have you taken any online English/language arts courses for high school or college credit? Ⓐ Yes Ⓑ No (2018 Grade 12)	42. Are you currently enrolled in or have you taken any online English/language arts courses for high school or college credit? Ⓐ Yes Ⓑ No **Issue:** Organization of Instruction	NC	N/A

Appendix K-1z: Operational Grade 12 Reading

VH731527

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731530
b. Done a project about something that you have read (for example, written a play, created a website)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH332888
b. Work in pairs or small groups to talk about something that we have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH652035
c. Discuss different interpretations of what we have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH652037

VH882582

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260256
b. Analyze the author's organization of information in a passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333142
c. Critique the author's craft or technique	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333144

VH882547

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333075
b. Interpret the meaning of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333076
c. Question the motives or feelings of the characters	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333079
d. Identify the main ideas of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333078
e. Identify the themes of the passage	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333094
f. Analyze two or more texts on the same topic	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333077

VH588774

28. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved reading?

Ⓐ Never

Ⓑ Once

Ⓒ Two or three times

Ⓓ Four or five times

Ⓔ More than five times

VH598636

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

Ⓐ Less than 30 minutes

Ⓑ About 30 minutes

Ⓒ About 1 hour

Ⓓ About 2 hours

Ⓔ About 3 hours

Ⓕ 4 or more hours

VH460301

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

VH260847

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260848
b. Explain the meaning of something you have read	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260849
c. Figure out the main idea of a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260851
d. Find text in a reading passage to help you answer a question on a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260859
e. Recognize when you don't understand something you are reading	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260861

VH611300

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	
a. Recognize the difference between fact and opinion in a text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260863
b. Judge the reliability of sources (for example, how a website might be biased or inaccurate)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260857
c. Critique an author's craft or technique	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260866
d. Use evidence from a text to support my answer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH616841
e. Identify the author's perspective in a persuasive text	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260868

VH844052

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	
a. I want other students to think I am good at reading.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844065
b. I want to show others that my English/ language arts schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844066
c. I want to look smart in comparison to the other students in my English/language arts class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844068
d. I want to get better English/language arts grades than most other students in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844070

VH844081

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

VH844168

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844169
b. I like talking about books with other people.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844170
c. I think reading is important.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844172
d. I enjoy going to a bookstore or a library.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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

Ⓒ About 1 hour a day

Ⓓ About 2 hours a day

Ⓔ About 3 hours a day

Ⓕ 4 or more hours a day

VH882561

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261066
b. Poems	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261067
c. Plays	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261068
d. Biographies	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH617043
e. Comic books	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261070
f. Magazines	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261071
g. E-mails	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH261074
h. Text messages	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260907
b. Go to my local library to borrow books (print or online)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260911
c. Read blogs	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260913
d. Use social media (for example, Facebook, Twitter, Instagram)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH333261
e. Help friends with reading homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH260917

VH240398

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

Ⓐ Yes, I am enrolled in or have taken Advanced Placement (AP) English **Language** and Composition.

Ⓑ Yes, I am enrolled in or have taken Advanced Placement (AP) English **Literature** and Composition.

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

VH240006

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

Ⓐ 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?

Ⓐ Yes

Ⓑ No

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

2019 Operational Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH350115 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 Ⓓ Four or five times Ⓔ More than five times (2017 Grade 4)	VH350115 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 **Issue:** Organization of Instruction	NC	N/A
VH350116 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 (2017 Grade 4)	N/A	D	This item was dropped based on the ADC's recommendation.
VH266754 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 (2017 Grade 4)	N/A	D	This item was dropped based on NCES's review of technology-use items.
VH591846 4. How often do you use a computer or other digital device (excluding handheld calculators) for math homework? Ⓐ 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.

2019 Operational Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH336228 5. 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.
VH336231 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 (2017 Grade 4)	VH336231 19. 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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH336233 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 (2017 Grade 4)	VH336233 22. How often do you receive help or tutoring with math **outside of school or after school?** Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day **Issue:** Resources for Learning and Instruction	NC	N/A
VH267415 8. This school year, how often did the following things happen in your math class? Select one answer choice on each row. (2017 Grade 4)	VH267415 18. This school year, how often did the following things happen in your math class? Select one answer choice on each row. **Issue:** Resources for Learning and Instruction	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	
a. My teacher used computers or other digital devices when teaching math to my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH588077
b. My teacher required us to use computers or other digital devices to complete math assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267419

	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH588077
b. My teacher required us to use computers or other digital devices to complete math assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267419

2019 Operational Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH268936 9. 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 (2017 Grade 4)	VH268936 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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH268945 10. 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 b. Play an instrument and read music c. Go to websites for help with your math homework (2017 Grade 4)	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 b. Play an instrument and read music c. Go to websites for help with your math homework **Issue:** Resources for Learning and Instruction	NC	N/A
VH336085 11. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No (2017 Grade 4)	VH336085 24. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No **Issue:** Resources for Learning and Instruction	NC	N/A
VH269037 12. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. ☐ (2017 Grade 4)	VH269037 25. 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	N/A

2019 Operational Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
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. (2017 Grade 4)	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. **Issue:** Student Factors	NC	N/A
14. How much does each of the following statements describe a person like you? Select one answer choice on each row. (2017 Grade 4)	27. How much does each of the following statements describe you? Select one answer choice on each row. 28. How much does each of the following statements describe you? Select one answer choice on each row. **Issue:** Student Factors	R	The previous matrix was separated into two matrices of achievement goals items (performance and mastery). In order to create indices for both performance and mastery goals based on a total of at least 4 items, VH844882 and 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”.

Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
15. How much does each of the following statements describe a person like you? Select one answer choice on each row. (2017 Grade 4)	29. How much does each of the following statements describe you? Select one answer choice on each row. **Issue:** Student Factors	R	The stem was revised from "describe a person like you" to "describe you".
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)	23. 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 **Issue:** Resources for Learning and Instruction	NC	N/A

Appendix K-1ab: Operational Grade 4 Mathematics

VH350115

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

VH267415

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

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

VH336231

19. 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

VH268936

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268946
b. Play an instrument and read music	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268961
c. Go to websites for help with your math homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268962

VH336233

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

Ⓐ Never

Ⓑ About once or twice a year

Ⓒ About once or twice a month

Ⓓ About once or twice a week

Ⓔ Every day or almost every day

VH460329

23. 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

VH336085

24. Have you ever helped your friends with their math homework?

Ⓐ Yes

Ⓑ No

VH269037

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

VH267672

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.)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267674
b. Divide 42 stickers among 6 students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH617317
c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267683

VH844870

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

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

VH845110

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845117
b. I want to master a lot of new skills in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845114
c. I want to become better in math this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845115
d. I want to understand as much as I can in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845118

VH844769

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844770
b. I look forward to my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844771
c. I am interested in the things I learn in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844775
d. I think making an effort in math is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844772
e. I think math will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844777
f. I think it is important to do well in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844774

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

2019 Pilot Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH350115 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 (2017 Grade 4)	VH350115 5. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times **Issue:** Organization of Instruction	NC	N/A
VH350116 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.
VH266754 23. 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 (2017 Grade 4)	N/A	D	This item was dropped based on NCES's review of technology-use items.
VH391846 24. How often do you use a computer or other digital device (excluding handheld calculators) for math homework? Ⓐ 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.

+ 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
VH036228 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.
VH036231 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)	VH036231 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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH036233 27. How often do you receive help or tutoring with math **outside of school or after school**? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 4)	N/A	D	This item was dropped in place of keeping VH853724, as per similar recommendations made for Reading based on pretesting and to ensure consistency across subjects.

+ 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
28. This school year, how often did the following things happen in your math class? Select **one** answer choice on each row. Never or hardly ever / Less than half of the time / About half of the time / More than half of the time / All or almost all of the time a. My teacher used computers or other digital devices when teaching math to my class. b. My teacher required us to use computers or other digital devices to complete math assignments. (2017 Grade 4)	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. b. My teacher required us to use computers or other digital devices to go on websites or use apps to complete math assignments. **Issue:** Resources for Learning and Instruction	R	The wording for both sub-items was revised to focus more on assessing what the students are utilizing the technology for.
29. 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 (2017 Grade 4)	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 **Issue:** Resources for Learning and Instruction	NC	N/A
30. 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 b. Play an instrument and read music c. Go to websites for help with your math homework (2017 Grade 4)	1. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row. Never / About once or twice a year / About once or twice a month / About once or twice a week / Every day or almost every day a. Talk about math problems with your friends b. Play an instrument and read music c. Go to websites for help with your math homework **Issue:** Resources for Learning and Instruction	NC	N/A
31. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No (2017 Grade 4)	3. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No **Issue:** Resources for Learning and Instruction	NC	N/A

+ 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
32. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. ☐ (2017 Grade 4)	2. 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	N/A
33. 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. a. Estimate the weight of 5 apples using pounds (lbs.) b. Divide 42 stickers among 6 students c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width 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 I definitely can't / I probably can't / Maybe / I probably can / I definitely can (2017 Grade 4)	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. a. Estimate the weight of 5 apples using pounds (lb) b. Share 42 stickers equally among 6 students c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width d. Calculate what time the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes. I definitely can't / I probably can't / Maybe / I probably can / I definitely can **Issue:** Student Factors	R	Sub-item "a" was revised from "lbs" to "lb"; sub-item "b" was revised; previous sub-item "d" was replaced with an alternate version.
34. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. 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 year. f. I want to understand as much as I can 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 (2017 Grade 4)	9. How much does each of the following statements describe you? Select **one** answer 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 math class. Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Exactly like me	R	The previous matrix was separated into two matrices of achievement goals items (performance and mastery). In order to create indices for both performance and mastery goals based

+ 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
	11. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors		on a total of at least 4 items, ~~VH844882~~ VH853961 and VH8451~~3~~4 were added from the 2016 pilot assessment. The stem was revised from "describe a person like you" to "describe you".
35. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. (2017 Grade 4)	10. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	R	The stem was revised from "describe a person like you" to "describe you".

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

2019 Pilot Grade 4 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
16. How often do you play digital games (for example, apps, video games, or computer games) **outside of school** that involve math? Ⓐ 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? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day **Issue:** Resources for Learning and Instruction	NC	N/A
N/A	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. **Issue:** Resources for Learning and Instruction	A	This item was added in place of VH336233. This item was pretested and kept in Reading, and to ensure consistency, the same decision was made for math.
N/A	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. **Issue:** Resources for Learning and Instruction	A	This item was added in place of VH336233. This item was pretested and kept in Reading, and to ensure consistency, the same decision was

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

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

+ 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.

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

Appendix K-1ad: Pilot Grade 4 Mathematics

VH268945

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

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day	
a. Talk about math problems with your friends	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268946
b. Play an instrument and read music	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268961
c. Go to websites for help with your math homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268962

VH269037

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

☐

VH336085

3. Have you ever helped your friends with their math homework?

Ⓐ Yes

Ⓑ No

VH336231

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

VH350115

5. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?

Ⓐ Never

Ⓑ Once

Ⓒ Two or three times

Ⓓ Four or five times

Ⓔ More than five times

VH460329

6. 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

VH853724

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853725
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853726
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853728
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH853733
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH853734
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH853736
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH853737

VH853944

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853957
b. I want to master a lot of new math skills in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853961
c. I want to become a better math student this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853949
d. I want to understand as much as I can in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853952

VH854028

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854029
b. I look forward to my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854030
c. I am interested in the things I learn in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854034
d. I think making an effort in math is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854031
e. I think math will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854036
f. I think it is important to do well in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854033

VH854116

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	Exactly like me	
a. I want other students to think I am a good math student.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854117
b. I want to show others that my math schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854118
c. I want to look smart in comparison to the other students in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854119
d. I want to get better math grades than most other students in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854134

VH882494

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH810476
b. My teacher required us to use computers or other digital devices to go on websites or use apps to complete math assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH858273
b. Share 42 stickers equally among 6 students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH810864
c. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267682
d. Calculate what time the movie ends if it starts at 11:00 AM and lasts for 2 hours and 45 minutes.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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 Ⓑ 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 (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 **Issue:** Organization of Instruction	NC	N/A
2. 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. (2017 Grade 8)	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	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 (2017 Grade 8)	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	NC	N/A

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH350116 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? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	N/A	D	This item was dropped based on the ADC's recommendation.
VH266754 5. How often do you use a computer or other digital device (excluding handheld calculators) for math at school? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology-use items.
VH336233 6. How often do you receive help or tutoring with math outside of school or after school? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	VH336233 30. 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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH266808 7. In your math class this year, how often have you used the following types of calculators? Select one answer choice on each row. a. Basic calculator — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH266809 b. Graphing calculator — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH266810 (2017 Grade 8)	VH266808 25. In your math class this year, how often have you used the following types of calculators? Select one answer choice on each row. a. Basic calculator — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH266809 b. Graphing calculator — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH266810 **Issue:** Resources for Learning and Instruction	NC	N/A

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
8. 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. b. I used the Internet for my math work. c. My teacher used computers or other digital devices when teaching math to my class. d. My teacher required us to use computers or other digital devices to complete math assignments. (2017 Grade 8)	26. This school year, how often did the following things happen in your math class? Select one answer choice on each row. Never or hardly ever / Less than half of the time / About half of the time / More than half of the time / All or almost all of the time a. My teacher used computers or other digital devices to show us how to work through math problems. b. I used the Internet for my math work. c. My teacher used computers or other digital devices when teaching math to my class. d. My teacher required us to use computers or other digital devices to complete math assignments. **Issue:** Resources for Learning and Instruction	NC	N/A
9. In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to complete 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 (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology-use items.
10. 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 (2017 Grade 8)	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 **Issue:** Resources for Learning and Instruction	NC	N/A

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH617207 11. In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to take an online practice test? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology-use items.
VH268936 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 Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH589204 13. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row. (2017 Grade 8)	VH589204 29. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row. **Issue:** Resources for Learning and Instruction	NC	N/A
VH336085 14. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No (2017 Grade 8)	VH336085 31. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No **Issue:** Resources for Learning and Instruction	NC	N/A

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH269037 15. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. ☐ (2017 Grade 8)	VH269037 32. 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	N/A
VH59192 16. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select one answer choice on each row. 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.	VH460345 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.	R	Items VH267674, VH617317, VH267681, VH267683, VH460348, VH460355, VH460381, VH460386, VH460389, VH460391, VH460398, VH460900, and VH460912 were dropped based on NCES's review of self-efficacy items for grade 8.

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale

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

	I definitely 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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460383
b. Create an expression to show how old you will be in n years if you are 8 years old today	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460386
c. Create an expression that shows the number of wheels on n wagons if each wagon has 4 wheels	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460389
d. Explain how you know the number of books you can buy if you know the price of each book and you have $35	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460391

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.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460398
b. Give an example to show that a math statement is false	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460399
c. Explain to your classmate how you solved a math problem	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460910
d. Use correct mathematical words and symbols to communicate ideas about math	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460900
e. Use correct mathematical words and symbols when showing your work	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460902
f. Use definitions of geometric shapes to support an argument	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460912

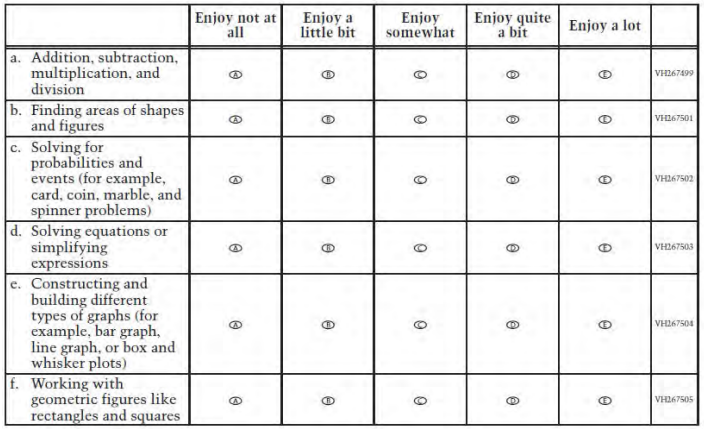
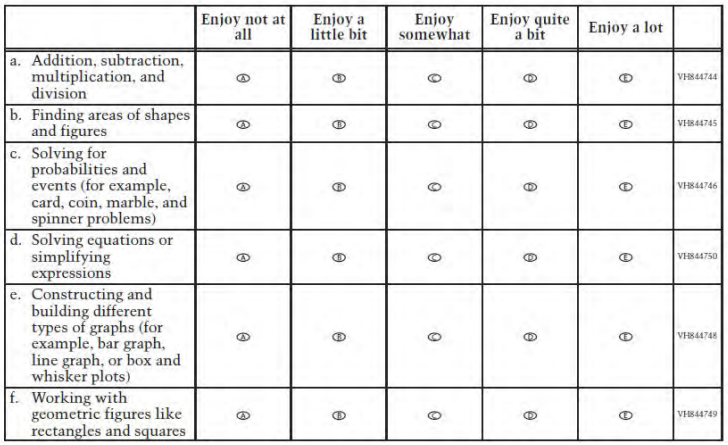
(2017 Grade 8)

Issue: Student factors

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
17. How much does each of the following statements describe a person like you? Select one answer choice on each row. (2017 Grade 8)	37. How much does each of the following statements describe you? Select one answer choice on each row. 38. How much does each of the following statements describe you? Select one answer choice on each row. **Issue:** Student factors	R	The previous matrix was separated into two matrices of achievement goals items (performance and mastery). In order to create indices for both performance and mastery goals based on a total of at least 4 items, VH844882 and VH845114 were added from the 2016 pilot assessment.
18. How much does each of the following statements describe a person like you? Select one answer choice on each row. (2017 Grade 8)	39. How much does each of the following statements describe you? Select one answer choice on each row. **Issue:** Student Factors	R	The stem was revised from "describe a person like you" to "describe you".

2019 Operational Grade 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
19. How much do you enjoy solving each of the following types of math problems? Select one answer choice on each row. VH267498  (2017 Grade 8)	40. How much do you enjoy each of the following types of math activities? Select one answer choice on each row. VH844743  **Issue:** Student Factors	R	The stem wording was revised to remove the word “solving” as per ADC feedback that the stem did not match rows E and F in the previous phrasing. Additionally, "problems" was replaced with "activities" to better match the sub-item content. This revision was made based on coglab data gathered on this item for the 2021 administration.

2019 Operational Grade 8 Mathematics Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
VH460329 20. 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 8)	VH460329 35. 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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH460337 21. How often do you use a computer, tablet, smartphone, or gaming console **outside of school** to play **educational 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 (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology-use items.
VH460341 22. 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 (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology-use items.
VH460923 26. Have you ever participated in a math study group **outside of school**? Ⓐ Yes Ⓑ No (2017 Grade 8)	VH460923 33. Have you ever participated in a math study group **outside of school**? Ⓐ Yes Ⓑ No **Issue:** Student factors	NC	N/A
VH460925 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)	VH460925 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. ☐ **Issue:** Student factors	NC	N/A

2019 Operational Grade 8 Mathematics Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
VH460401 28. Have you ever participated in a math study group at school? Ⓐ Yes Ⓑ No (2017 Grade 8)	N/A	D	This item was dropped based on the ADC's recommendation.
VH460877 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. 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

VH240046

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.

VH350115

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

VH266808

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH266809
b. Graphing calculator	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH266810

VH589166

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

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

VH336037

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

VH589204

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268946
b. Program computers	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268949
c. Play an instrument and read music	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268961
d. Go to websites for help with your math homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268962

VH336233

30. 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

VH336085

31. Have you ever helped your friends with their math homework?

Ⓐ Yes

Ⓑ No

VH269037

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

☐

VH460923

33. Have you ever participated in a math study group **outside of school**?

Ⓐ Yes

Ⓑ No

VH460925

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.

☐

VH460329

35. 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

VH460345

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460383
c. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267679
d. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267682
e. Give an example to show that a math statement is false	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460399
f. Explain to your classmate how you solved a math problem	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460910
g. Use correct mathematical words and symbols when showing your work	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460902

VH844870

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844871
b. I want to show others that my math schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844872
c. I want to look smart in comparison to the other students in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844873
d. I want to get better grades than most other students in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844882

VH845110

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

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

VH844769

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844770
b. I look forward to my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844771
c. I am interested in the things I learn in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844775
d. I think making an effort in math is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844772
e. I think math will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844777
f. I think it is important to do well in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844774

VH844743

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844744
b. Finding areas of shapes and figures	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844745
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844746
d. Solving equations or simplifying expressions	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844750
e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844748
f. Working with geometric figures like rectangles and squares	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844749

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

2019 Pilot 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 (2017 Grade 8)	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: _____ **Issue:** Organization of Instruction	R	This item's response options were revised based on cognitive interviews and as recommended by NCES.
26. 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. (2017 Grade 8)	9. What math class do you expect to take next year? Ⓐ Basic or general math Ⓑ Introduction to algebra or pre-algebra Ⓒ Algebra I Ⓓ Geometry Ⓔ Algebra II Ⓕ Other math class. Please specify:_____ Ⓖ I don't know. **Issue:** Organization of Instruction	R	This item's response options were revised based on cognitive interviews and as recommended by NCES.
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)	4. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times **Issue:** Organization of Instruction	NC	N/A

+ 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**
VH855010 **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 (2017 Grade 8)	N/A	D	This item was dropped based on the ADC's recommendation.
VH266754 **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 Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology-use items.
VH853724 **30.** How often do you receive help or tutoring with math **outside of school or after school**? Ⓐ Never Ⓑ About once or twice a year Ⓒ About once or twice a month Ⓓ About once or twice a week Ⓔ Every day or almost every day (2017 Grade 8)	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 across subjects.

+ 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
31. In your math class this year, how often have you used the following types of calculators? Select **one** answer choice on each row. a. Basic calculator b. Graphing calculator 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 (2017 Grade 8)	19. In your math class this year, how often have you used the following types of calculators? Select **one** answer choice on each row. a. Basic calculator (for example, four function or scientific) b. Graphing calculator 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 **Issue:** Resources for Learning and Instruction	R	Sub-item "a" was revised to give examples of what is meant by a basic calculator.
32. This school year, how often did the following things happen in your math class? Select **one** answer choice on each row. a. My teacher used computers or other digital devices to show us how to work through math problems. b. I used the Internet for my math work. c. My teacher used computers or other digital devices when teaching math to my class. d. My teacher required us to use computers or other digital devices to complete math assignments. 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 (2017 Grade 8)	20. This school year, how often did the following things happen in your math class? Select **one** answer choice on each row. a. My teacher used computers or other digital devices to show us how to work through math problems. b. I used the Internet for my math work. c. My teacher used computers or other digital devices to go on websites or use apps when teaching math to my class. d. My teacher required us to use computers or other digital devices to go on websites or use apps to complete math assignments. 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 **Issue:** Resources for Learning and Instruction	R	Previous sub-items "a" and "c" were revised to focus more on assessing what the students are utilizing the technology for. These are current sub-items "c" and "d".
33. In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to complete 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 (2017 Grade 8)	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 8 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
34. 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 (2017 Grade 8)	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 **Issue:** Resources for learning and instruction	R	The item stem was revised.
35. In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to take an online practice test? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times (2017 Grade 8)	N/A	D	This item was dropped based on NCES's review of technology-use items.
36. 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 (2017 Grade 8)	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 **Issue:** Resources for Learning and Instruction	NC	N/A
37. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row. (2017 Grade 8)	18. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row. **Issue:** Resources for Learning and Instruction	R	Sub-item "b" was revised.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
b. Program computers	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
c. Play an instrument and read music	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
d. Go to websites for help with your math homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

	Never	About once or twice a year	About once or twice a month	About once or twice a week	Every day or almost every day
a. Talk about math problems with your friends	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
b. Write a computer program	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
c. Play an instrument and read music	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
d. Go to websites for help with your math homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

+ 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**
38. Have you ever helped your friends with their math homework? Yes No (2017 Grade 8)	3. Have you ever helped your friends with their math homework? Yes No **Issue:** Resources for Learning and Instruction	NC	N/A
39. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. ☐ (2017 Grade 8)	2. 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	N/A

+ 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
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.	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.	R	Current sub-item "b" was revised. Current sub-items "d", "f", "g", and "h" were administered in coglabs and retained for pilot.

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	
a. Estimate the weight of 5 apples using pounds (lbs.)	A	B	C	D	E	VH267674
b. Divide 42 stickers among 6 students	A	B	C	D	E	VH617317
c. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	A	B	C	D	E	VH267679
d. Describe the properties shared by every isosceles right triangle	A	B	C	D	E	VH267681
e. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	A	B	C	D	E	VH267682
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	A	B	C	D	E	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	A	B	C	D	E	VH460348
b. Use a box plot to represent the height, in inches, of all of the students in your class	A	B	C	D	E	VH460355
c. Determine the probability of picking a blue marble without looking if you know the number of marbles of each color in a bag	A	B	C	D	E	VH460381
d. List all of the different possible outcomes when a coin is flipped three times	A	B	C	D	E	VH460362

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	
a. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	A	B	C	D	E	VH267682
b. Determine a 20% tip of a $55 restaurant dinner bill	A	B	C	D	E	VH853690
c. List all of the different possible outcomes when a coin is flipped three times	A	B	C	D	E	VH853692
d. Determine the likely number of red faces a cube has if the red face lands up 130 out of 400 times the cube is rolled. The 6 faces of the cube are painted red, yellow, or blue.	A	B	C	D	E	VH853683
e. Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	A	B	C	D	E	VH853693
f. Calculate how many cats a pet store has if the ratio of cats to dogs is 5 to 4, and the total number of cats and dogs the store has is 27	A	B	C	D	E	VH853685
g. Write an equation with a variable to solve a problem (for example, if pizza costs $2 per slice, then x number of slices can be bought for $16)	A	B	C	D	E	VH853713
h. Find the total sum of the interior angles of a pentagon with 5 equal sides	A	B	C	D	E	VH853714

Issue: Student factors

+ 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
24. Thinking about math, do you think that you would be able to do each of the following? Do not actually solve the problems. Select **one** answer choice on each row. (2017 Grade 8)			
41. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. (2017 Grade 8)	15. How much does each of the following statements describe you? Select **one** answer choice on each row.	R	The previous matrix was separated into two matrices of achievement goals items (performance and mastery). In order to create indices for both performance and mastery goals based on a total of at least 4 items, VH853961

+ 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
	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. 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 get better math grades than most other students in my class. **Issue:** Student Factors		and VH845134 were added from the 2016 pilot assessment. The stem was revised from "describe a person like you" to "describe you".
42. How much does each of the following statements describe a person like you? Select **one** answer choice on each row. Not at all like me / A little bit like me / Somewhat like me / Quite a bit like me / Exactly like me 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. e. I think math will help me even when I am not in school. f. I think it is important to do well in math. (2017 Grade 8)	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. 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. e. I think math will help me even when I am not in school. f. I think it is important to do well in math. **Issue:** Student Factors	R	The stem was revised from "describe a person like you" to "describe you".

+ 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
43. How much do you enjoy solving each of the following types of math problems? Select **one** answer choice on each row. (2017 Grade 8)	11. How much do you enjoy each of the following types of math activities? Select **one** answer choice on each row. **Issue:** Student Factors	R	The stem wording was revised to remove the word "solving" as per ADC feedback that the stem did not match rows E and F in the previous phrasing. Additionally, "problems" was replaced with "activities". Sub-items "d", "e" and "f" were revised.
20. 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 8)	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 **Issue:** Resources for Learning and Instruction	NC	N/A

	Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot
a. Addition, subtraction, multiplication, and division	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
b. Finding areas of shapes and figures	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
d. Solving equations or simplifying expressions	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
f. Working with geometric figures like rectangles and squares	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

	Enjoy not at all	Enjoy a little bit	Enjoy somewhat	Enjoy quite a bit	Enjoy a lot
a. Adding, subtracting, multiplying, and dividing fractions	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
b. Finding areas of shapes and figures	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
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?)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
e. Constructing and building different types of graphs (for example, a bar graph or line graph)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
f. Moving geometric figures from one set of points to another (for example, rotating a rectangle 90 degrees)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

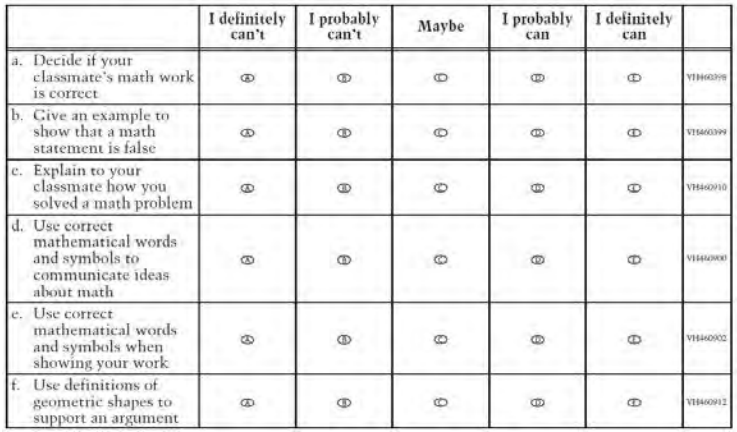
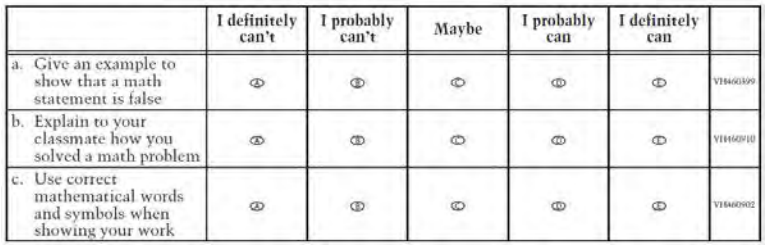
+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

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 participated in a math study group **outside of school**? Ⓐ Yes Ⓑ No **Issue:** Student factors	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, how many days have you participated in a math study group **outside of school**? Enter the number of days. ☐ **Issue:** Student factors	NC	N/A
N/A	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 b. Help from a tutor c. Help from a family member or friend d. Help from online resources (for example, websites or apps) **Issue:** Resources for Learning and Instruction	A	This item was added in place of VH336233. This item was pretested and kept in Reading, and 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. Not useful at all / Somewhat useful / Very useful / I don't receive that type of help. a. Help from a teacher b. Help from a tutor c. Help from a family member or friend d. Help from online resources (for example, websites or apps) **Issue:** Resources for Learning and Instruction	A	This item was added in place of VH336233. This item was pretested and kept in Reading, and to ensure consistency,

+ 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
			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.  (2017 Grade 8)	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.  **Issue:** Student factors	R	Previous sub-items “a”, “d”, and “f” were dropped.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
e. Use correct mathematical words and symbols when showing your work	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
f. Use definitions of geometric shapes to support an argument	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
b. Explain to your classmate how you solved a math problem	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
c. Use correct mathematical words and symbols when showing your work	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	

+ 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

VH268936

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

VH269037

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

☐

VH336085

3. Have you ever helped your friends with their math homework?

Ⓐ Yes

Ⓑ No

VH350115

4. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?

Ⓐ Never

Ⓑ Once

Ⓒ Two or three times

Ⓓ Four or five times

Ⓔ More than five times

VH460329

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

VH460925

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.

☐

VH810501

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: _____

VH810507

9. What math class do you expect to take next year?

Ⓐ Basic or general math

Ⓑ Introduction to algebra or pre-algebra

Ⓒ Algebra I

Ⓓ Geometry

Ⓔ Algebra II

Ⓕ Other math class. Please specify:_____

Ⓖ I don't know.

VH810512

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

VH810625

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH810635
b. Finding areas of shapes and figures	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853661
c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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?)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853665
e. Constructing and building different types of graphs (for example, a bar graph or line graph)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853674
f. Moving geometric figures from one set of points to another (for example, rotating a rectangle 90 degrees)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853671

VH853682

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	
a. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267682
b. Determine a 20% tip of a $55 restaurant dinner bill	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853690
c. List all of the different possible outcomes when a coin is flipped three times	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853692
d. Determine the likely number of red faces a cube has if the red face lands up 130 out of 400 times the cube is rolled. The 6 faces of the cube are painted red, yellow, or blue.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853683
e. Create an expression that represents the average number of miles you run in a week if you run 100 miles in w weeks	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853693
f. Calculate how many cats a pet store has if the ratio of cats to dogs is 5 to 4, and the total number of cats and dogs the store has is 27	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853685
g. Write an equation with a variable to solve a problem (for example, if pizza costs $2 per slice, then x number of slices can be bought for $16)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853713
h. Find the total sum of the interior angles of a pentagon with 5 equal sides	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853714

VH853724

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853725
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853726
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853728
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH853733
b. Help from a tutor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH853734
c. Help from a family member or friend	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH853736
d. Help from online resources (for example, websites or apps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853957
b. I want to master a lot of new math skills in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853961
c. I want to become a better math student this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853949
d. I want to understand as much as I can in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853952

VH854028

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854029
b. I look forward to my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854030
c. I am interested in the things I learn in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854034
d. I think making an effort in math is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854031
e. I think math will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854036
f. I think it is important to do well in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854033

VH854116

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854117
b. I want to show others that my math schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854118
c. I want to look smart in comparison to the other students in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854119
d. I want to get better math grades than most other students in my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH854134

VH882452

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268946
b. Write a computer program	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH858371
c. Play an instrument and read music	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268961
d. Go to websites for help with your math homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	
a. Basic calculator (for example, four function or scientific)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH853523
b. Graphing calculator	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH266810

VH882471

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267416
b. I used the Internet for my math work.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267417
c. My teacher used computers or other digital devices to go on websites or use apps when teaching math to my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH810476
d. My teacher required us to use computers or other digital devices to go on websites or use apps to complete math assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH810477

VH882480

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460399
b. Explain to your classmate how you solved a math problem	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460910
c. Use correct mathematical words and symbols when showing your work	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
(2018 Grade 12)	**Issue:** Student factors	R	Sub-item “p” was dropped since "Other" is not an option preferred to be included for student operational administration.

Previous item

VH240819

1. 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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240820
b. **Tech-prep** mathematics, **business** mathematics, **consumer** mathematics, or other **applied mathematics** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240844
c. **Introduction to algebra** or **pre-algebra** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240822
d. **Algebra I** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240823
e. **Geometry** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240824
f. **Algebra II** course, **with or without trigonometry**	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240825
g. **Trigonometry** (as a separate course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240826
h. **Pre-calculus** course (also called introductory analysis)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240833
i. **Integrated** mathematics 1 (first year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240841
j. **Integrated** mathematics 2 (second year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240842
k. **Integrated** mathematics 3 (third year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	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.	
l. **Integrated** mathematics 4 (fourth year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240821
m. **Probability or statistics** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240836
n. **Calculus** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240829
o. **Computer programming** course (such as C++, Visual Basic, etc.)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240835
p. **Other** mathematics course (specify): _____	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240834

2019 item

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.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240820
b. **Tech-prep** mathematics, **business** mathematics, **consumer** mathematics, or other **applied mathematics** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240844
c. **Introduction to algebra** or **pre-algebra** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240822
d. **Algebra I** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240823
e. **Geometry** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240824
f. **Algebra II** course, **with or without trigonometry**	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240825
g. **Trigonometry** (as a separate course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240826
h. **Pre-calculus** course (also called introductory analysis)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240833
i. **Integrated** mathematics 1 (first year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240841
j. **Integrated** mathematics 2 (second year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240842
k. **Integrated** mathematics 3 (third year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	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.	
l. **Integrated** mathematics 4 (fourth year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240821
m. **Probability or statistics** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240836
n. **Calculus** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240829
o. **Computer programming** course (such as C++, Visual Basic, etc.)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240835

2019 Operational Grade 12 Mathematics Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
VH250444 2. Are you currently enrolled in or have you taken any of the following Advanced Placement (AP®) courses? Select **all** that apply. Ⓐ Yes, I am enrolled in or have taken Advanced Placement (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. Ⓓ No, I have not taken any of the courses listed above. (2018 Grade 12)	VH250444 25. Are you currently enrolled in or have you taken any of the following Advanced Placement (AP®) courses? Select **all** that apply. Ⓐ Yes, I am enrolled in or have taken Advanced Placement (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. Ⓓ No, I have not taken any of the courses listed above. **Issue:** Organization of Instruction	NC	N/A
VH240048 3. Are you currently enrolled in or have you taken an International Baccalaureate® (IB) mathematics course? Ⓐ Yes Ⓑ No (2018 Grade 12)	VH240048 26. Are you currently enrolled in or have you taken an International Baccalaureate® (IB) mathematics course? Ⓐ Yes Ⓑ No **Issue:** Organization of Instruction	NC	N/A
VH240049 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)	VH240049 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	NC	N/A
VH240050 5. Was there a mathematics course that you would have liked to have taken this school year but did not take? Ⓐ Yes, but my school does not offer the course. Ⓑ Yes, but the course was full. Ⓒ Yes, but I did not have the necessary prerequisites. Ⓓ Yes, but my schedule was full. Ⓔ No, there was no other course that I wanted to take. (2018 Grade 12)	VH240050 28. Was there a mathematics course that you would have liked to have taken this school year but did not take? Ⓐ Yes, but my school does not offer the course. Ⓑ Yes, but the course was full. Ⓒ Yes, but I did not have the necessary prerequisites. Ⓓ Yes, but my schedule was full. Ⓔ No, there was no other course that I wanted to take. **Issue:** Organization of Instruction	NC	N/A

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
6. Please indicate how much you DISAGREE or AGREE with the following statements. Select one answer choice on each row. VH240763 Strongly disagree / Disagree / Agree / Strongly agree a. Math is one of my favorite subjects. VH240768 b. I take mathematics because it will help me in the future. VH240770 c. I take mathematics to meet my high school graduation requirements. VH240767 (2018 Grade 12)	N/A	D	This item was dropped in lieu of keeping item VH731852.
7. How much does each of the following statements describe a person like you? Select one answer choice on each row. VH267478 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. VH267479 b. I look forward to my math class. VH267481 c. I am interested in the things I learn in math. VH617324 d. I think making an effort in math is worthwhile. VH267485 e. I think math will help me even when I am not in school. VH267486 f. I think it is important to do well in math. VH267487 g. I take mathematics because it will help me in the future. VH651872 h. I take mathematics to meet my high school graduation requirements. VH651874 8. How much does each of the following statements describe you? Select one answer choice on each row. VH731852 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. VH731853 b. I look forward to my math class. VH731854 c. I am interested in the things I learn in math. VH731858 d. I think making an effort in math is worthwhile. VH731855 e. I think math will help me even when I am not in school. VH731860 f. I think it is important to do well in math. VH731857 g. I take mathematics because it will help me in the future. VH731859 h. I take mathematics to meet my high school graduation requirements. VH731856 (2018 Grade 12)	47. How much does each of the following statements describe you? Select one answer choice on each row. VH731852 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. VH731853 b. I look forward to my math class. VH731854 c. I am interested in the things I learn in math. VH731858 d. I think making an effort in math is worthwhile. VH731855 e. I think math will help me even when I am not in school. VH731860 f. I think it is important to do well in math. VH731857 g. I take mathematics because it will help me in the future. VH731859 h. I take mathematics to meet my high school graduation requirements. VH731856 **Issue:** Student factors	R	The version of the item that uses "describe you" in the stem was retained for operational.

2019 Operational Grade 12 Mathematics Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
VH240051 9. Are you currently taking a mathematics course? Ⓐ Yes Ⓑ No (2018 Grade 12)	VH240051 29. Are you currently taking a mathematics course? Ⓐ Yes Ⓑ No **Issue:** Organization of Instruction	NC	N/A
VH350115 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? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times (2018 Grade 12)	VH350115 30. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times **Issue:** Organization of Instruction	NC	N/A
VH350116 11. For school this year, how often do you work in pairs or small groups to talk about something that you have done in math? Ⓐ 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 (2018 Grade 12)	N/A	D	This item was dropped to keep in line with the ADC's recommendation for grades 4 and 8.
VH266754 12. 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 (2018 Grade 12)	N/A	D	This item was dropped to keep in line with NCES's review of technology-use items for grades 4 and 8.

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH336233 13. 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 (2018 Grade 12)	VH336233 42. 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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH266808 14. In your math class this year, how often have you used the following types of calculators? Select **one** answer choice on each row. (2018 Grade 12)	VH266808 31. In your math class this year, how often have you used the following types of calculators? Select **one** answer choice on each row. **Issue:** Resources for Learning and Instruction	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	
a. Basic calculator	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH266809
b. Graphing calculator	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH266810

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH589166 15. This school year, how often did the following things happen in your math class? Select one answer choice on each row. (2018 Grade 12)	VH589166 32. This school year, how often did the following things happen in your math class? Select one answer choice on each row. **Issue:** Resources for Learning and Instruction	NC	N/A
VH336036 16. In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to complete 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 (2018 Grade 12)	N/A	D	This item was dropped to keep in line with NCES's review of technology-use items for grades 4 and 8.
VH336037 17. 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 (2018 Grade 12)	VH336037 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 **Issue:** Resources for Learning and Instruction	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	
a. My teacher used computers or other digital devices to show us how to work through math problems.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267416
b. I used the Internet for my math work.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267417
c. My teacher used computers or other digital devices when teaching math to my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH588077
d. My teacher required us to use computers or other digital devices to complete math assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267419

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH617207 18. In this school year, how often have you used a computer or other digital device (excluding handheld calculators) to take an online practice test? Ⓐ Never Ⓑ Once Ⓒ Two or three times Ⓓ Four or five times Ⓔ More than five times (2018 Grade 12)	N/A	D	This item was dropped to keep in line with NCES's review of technology-use items for grades 4 and 8.
VH268936 19. 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 (2018 Grade 12)	VH268936 39. 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 **Issue:** Resources for Learning and Instruction	NC	N/A
VH589204 20. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row. a. Talk about math problems with your friends — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268946 b. Program computers — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268949 c. Play an instrument and read music — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268961 d. Go to websites for help with your math homework — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268962 (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) (2018 Grade 12)	VH589204 41. How often do you participate in each of the following activities **outside of school**? Select **one** answer choice on each row. a. Talk about math problems with your friends — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268946 b. Program computers — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268949 c. Play an instrument and read music — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268961 d. Go to websites for help with your math homework — Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ VH268962 (Never / About once or twice a year / About once or twice a month / About once or twice a week / Every day or almost every day) **Issue:** Resources for Learning and Instruction	NC	N/A
VH336085 21. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No (2018 Grade 12)	VH336085 43. Have you ever helped your friends with their math homework? Ⓐ Yes Ⓑ No **Issue:** Resources for Learning and Instruction	NC	N/A

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH269037 22. Over the past seven days, how many days have you helped your friends with their math homework? Enter the number of days. ☐ (2018 Grade 12)	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	N/A
VH589192 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. (2018 Grade 12)	VH613511 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. **Issue:** Student factors	R	A subset of items was selected from the previous two matrices to be included in the self-efficacy matrix for operational.

23.

	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.)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267674
b. Divide 42 stickers among 6 students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH617317
c. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267679
d. Describe the properties shared by every isosceles right triangle	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267681
e. Find the amount of carpet needed to cover a rectangular floor if you know its length and width	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267682
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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267683

VH613511

30. 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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460383
b. Create an expression to show how old you will be in n years if you are 8 years old today	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460386
c. Create an expression that shows the number of wheels on n wagons if each wagon has 4 wheels	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460389
d. Explain how you know the number of books you can buy if you know the price of each book and you have $35	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460391

36.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460383
b. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267679
c. Describe the properties shared by every isosceles right triangle	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267681

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
24. How much does each of the following statements describe a person like you? Select one answer choice on each row. Ⓐ Not at all like me Ⓑ A little bit like me Ⓒ Somewhat like me Ⓓ Quite a bit like me Ⓔ Exactly like me 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 year. f. I want to understand as much as I can in my math class. 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 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 year. f. I want to understand as much as I can in my math 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 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 get better grades than most other students in my math class. 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. b. I want to master a lot of new skills in my math class. c. I want to become better in math this year. d. I want to understand as much as I can in my math class.	R	The version of the item that uses "describe you" in the stem was retained for operational. The single matrix was separated into two matrices of achievement goals items (performance and mastery). In order to create indices for both performance and mastery goals based on a total of at least 4 items, VH844882 and VH845114 were added from the 2016 pilot assessment.
(2018 Grade 12)	**Issue:** Student factors		

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
26. How much do you enjoy solving each of the following types of math problems? 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 b. Finding areas of shapes and figures c. Solving for probabilities and events (for example, card, coin, marble, and spinner problems) d. Solving equations or simplifying expressions e. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots) f. Working with geometric figures like rectangles and squares (2018 Grade 12)	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 b. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots) c. Working with geometric figures like rectangles and squares **Issue:** Solving equations	R	Previous sub-items "a" – "c" were dropped.
27. 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 (2018 Grade 12)	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 **Issue:** Resources for Learning and Instruction	NC	N/A
28. How often do you use a computer, tablet, smartphone, or gaming console **outside of school** to play **educational 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 (2018 Grade 12)	N/A	D	This item was dropped to keep in line with NCES's review of technology-use items for grades 4 and 8.

2019 Operational Grade 12 Mathematics Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
VH460341 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 (2018 Grade 12)	N/A	D	This item was dropped to keep in line with NCES's review of technology-use items for grades 4 and 8.

2019 Operational Grade 12 Mathematics Student

Previous item	2019 item	D/A/ R/NC+	Rationale
31. Thinking about math, do you think that you would be able to do each of the following? Select one answer choice on each row. (2018 Grade 12)	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. **Issue:** Student factors	R	Previous sub-item “d” was dropped.
32. Have you ever participated in a math study group outside of school? Ⓐ Yes Ⓑ No (2018 Grade 12)	45. Have you ever participated in a math study group outside of school? Ⓐ Yes Ⓑ No **Issue:** Student factors	NC	N/A
33. Over the past seven days, how many days have you participated in a math study group outside of school? Enter the number of days. ☐ (2018 Grade 12)	46. Over the past seven days, how many days have you participated in a math study group outside of school? Enter the number of days. ☐ **Issue:** Student factors	NC	N/A
34. Have you ever participated in a math study group at school? Ⓐ Yes Ⓑ No (2018 Grade 12)	N/A	D	This item was dropped based on the ADC's recommendation for grades 4 and 8.
35. Over the past seven days, how many days have you participated in a math study group at school? Enter the number of days. ☐	N/A	D	This item was dropped based on the ADC's

2019 Operational Grade 12 Mathematics Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
(2018 Grade 12)			recommendation for grades 4 and 8.

Appendix K-1al: Operational Grade 12 Mathematics

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.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240820
b. **Tech-prep** mathematics, **business** mathematics, **consumer** mathematics, or other **applied mathematics** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240844
c. **Introduction to algebra** or **pre-algebra** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240822
d. **Algebra I** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240823
e. **Geometry** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240824
f. **Algebra II** course, **with or without trigonometry**	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240825
g. **Trigonometry** (as a separate course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240826
h. **Pre-calculus** course (also called introductory analysis)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240833
i. **Integrated** mathematics 1 (first year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240841
j. **Integrated** mathematics 2 (second year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240842
k. **Integrated** mathematics 3 (third year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	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.	
l. **Integrated** mathematics 4 (fourth year of a multi-year course)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240821
m. **Probability or statistics** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240836
n. **Calculus** course	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240829
o. **Computer programming** course (such as C++, Visual Basic, etc.)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH240835

VH250444

25. Are you currently enrolled in or have you taken any of the following Advanced Placement (AP®) courses? Select **all** that apply.

Ⓐ Yes, I am enrolled in or have taken Advanced Placement (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.

Ⓓ No, I have not taken any of the courses listed above.

VH240048

26. Are you currently enrolled in or have you taken an International Baccalaureate® (IB) mathematics course?

Ⓐ Yes

Ⓑ No

VH240049

27. Are you currently enrolled in or have you taken any **online** mathematics courses for **high school or college credit**?

Ⓐ Yes

Ⓑ No

VH240050

28. Was there a mathematics course that you would have liked to have taken this school year but did not take?

Ⓐ Yes, but my school does not offer the course.

Ⓑ Yes, but the course was full.

Ⓒ Yes, but I did not have the necessary prerequisites.

Ⓓ Yes, but my schedule was full.

Ⓔ No, there was no other course that I wanted to take.

VH240051

29. Are you currently taking a mathematics course?

Ⓐ Yes

Ⓑ No

VH350115

30. For school this year, how often have you been asked to write long answers (several sentences or paragraphs) to questions on tests or assignments that involved math?

Ⓐ Never

Ⓑ Once

Ⓒ Two or three times

Ⓓ Four or five times

Ⓔ More than five times

VH266808

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH266809
b. Graphing calculator	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267416
b. I used the Internet for my math work.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267417
c. My teacher used computers or other digital devices when teaching math to my class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH588077
d. My teacher required us to use computers or other digital devices to complete math assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267419

VH336037

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

VH844870

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844871
b. I want to show others that my math schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844872
c. I want to look smart in comparison to the other students in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844873
d. I want to get better grades than most other students in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH844882

VH845110

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845117
b. I want to master a lot of new skills in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845114
c. I want to become better in math this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845115
d. I want to understand as much as I can in my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH845118

VH613511

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460383
b. Determine a 20 percent tip of a 67-dollar restaurant dinner bill	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267679
c. Describe the properties shared by every isosceles right triangle	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH267681

VH613523

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460398
b. Give an example to show that a math statement is false	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460399
c. Explain to your classmate how you solved a math problem	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460910
d. Use correct mathematical words and symbols when showing your work	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH460902
e. Use definitions of geometric shapes to support an argument	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH860653
b. Constructing and building different types of graphs (for example, bar graph, line graph, or box and whisker plots)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH860651
c. Working with geometric figures like rectangles and squares	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH860652

VH268936

39. 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

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268946
b. Program computers	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268949
c. Play an instrument and read music	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268961
d. Go to websites for help with your math homework	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH268962

VH336233

42. 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

VH336085

43. Have you ever helped your friends with their math homework?

Ⓐ Yes

Ⓑ No

VH269037

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

☐

VH460923

45. Have you ever participated in a math study group **outside of school**?

Ⓐ Yes

Ⓑ No

VH460925

46. Over the past seven days, how many days have you participated in a math study group **outside of school**? Enter the number of days.

☐

VH731852

47. 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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731853
b. I look forward to my math class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731854
c. I am interested in the things I learn in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731858
d. I think making an effort in math is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731855
e. I think math will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731860
f. I think it is important to do well in math.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731857
g. I take mathematics because it will help me in the future.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH731859
h. I take mathematics to meet my high school graduation requirements.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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
1. 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 (2018 Grade 4)	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 **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)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Very often (2018 Grade 4)	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 **Issue:** Organization of Instruction	NC	N/A
3. In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Very often (2018 Grade 4)	19. In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Very often **Issue:** Organization of Instruction	NC	N/A
4. In your science class this year, how often have you learned about rocks or minerals (for example, diamond, iron, or lava rock)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Very often (2018 Grade 4)	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 Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Very often **Issue:** Organization of Instruction	NC	N/A

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

2019 Operational Grade 4 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH039043 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)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always (2018 Grade 4)	VH039043 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)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always **Issue:** Organization of Instruction	NC	N/A
VH039047 6. In your science class this year, how often have you read from a science textbook (print or digital)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always (2018 Grade 4)	VH039047 22. In your science class this year, how often have you read from a science textbook (print or digital)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always **Issue:** Organization of Instruction	NC	N/A
VH039055 7. In your science class this year, how often have you learned about science topics on the Internet? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always (2018 Grade 4)	VH039055 23. In your science class this year, how often have you learned about science topics on the Internet? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always **Issue:** Organization of Instruction	NC	N/A
VH039057 8. In your science class this year, how often have you watched a short video clip, movie, or video about science topics? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always (2018 Grade 4)	VH039057 24. In your science class this year, how often have you watched a short video clip, movie, or video about science topics? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Always or almost always **Issue:** Organization of Instruction	NC	N/A

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

2019 Operational Grade 4 Science Student

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 (2018 Grade 4)	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 **Issue:** Organization of Instruction	NC	N/A
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)	N/A	D	Due to overlap with new content and to keep student burden low, this item was dropped.
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 Ⓔ 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 dropped.
12. In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ 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 dropped.

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

2019 Operational Grade 4 Science Student

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. (2018 Grade 4)	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. **Issue:** Student Factors	R	Due to a lack of response variability and to keep student burden low, sub-item g was dropped.

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Describe different ways to heat or cool water	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638866
b. Describe how the length of a vibrating string affects the sound it makes	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638870
c. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638872
d. Use examples to show how one living thing has helped another to survive	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638875
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638876
f. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638883
g. Describe why the weather in the summer is different than in the winter	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638885

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Describe different ways to heat or cool water	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638866
b. Describe how the length of a vibrating string affects the sound it makes	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638870
c. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638872
d. Use examples to show how one living thing has helped another to survive	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638875
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638876
f. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638883

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

2019 Operational Grade 4 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
14. How much does each of the following statements describe you? Select **one** answer choice on each row. (2018 Grade 4)	28. How much does each of the following statements describe you? Select **one** answer choice on each row. 29. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	R	This item was divided into two items to reduce scrolling and align presentation with similar items in other subjects. Additionally, the wording of sub-items d and h (now sub-item d in the second matrix) have been revised, with the word "science" moved to before the word "class".

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

2019 Operational Grade 4 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
15. In this school year, how often have you done each of the following activities **outside of school**? Select **one** answer choice on each row. (2018 Grade 4)	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. **Issue:** Student Factors	R	Due to a lack of response variability and to keep student burden low, sub-item b was dropped. Additionally, the verbs at the beginning of the original sub-items a and c have been changed to past tense for consistency with the item stem.
16. How much does each of the following statements describe you? Select **one** answer choice on each row. (2018 Grade 4)	31. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	NC	N/A

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

2019 Operational Grade 4 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
17. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row. (2018 Grade 4)	26. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row. **Issue:** Organization of Instruction	NC	N/A
18. 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 (2018 Grade 4)	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 **Issue:** Student Factors	NC	N/A

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
b. Used a science experiment to answer a question	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
c. Put information you collected into a table or graph	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
d. Used evidence to explain why something happens	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
e. Found news articles about science on the Internet	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ

+ 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

VH639012

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. In your science class this year, how often have you learned about chemicals (for example, vinegar, baking soda, or hydrogen peroxide)?

Ⓐ Never or hardly ever

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Very often

VH639037

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

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Very often

VH639043

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)?

Ⓐ Never or hardly ever

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Always or almost always

VH639047

22. In your science class this year, how often have you read from a science textbook (print or digital)?

Ⓐ Never or hardly ever

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Always or almost always

VH639055

23. In your science class this year, how often have you learned about science topics on the Internet?

Ⓐ Never or hardly ever

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Always or almost always

VH639057

24. In your science class this year, how often have you watched a short video clip, movie, or video about science topics?

Ⓐ Never or hardly ever

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Always or almost always

VH639060

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639156
b. Used a science experiment to answer a question	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639162
c. Put information you collected into a table or graph	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639164
d. Used evidence to explain why something happens	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639166
e. Found news articles about science on the Internet	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639169

VH638866

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638868
b. Describe how the length of a vibrating string affects the sound it makes	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638870
c. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638872
d. Use examples to show how one living thing has helped another to survive	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638875
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638876
f. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638883

VH639079

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 other students to think I am good at science.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639080
b. I want to show others that science schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639082
c. I want to look smart in comparison to the other students in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639084
d. I want to get better grades than most other students in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH860366

VH859155

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

	Not at all like me	A little bit like me	Somewhat like me	Quite a bit like me	Exactly like me	
a. I want to learn as much as possible in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639086
b. I want to become better in science this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639087
c. I want to understand as much as I can in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639089
d. I want to master a lot of new skills in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH859162
b. Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH891927
c. Read about science topics in books or magazines (print or digital)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638987
d. Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH893268

VH639115

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 enjoy science activities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639117
b. I look forward to my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639120
c. I am interested in the things I learn in science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639122
d. I think making an effort in science class is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639125
e. I think science will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639127
f. I think it is important to do well on science assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639128

VH743438

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

Ⓐ Never or hardly ever

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Very often

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

2019 Operational Grade 8 Science Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
1. 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 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? Ⓐ Never or hardly ever Ⓑ 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)? Ⓐ Never or hardly ever Ⓑ 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).

2019 Operational Grade 8 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
4. 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. (2018 Grade 8)	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. **Issue:** Organization of Instruction	NC	N/A
5. In your science class this year, how often have you done each of the following activities? Select **one** answer choice on each row. (2018 Grade 8)	23. In your science class this year, how often have you done each of the following activities? Select **one** answer choice on each row. **Issue:** Organization of Instruction	R	To simplify wording based on stakeholder feedback, sub-item e was revised.

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

2019 Operational Grade 8 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
6. 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. (2018 Grade 8)	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. **Issue:** Student Factors	R	Due to a lack of response variability and to keep student burden low, sub-items a, d, and g were dropped.

Previous item

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Describe different ways to heat or cool water	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
b. Describe how the length of a vibrating string affects the sound it makes	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
c. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
d. Use examples to show how one living thing has helped another to survive	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
f. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
g. Describe why the weather in the summer is different than in the winter	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	

2019 item

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
b. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
c. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	
d. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	

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

2019 Operational Grade 8 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
7. How much does each of the following statements describe you? Select **one** answer choice on each row. (2018 Grade 8)	25. How much does each of the following statements describe you? Select **one** answer choice on each row. 26. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	R	This item was divided into two items to reduce scrolling and align presentation with similar items in other subjects. Additionally, the wording of sub-items d and h (now sub-item d in the second matrix) have been revised, with the word "science" moved to before the word "class".

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

2019 Operational Grade 8 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
8. In this school year, how often have you done each of the following activities **outside of school**? Select **one** answer choice on each row. (2018 Grade 8)	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. **Issue:** Student Factors	R	Due to a lack of response variability and to keep student burden low, sub-item b was dropped. Additionally, the verbs at the beginning of the original sub-items a and c have been changed to past tense for consistency with the item stem.
9. How much does each of the following statements describe you? Select **one** answer choice on each row. (2018 Grade 8)	28. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	NC	N/A

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

2019 Operational Grade 8 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
10. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row. VH639733 (2018 Grade 8)	29. In this school year, how often have you done the following activities in your science class? Select **one** answer choice on each row. VH639733 **Issue:** Organization of Instruction	NC	N/A
11. 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 VH743438 (2018 Grade 8)	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 VH743438 **Issue:** Student Factors	N/C	N/A

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

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

+ 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

VH639071

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)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639072
b. Electricity (for example, circuits, batteries, or light bulbs)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639074
c. Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639073
d. Rocks or minerals (for example, diamond, iron, or lava rock)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639077
e. Technology and engineering (for example, robots, pulley systems, or ramps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639076

VH639311

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

VH882513

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 vibrating string affects the sound it makes	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638870
b. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638872
c. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638876
d. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638883

VH639079

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 other students to think I am good at science.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639080
b. I want to show others that science schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639082
c. I want to look smart in comparison to the other students in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639084
d. I want to get better grades than most other students in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH860366

VH859155

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. I want to learn as much as possible in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639086
b. I want to become better in science this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639087
c. I want to understand as much as I can in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639089
d. I want to master a lot of new skills in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH859162
b. Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH891927
c. Read about science topics in books or magazines (print or digital)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638987
d. Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH893268

VH639115

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

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

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.

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639744
b. Made drawings that explain why or how something happens	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639749
c. Came up with experiments that you could use to answer a research question	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639753
d. Used tables or graphs to identify relationships between variables	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639760
e. Used math equations to explain or support scientific conclusions	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639763
f. Used evidence from experiments to explain why something happens	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639765
g. Used information to disagree with someone about a scientific idea	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639770
h. Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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 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? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ 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.
2. In this school year, how often have you done well on your science tests? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ 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.
3. In this school year, how often have you done well on your science assignments (for example, projects, homework, or worksheets)? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ 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).

2019 Operational Grade 12 Science Student

Previous item	2019 item	D/A/ R/NC+	Rationale
4. 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. (2018 Grade 12)	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. **Issue:** Organization of Instruction	NC	N/A
5. In your science class this year, how often have you done each of the following activities? Select **one** answer choice on each row. (2018 Grade 12)	29. In your science class this year, how often have you done each of the following activities? Select **one** answer choice on each row. **Issue:** Organization of Instruction	R	To simplify wording based on stakeholder feedback, sub-item e was revised.

+ 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
6. 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. a. General science b. First-year biology 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 physics i. Physical science (other than chemistry or physics) j. Earth and space science k. Engineering and technology l. Other science course (Please specify): _____ 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. (2018 Grade 12)	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. a. General science b. First-year biology 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 physics i. Physical science (other than chemistry or physics) j. Earth and space science k. Engineering and technology 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. **Issue:** Organization of Instruction	R	The "Other (Please specify)" response option was removed. This response option is only used in pilot administrations.
7. Are you currently enrolled in or have you taken any online science courses for high school or college credit? Yes No (2018 Grade 12)	25. Are you currently enrolled in or have you taken any online science courses for high school or college credit? Yes No **Issue:** Organization of Instruction	NC	N/A

+ 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
VH240377 8. Are you currently enrolled in or have you taken an Advanced Placement® course in science? Select **all** that apply. Ⓐ 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 Chemistry. Ⓓ Yes, I am enrolled in or have taken Advanced Placement Physics C. Ⓔ Yes, I am enrolled in or have taken Advanced Placement Physics 1. Ⓕ Yes, I am enrolled in or have taken Advanced Placement Physics 2. Ⓖ Yes, I am enrolled in or have taken Advanced Placement Computer Science A. Ⓗ Yes, I am enrolled in or have taken Advanced Placement Computer Science Principles. Ⓘ No, I have never taken an Advanced Placement science course. (2018 Grade 12)	VH240377 26. Are you currently enrolled in or have you taken an Advanced Placement® course in science? Select **all** that apply. Ⓐ 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 Chemistry. Ⓓ Yes, I am enrolled in or have taken Advanced Placement Physics C. Ⓔ Yes, I am enrolled in or have taken Advanced Placement Physics 1. Ⓕ Yes, I am enrolled in or have taken Advanced Placement Physics 2. Ⓖ Yes, I am enrolled in or have taken Advanced Placement Computer Science A. Ⓗ Yes, I am enrolled in or have taken Advanced Placement Computer Science Principles. Ⓘ No, I have never taken an Advanced Placement science course. **Issue:** Organization of Instruction	NC	N/A
VH240112 9. Are you currently taking a science course? Ⓐ Yes Ⓑ No (2018 Grade 12)	VH240112 27. Are you currently taking a science course? Ⓐ Yes Ⓑ No **Issue:** Organization of Instruction	NC	N/A

+ 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
10. 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. VH651609 (2018 Grade 12)	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. **Issue:** Student Factors	R	Due to a lack of response variability and to keep student burden low, sub-items a, d, e, f, and g were dropped.

Previous item

	I definitely can't	I probably can't	Maybe	I probably can	I definitely can	
a. Describe different ways to heat or cool water	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638868
b. Describe how the length of a vibrating string affects the sound it makes	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638870
c. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638872
d. Use examples to show how one living thing has helped another to survive	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638875
e. Describe what would happen to the number of frogs at a pond if all the insects were removed from the pond	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638876
f. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638883
g. Describe why the weather in the summer is different than in the winter	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638885
h. Design an experiment to test how the growth of a plant is affected by light, water, and soil quality	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638877
i. Create a diagram that shows how bees and plants need each other for survival	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638878
j. Describe how the combination of parental genes can result in different traits in their offspring (for example, eye or hair color)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638879

2019 item

	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638870
b. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638872
c. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638883
d. Design an experiment to test how the growth of a plant is affected by light, water, and soil quality	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638877
e. Create a diagram that shows how bees and plants need each other for survival	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638878
f. Describe how the combination of parental genes can result in different traits in their offspring (for example, eye or hair color)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638879

+ 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
11. How much does each of the following statements describe you? Select **one** answer choice on each row. (2018 Grade 12)	31. How much does each of the following statements describe you? Select **one** answer choice on each row. 32. How much does each of the following statements describe you? Select **one** answer choice on each row. **Issue:** Student Factors	R	This item was divided into two items to reduce scrolling and align presentation with similar items in other subjects. Additionally, the wording of sub-items d and h (now sub-item d in the second matrix) have been revised, with the word "science" moved to before the word "class".

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	Exactly like me	
a. I want other students to think I am good at science.	①	②	③	④	⑤	
b. I want to show others that science schoolwork is easy for me.	①	②	③	④	⑤	
c. I want to look smart in comparison to the other students in my science class.	①	②	③	④	⑤	
d. I want to get better science grades than most other students in my class.	①	②	③	④	⑤	
e. I want to learn as much as possible in my science class.	①	②	③	④	⑤	
f. I want to become better in science this year.	①	②	③	④	⑤	
g. I want to understand as much as I can in my science class.	①	②	③	④	⑤	
h. I want to master a lot of new science skills in my class.	①	②	③	④	⑤	

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.	①	②	③	④	⑤	
b. I want to show others that science schoolwork is easy for me.	①	②	③	④	⑤	
c. I want to look smart in comparison to the other students in my science class.	①	②	③	④	⑤	
d. I want to get better grades than most other students in my science class.	①	②	③	④	⑤	

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.	①	②	③	④	⑤	
b. I want to become better in science this year.	①	②	③	④	⑤	
c. I want to understand as much as I can in my science class.	①	②	③	④	⑤	
d. I want to master a lot of new skills in my science class.	①	②	③	④	⑤	

+ 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

<table>
<tr><th>Previous item</th><th>2019 item</th><th>D/A/ R/NC+</th><th>Rationale</th></tr>
<tr>
<td>12. In this school year, how often have you done each of the following activities outside of school? Select one answer choice on each row.
<table>
<tr><th></th><th>Never</th><th>About once or twice a year</th><th>About once or twice a month</th><th>About once or twice a week</th><th>Every day or almost every day</th><th></th></tr>
<tr><td>a. Work on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>b. Write or blog about science topics</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>c. Use scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>d. Read about science topics in books or magazines (print or digital)</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>e. Attend clubs or programs that include science or engineering activities (for example, chemistry club, robotics club, or coding programs)</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
</table>
(2018 Grade 12)</td>
<td>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.
<table>
<tr><th></th><th>Never</th><th>About once or twice a year</th><th>About once or twice a month</th><th>About once or twice a week</th><th>Every day or almost every day</th><th></th></tr>
<tr><td>a. Worked on science-related projects (for example, making a volcano, growing plants from seeds, or building simple rockets)</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>b. Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>c. Read about science topics in books or magazines (print or digital)</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
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</table>
Issue: Student Factors</td>
<td>R</td>
<td>Due to a lack of response variability and to keep student burden low, sub-item b was dropped. Additionally, the verbs at the beginning of the original sub-items a and c have been changed to past tense for consistency with the item stem.</td>
</tr>
<tr>
<td>13. How much does each of the following statements describe you? Select one answer choice on each row.
<table>
<tr><th></th><th>Not at all like me</th><th>A little bit like me</th><th>Somewhat like me</th><th>Quite a bit like me</th><th>Exactly like me</th><th></th></tr>
<tr><td>a. I enjoy science activities.</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>b. I look forward to my science class.</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>c. I am interested in the things I learn in science class.</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>d. I think making an effort in science class is worthwhile.</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>e. I think science will help me even when I am not in school.</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
<tr><td>f. I think it is important to do well on science assignments.</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td></td></tr>
</table>
(2018 Grade 12)</td>
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</table>
Issue: Student Factors</td>
<td>NC</td>
<td>N/A</td>
</tr>
</table>

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2019 Operational Grade 12 Science Student

<table>
<tr><th>Previous item</th><th>2019 item</th><th>D/A/ R/NC+</th><th>Rationale</th></tr>
<tr>
<td>14. In this school year, how often have you done the following activities in your science class? Select one answer choice on each row.
VH639733
<table>
<tr><th></th><th>Never or hardly ever</th><th>Once in a while</th><th>Sometimes</th><th>Often</th><th>Always or almost always</th><th></th></tr>
<tr><td>a. Came up with research questions to explore how something works</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639744</td></tr>
<tr><td>b. Made drawings that explain why or how something happens</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639749</td></tr>
<tr><td>c. Came up with experiments that you could use to answer a research question</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639753</td></tr>
<tr><td>d. Used tables or graphs to identify relationships between variables</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639760</td></tr>
<tr><td>e. Used math equations to explain or support scientific conclusions</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639763</td></tr>
<tr><td>f. Used evidence from experiments to explain why something happens</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639765</td></tr>
<tr><td>g. Used information to disagree with someone about a scientific idea</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639770</td></tr>
<tr><td>h. Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639777</td></tr>
</table>
(2018 Grade 12)</td>
<td>30. In this school year, how often have you done the following activities in your science class? Select one answer choice on each row.
VH639733
<table>
<tr><th></th><th>Never or hardly ever</th><th>Once in a while</th><th>Sometimes</th><th>Often</th><th>Always or almost always</th><th></th></tr>
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<tr><td>g. Used information to disagree with someone about a scientific idea</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639770</td></tr>
<tr><td>h. Combined information about science from multiple sources (for example, books, websites, or articles) for an assignment</td><td>Ⓐ</td><td>Ⓑ</td><td>Ⓒ</td><td>Ⓓ</td><td>Ⓔ</td><td>VH639777</td></tr>
</table>
Issue: Organization of Instruction</td>
<td>NC</td>
<td>N/A</td>
</tr>
<tr>
<td>15. How likely are you to pursue a career in science?
Ⓐ Not at all likely
Ⓑ Not likely
Ⓒ Somewhat likely
Ⓓ Quite likely
Ⓔ Extremely likely
(2018 Grade 12)</td>
<td>37. How likely are you to pursue a career in science?
Ⓐ Not at all likely
Ⓑ Not likely
Ⓒ Somewhat likely
Ⓓ Quite likely
Ⓔ Extremely likely
Issue: Student Factors</td>
<td>N/C</td>
<td>N/A</td>
</tr>
</table>

+ 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
16. 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. Attended a career fair b. Answered questions on a career interest survey (for example, the Vocational-Interest Inventory, the Career Interest Test, or the Strong Interest Inventory®) c. Taken a science course in addition to what you need to graduate d. Collected information about science-related careers on your own e. Collected information about science-related college programs on your own f. Spoken with a guidance counselor or teacher about science-related careers g. Spoken with a guidance counselor or teacher about science-related college programs h. Spoken with a family member or family friend who works in a scientific field about his or her job i. Shadowed a person who does science-related work at his or her job j. Worked as an intern or employee doing science-related work k. Other (Please specify): _____ (2018 Grade 12)	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 b. Spoken with a guidance counselor or teacher about science-related college programs c. Shadowed a person who does science-related work at his or her job d. Worked as an intern or employee doing science-related work **Issue:** Student Factors	R	To keep student burden low, sub-items a, b, c, d, e, h, and k were dropped.
17. 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 (2018 Grade 12)	36. How often do you talk about things you have learned in science class with someone in your family? Ⓐ Never or hardly ever Ⓑ Once in a while Ⓒ Sometimes Ⓓ Often Ⓔ Very often **Issue:** Student Factors	NC	N/A

+ 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

VH241146

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241150
b. First-year biology	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241151
c. Second-year biology	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241159
d. Life science (other than biology)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241148
e. First-year chemistry	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241154
f. Second-year chemistry	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241155
g. First-year physics	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241156
h. Second-year physics	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241157
i. Physical science (other than chemistry or physics)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241149
j. Earth and space science	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241147
k. Engineering and technology	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	VH241158

VH240111

25. Are you currently enrolled in or have you taken any online science courses for high school or college credit?

Ⓐ Yes

Ⓑ No

VH240377

26. Are you currently enrolled in or have you taken an Advanced Placement® course in science? Select **all** that apply.

Ⓐ 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 Chemistry.

Ⓓ Yes, I am enrolled in or have taken Advanced Placement Physics C.

Ⓔ Yes, I am enrolled in or have taken Advanced Placement Physics 1.

Ⓕ Yes, I am enrolled in or have taken Advanced Placement Physics 2.

Ⓖ Yes, I am enrolled in or have taken Advanced Placement Computer Science A.

Ⓗ Yes, I am enrolled in or have taken Advanced Placement Computer Science Principles.

Ⓘ No, I have never taken an Advanced Placement science course.

VH240112

27. Are you currently taking a science course?

Ⓐ Yes

Ⓑ No

VH639071

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)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639072
b. Electricity (for example, circuits, batteries, or light bulbs)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639074
c. Chemicals (for example, vinegar, baking soda, or hydrogen peroxide)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639073
d. Rocks or minerals (for example, diamond, iron, or lava rock)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639077
e. Technology and engineering (for example, robots, pulley systems, or ramps)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639076

VH639311

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

VH639733

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

VH639079

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639080
b. I want to show others that science schoolwork is easy for me.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639082
c. I want to look smart in comparison to the other students in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639084
d. I want to get better grades than most other students in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH860366

VH859155

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639086
b. I want to become better in science this year.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639087
c. I want to understand as much as I can in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639089
d. I want to master a lot of new skills in my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH860369

VH639115

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	
a. I enjoy science activities.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639117
b. I look forward to my science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639120
c. I am interested in the things I learn in science class.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639122
d. I think making an effort in science class is worthwhile.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639125
e. I think science will help me even when I am not in school.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639127
f. I think it is important to do well on science assignments.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH639128

VH638951

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)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH859162
b. Used scientific tools (for example, microscopes, thermometers, beakers, or weighing scales)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH891927
c. Read about science topics in books or magazines (print or digital)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638987
d. Attended clubs or programs that include science or engineering activities (for example chemistry club, robotics club, or coding programs)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH893268

VH651609

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638870
b. Design an experiment to show how sunlight affects the growth of a plant	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638872
c. Decide which tool to use if you want to measure wind speed	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638883
d. Design an experiment to test how the growth of a plant is affected by light, water, and soil quality	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638877
e. Create a diagram that shows how bees and plants need each other for survival	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638878
f. Describe how the combination of parental genes can result in different traits in their offspring (for example, eye or hair color)	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH638879

VH743438

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

Ⓐ Never or hardly ever

Ⓑ Once in a while

Ⓒ Sometimes

Ⓓ Often

Ⓔ Very often

VH639871

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	Ⓐ	Ⓑ	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	Ⓐ	Ⓑ	VH640773

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

2019 Operational Grade 4 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VC759180 1. How much do you know about your American Indian tribe or Alaska Native group? For example, you may know about the history, traditions, or arts and crafts of your tribe or group. Ⓐ Nothing Ⓑ A little Ⓒ Some Ⓓ A lot (2015 Grade 4)	VH240128 1. How much do you know about your American Indian tribe or Alaska Native group? For example, you may know about the history, traditions, or arts and crafts of your tribe or group. Ⓐ Nothing Ⓑ A little Ⓒ Some Ⓓ A lot	NC	N/A
VH039733 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 Ⓕ Some else (please specify): _____ (2015 Grade 4)	VH240129 2. Who taught you **most** of what you know about American Indian or Alaska Native history? Ⓐ No one has taught me about American Indian or Alaska Native history. Ⓑ Family members Ⓒ Friends Ⓓ Teachers Ⓔ Tribal representatives or elders Ⓕ Someone else (please specify):_____	NC	N/A
VH039760 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 Ⓕ Some else (please specify): _____ (2015 Grade 4)	VH240130 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):_____	NC	N/A

2019 Operational Grade 4 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH040030 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 Ⓕ Some else (please specify): _____ (2015 Grade 4)	VH240131 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	N/A
VC759183 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)	VH240132 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	NC	N/A
VC759193 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 (2015 Grade 4)	VH240133 6. How often do members of your family talk to each other in your American Indian or Alaska Native language? Ⓐ Never or hardly ever Ⓑ Once or twice a month Ⓒ Once or twice a week Ⓓ 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
VC759195 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)	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	NC	N/A
VH153907 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 (2015 Grade 4)	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 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
VH040050 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. (2015 Grade 4)	VH240136 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
VH040067 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.	VH240137 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

2019 Operational Grade 4 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
(2015 Grade 4)			
VH040082 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 Ⓓ Teachers Ⓔ Tribal representatives or elders Ⓕ Some else (please specify): _____ (2015 Grade 4)	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 Ⓓ Teachers Ⓔ Tribal representatives or elders Ⓕ Someone else (please specify):_____	NC	N/A
VH158483 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 (2015 Grade 4)	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? Ⓐ Yes Ⓑ No	NC	N/A
VH153935 13. During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **in school**? Ⓐ Yes, once or twice Ⓑ Yes, three or more times Ⓒ No (2015 Grade 4)	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**? Ⓐ 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
VH153940 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 (2015 Grade 4)	VH240141 **14.** During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **outside of school**? Ⓐ Yes, once or twice Ⓑ Yes, three or more times Ⓒ No	NC	N/A
VH153945 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 (2015 Grade 4)	VH240142 **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
VH040212 16. When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me. (2015 Grade 4)	VH240143 **16.** When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me.	NC	N/A
VC759280 17. I enjoy reading about American Indian or Alaska Native people. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me. (2015 Grade 4)	VH240144 **17.** I enjoy reading about American Indian or Alaska Native people. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me.	NC	N/A

2019 Operational Grade 4 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VC759283 18. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me. (2015 Grade 4)	VH240145 **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.	NC	N/A
VH040240 19. I put a lot of effort into my schoolwork. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me. (2015 Grade 4)	VH240146 **19.** I put a lot of effort into my schoolwork. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me.	NC	N/A
VH040276 20. I want to be one of the best students in my class. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me. (2015 Grade 4)	VH240147 **20.** I want to be one of the best students in my class. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me.	NC	N/A
VH040379 21. I enjoy being challenged in my classes. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me. (2015 Grade 4)	VH240148 **21.** I enjoy being challenged in my classes. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me.	NC	N/A
VH040382 22. I feel that I belong at school. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me.	VH240149 **22.** I feel that I belong at school. Ⓐ This is not like me. Ⓑ This is a little like me. Ⓒ This is a lot like me.	NC	N/A

2019 Operational Grade 4 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
(2015 Grade 4)			
VH040391 23. If I put in enough effort, I will succeed in school. Ⓐ Strongly disagree Ⓑ Disagree Ⓒ Agree Ⓓ Strongly agree (2015 Grade 8)	VH240150 **23.** If I put in enough effort, I will succeed in school. Ⓐ Strongly disagree Ⓑ Disagree Ⓒ Agree Ⓓ Strongly agree	NC	N/A
VH040394 24. Trying hard in school will help me live a good life when I grow up. Ⓐ Strongly disagree Ⓑ Disagree Ⓒ Agree Ⓓ Strongly agree (2015 Grade 4)	VH240151 **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
VC759288 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 (2015 Grade 4)	VH240152 **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

2019 Operational Grade 4 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VC759289 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 (2015 Grade 4)	VH240153 **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
VC759290 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 (2015 Grade 4)	VH240154 **27.** How often does **another student from your school** help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you. Ⓐ Never or hardly ever Ⓑ Once or twice a month Ⓒ Once or twice a week Ⓓ Every day or almost every day	NC	N/A
VH040389 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)	VH240155 **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
VC759293 29. How much do you like school? Ⓐ Not at all Ⓑ A little Ⓒ Somewhat Ⓓ Very much (2015 Grade 4)	VID40156 **29.** How much do you like school? Ⓐ Not at all Ⓑ A little Ⓒ Somewhat Ⓓ Very much	NC	N/A
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 Ⓒ I'm not sure. (2015 Grade 4)	VID40157 **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.	NC	N/A
VC759295 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. (2015 Grade 4)	VID42081 **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.	NC	N/A
VC759297 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)	VID42082 **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.	NC	N/A

Appendix K-1at: Operational Grade 4 NIES

VH240128

1. How much do you know about your American Indian tribe or Alaska Native group? For example, you may know about the history, traditions, or arts and crafts of your tribe or group.

Ⓐ Nothing

Ⓑ A little

Ⓒ Some

Ⓓ A lot

VH240129

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):_____

VH240130

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):_____

VH240131

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):_____

VH240132

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

VH240133

6. How often do members of your family talk to each other in your American Indian or Alaska Native language?

Ⓐ Never or hardly ever

Ⓑ Once or twice a month

Ⓒ Once or twice a week

Ⓓ Every day or almost every day

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 Native language.

Ⓑ Never or hardly ever

Ⓒ Once or twice a month

Ⓓ Once or twice a week

Ⓔ Every day or almost every day

VH240136

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.

VH240137

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.

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

Ⓓ 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?

Ⓐ 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**?

Ⓐ Yes, once or twice

Ⓑ Yes, three or more times

Ⓒ No

VH240141

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

VH240142

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

VH240143

16. When my teacher talks about American Indian or Alaska Native history or culture, I try to read more about it.

Ⓐ This is not like me.

Ⓑ This is a little like me.

Ⓒ This is a lot like me.

VH240144

17. I enjoy reading about American Indian or Alaska Native people.

Ⓐ This is not like me.

Ⓑ This is a little like me.

Ⓒ This is a lot like me.

VH240145

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.

VH240146

19. I put a lot of effort into my schoolwork.

Ⓐ This is not like me.

Ⓑ This is a little like me.

Ⓒ This is a lot like me.

VH240147

20. I want to be one of the best students in my class.

Ⓐ This is not like me.

Ⓑ This is a little like me.

Ⓒ This is a lot like me.

VH240148

21. I enjoy being challenged in my classes.

Ⓐ This is not like me.

Ⓑ This is a little like me.

Ⓒ This is a lot like me.

VH240149

22. I feel that I belong at school.

Ⓐ This is not like me.

Ⓑ This is a little like me.

Ⓒ This is a lot like me.

VH240150

23. If I put in enough effort, I will succeed in school.

Ⓐ Strongly disagree

Ⓑ Disagree

Ⓒ Agree

Ⓓ Strongly agree

VH240151

24. Trying hard in school will help me live a good life when I grow up.

Ⓐ Strongly disagree

Ⓑ Disagree

Ⓒ Agree

Ⓓ Strongly agree

VH240152

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

VH240153

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

VH240154

27. How often does **another student from your school** help you with your schoolwork? For example, they might help you to study for a test, help you with a school project, or go over your homework with you.

Ⓐ Never or hardly ever

Ⓑ Once or twice a month

Ⓒ Once or twice a week

Ⓓ Every day or almost every day

VH240155

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

VH240156

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

2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
1. How much do you know about each of the following? Fill in **one** oval on each line. Nothing / A little / Some / A lot a. Your American Indian or Alaska Native history b. Your American Indian or Alaska Native traditions and culture (way of life, customs) c. Issues today that are important to American Indian or Alaska Native people (2015 Grade 8)	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 b. Your American Indian or Alaska Native traditions and culture (way of life, customs) c. Issues today that are important to American Indian or Alaska Native people	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."
2. Who taught you **most** of what you know about American Indian or Alaska Native history? A No one has taught me about American Indian or Alaska Native history. B Family members C Friends D Teachers E Tribal representatives or elders F Someone else (please specify): _____ (2015 Grade 8)	2. Who taught you **most** of what you know about American Indian or Alaska Native history? A No one has taught me about American Indian or Alaska Native history. B Family members C Friends D Teachers E Tribal representatives or elders F Someone else (please specify):_____	NC	N/A
3. Who taught you **most** of what you know about American Indian or Alaska Native traditions (ways of life, customs)? A No one has taught me about American Indian or Alaska Native traditions. B Family members C Friends D Teachers E Tribal representatives or elders F Someone else (please specify): _____ (2015 Grade 8)	3. Who taught you **most** of what you know about American Indian or Alaska Native traditions (ways of life, customs)? A No one has taught me about American Indian or Alaska Native traditions. B Family members C Friends D Teachers E Tribal representatives or elders F Someone else (please specify):_____	NC	N/A

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

2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
4. Who taught you **most** of what you know about issues today that are important to American Indian or Alaska Native people? Ⓐ No one has taught me about issues today that are important to American Indian or Alaska Native people. Ⓑ Family members Ⓒ Friends Ⓓ Teachers Ⓔ Tribal representatives or elders Ⓕ Someone else (please specify): _____ (2015 Grade 8)	4. Who taught you **most** of what you know about issues today that are important to American Indian or Alaska Native people? Ⓐ No one has taught me about issues today that are important to American Indian or Alaska Native people. Ⓑ Family members Ⓒ Friends Ⓓ Teachers Ⓔ Tribal representatives or elders Ⓕ Someone else (please specify):_____	NC	N/A
5. How often have you participated in each of the following? Fill in **one** oval on each line. 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 b. Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups c. Other American Indian or Alaska Native activities (2015 Grade 8)	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 b. Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups c. Other American Indian or Alaska Native activities	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."
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 (2015 Grade 8)	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	N/A

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

2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VC759195 7. How often do people in your school talk to each other in your American Indian or Alaska Native language? Ⓐ Never or hardly ever Ⓑ Once or twice a month Ⓒ Once or twice a week Ⓓ Every day or almost every day (2015 Grade 8)	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	NC	N/A
VH153907 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 (2015 Grade 8)	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 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
VH040050 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. (2015 Grade 8)	VH240136 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
VH040067 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. (2015 Grade 8)	VH240137 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).

2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VHB40082 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 Ⓓ Teachers Ⓔ Tribal representatives or elders Ⓕ Someone else (please specify): _____ (2015 Grade 8)	VH240158 **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 Ⓓ Teachers Ⓔ Tribal representatives or elders Ⓕ Someone else (please specify):_____	NC	N/A
VC906590 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 (2015 Grade 8)	VH240159 **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	NC	N/A
VH158490 13. During 8th grade, have you attended any of the following activities **organized by your school**? Fill in **one** oval on each line. Yes / No a. Presentations by American Indian or Alaska Native people about their traditions and cultures (ways of life, customs) Ⓐ Ⓑ VH158491 b. American Indian or Alaska Native art and craft demonstrations Ⓐ Ⓑ VH158492 c. Traditional American Indian or Alaska Native music and/or dance performances Ⓐ Ⓑ VH158493 d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people Ⓐ Ⓑ VH158494 (2015 Grade 8)	VH241522 **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) Ⓐ Ⓑ VH241523 b. American Indian or Alaska Native art and craft demonstrations Ⓐ Ⓑ VH241526 c. Traditional American Indian or Alaska Native music and/or dance performances Ⓐ Ⓑ VH241525 d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people Ⓐ Ⓑ VH241524	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."

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2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH040140 14. During 8th grade, have you participated in any of the following activities **organized by your school**? Fill in **one** oval on each line. Yes / No a. Sports team — VH040143 b. Music club, orchestra, or band — VH040147 c. Cultural dances or other American Indian or Alaska Native activities (for example, drum groups) — VH040150 d. Academic club (for example, math club) — VH040152 (2015 Grade 8)	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 — VH241528 b. Music club, orchestra, or band — VH241532 c. Cultural dances or other American Indian or Alaska Native activities (for example, drum groups) — VH241531 d. Academic club (for example, math club) — VH241530	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."
VH159106 15. During 8th 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 (2015 Grade 8)	VH240160 15. During 8th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **in school**? Yes, once or twice Yes, three or more times No	NC	N/A
VH159110 16. During 8th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **outside of school**? Yes, once or twice Yes, three or more times No (2015 Grade 8)	VH240161 16. During 8th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **outside of school**? Yes, once or twice Yes, three or more times No	NC	N/A
VH153945 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? Yes No (2015 Grade 8)	VH240162 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? Yes No	NC	N/A

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

2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VCY99624 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. VH043704 b. I enjoy reading about American Indian or Alaska Native people. VCY99627 c. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have. VCY99628 (2015 Grade 8)	VH041535 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. VH041536 b. I enjoy reading about American Indian or Alaska Native people. VH041538 c. I enjoy reading about people who have different traditions and cultures (ways of life, customs) than I have. VH041537	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line to show whether the sentence describes a person like you." was adapted to "Select one answer choice on each row."
VH040130 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. VH040131 b. I want to be one of the best students in my class. VH040134 c. I enjoy being challenged in my classes. VH040137 d. I feel that I belong at school. VH040138 (2015 Grade 8)	VH041539 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. VH041540 b. I want to be one of the best students in my class. VH041543 c. I enjoy being challenged in my classes. VH041542 d. I feel that I belong at school. VH041541	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line to show whether the sentence describes a person like you." was adapted to "Select one answer choice on each row."

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2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH040157 20. How much do you agree with each of the following statements? Fill in **one** oval on each line. Strongly disagree / Disagree / Agree / Strongly agree a. If I put in enough effort, I will succeed in school. VH040158 b. If I put in enough effort in school, I will get into college. VH040160 c. If I put in enough effort in school, I will get a good job. VH040161 (2015 Grade 8)	VH241544 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. VH241545 b. If I put in enough effort in school, I will get into college. VH241547 c. If I put in enough effort in school, I will get a good job. VH241546	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."
VC759293 21. How much do you like school? Not at all A little Somewhat Very much (2015 Grade 8)	VH240156 21. How much do you like school? Not at all A little Somewhat Very much	NC	N/A
VC986661 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 Very much (2015 Grade 8)	VH240162 22. How much are the things you are learning in school preparing you for the life you want to lead? Not at all A little A fair amount Very much	NC	N/A
VC986641 23. During 8th grade, how often have you talked with any of your teachers outside of regular class periods? For example, to get extra help with your assignments, to talk about issues that matter to you, or just to visit. Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day (2015 Grade 8)	VH240163 23. During 8th grade, how often have you talked with any of your teachers outside of regular class periods? For example, to get extra help with your assignments, to talk about issues that matter to you, or just to visit. Never or hardly ever Once or twice a month Once or twice a week Every day or almost every day	NC	N/A

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

2019 Operational Grade 8 National Indian Education Study (NIES) Student

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 (2015 Grade 8)	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	NC	N/A
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. Fill in **one** oval on each line. a. A parent or someone else from my family — Ⓐ Ⓑ Ⓒ Ⓓ b. A teacher or another adult from my school — Ⓐ Ⓑ Ⓒ Ⓓ c. Another student — Ⓐ Ⓑ Ⓒ Ⓓ d. A tribal representative or elder — Ⓐ Ⓑ Ⓒ Ⓓ (Never or hardly ever; Once or twice a month; Once or twice a week; Every day or almost every day) (2015 Grade 8)	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. a. A parent or someone else from my family — Ⓐ Ⓑ Ⓒ Ⓓ b. A teacher or another adult from my school — Ⓐ Ⓑ Ⓒ Ⓓ c. Another student — Ⓐ Ⓑ Ⓒ Ⓓ d. A tribal representative or elder — Ⓐ Ⓑ Ⓒ Ⓓ (Never or hardly ever; Once or twice a month; Once or twice a week; Every day or almost every day)	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."
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? Fill in **one** oval on each line. a. A family member — Ⓐ Ⓑ Ⓒ Ⓓ b. A teacher — Ⓐ Ⓑ Ⓒ Ⓓ c. A school counselor — Ⓐ Ⓑ Ⓒ Ⓓ d. Another student — Ⓐ Ⓑ Ⓒ Ⓓ e. A tribal representative or elder — Ⓐ Ⓑ Ⓒ Ⓓ f. Someone else who lives in my community or is a friend of my family — Ⓐ Ⓑ Ⓒ Ⓓ (Never; One time; Two or three times; Four or more times) (2015 Grade 8)	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. a. A family member — Ⓐ Ⓑ Ⓒ Ⓓ b. A teacher — Ⓐ Ⓑ Ⓒ Ⓓ c. A school counselor — Ⓐ Ⓑ Ⓒ Ⓓ d. Another student — Ⓐ Ⓑ Ⓒ Ⓓ e. A tribal representative or elder — Ⓐ Ⓑ Ⓒ Ⓓ f. Someone else who lives in my community or is a friend of my family — Ⓐ Ⓑ Ⓒ Ⓓ (Never; One time; Two or three times; Four or more times)	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."

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2019 Operational Grade 8 National Indian Education Study (NIES) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
27. Which of the following would you plan to do in your first year after high school? Fill in **as many ovals as apply**. a. Go to college full time Ⓐ b. Go to college part time Ⓑ c. Go to another school (for example, career training, technical, or trade/vocational) full time Ⓒ d. Go to another school (for example, career training, technical, or trade/vocational) part time Ⓓ e. Join the military Ⓔ f. Work full time Ⓕ g. Work part time Ⓖ h. Travel Ⓗ i. Care for family Ⓘ j. I don't know. Ⓙ (2015 Grade 8)	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 | Ⓐ | Ⓑ | | b. Go to college part time | Ⓐ | Ⓑ | | c. Go to another school (for example, career training, technical, or trade/vocational) full time | Ⓐ | Ⓑ | | d. Go to another school (for example, career training, technical, or trade/vocational) part time | Ⓐ | Ⓑ | | e. Join the military | Ⓐ | Ⓑ | | f. Work full time | Ⓐ | Ⓑ | | g. Work part time | Ⓐ | Ⓑ | | h. Travel | Ⓐ | Ⓑ | | i. Care for family | Ⓐ | Ⓑ | | j. I don't know. | Ⓐ | Ⓑ |	R	This item was revised in item type and sentence structure of this item based on the structure for Core household possession item. The in-line direction was adapted from PBA to DBA: "Fill in as many ovals as apply." was adapted to "Select one answer choice on each row."
28. To what extent is each of the following a problem in your school? Fill in **one** oval on each line. | | Not at all | Small extent | Moderate extent | Large extent | |---|---|---|---|---| | a. Student tardiness | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | b. Student health problems | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | c. Student misbehavior in class | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | d. Physical conflicts among students | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | e. Bullying | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | f. Low student motivation | Ⓐ | Ⓑ | Ⓒ | Ⓓ |	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 | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | b. Student health problems | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | c. Student misbehavior in class | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | d. Physical conflicts among students | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | e. Bullying | Ⓐ | Ⓑ | Ⓒ | Ⓓ | | f. Low student motivation | Ⓐ | Ⓑ | Ⓒ | Ⓓ |	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to

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2019 Operational Grade 8 National Indian Education Study (NIES) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
(2015 Grade 8)			"Select one answer choice on each row."
VC759294 29. 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. (2015 Grade 8)	VH240157 29. 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.	NC	N/A
VC759295 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. _____ _____ (2015 Grade 8)	VH242001 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. _____ _____	NC	N/A
VC759297 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. _____ _____ _____ (2015 Grade 8)	VH242682 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. _____ _____ _____	NC	N/A

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Appendix K-1av: Operational Grade 8 NIES

VH241514

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

VH240129

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):_____

VH240130

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):_____

VH240158

4. Who taught you **most** of what you know about issues today that are important to American Indian or Alaska Native people?

Ⓐ No one has taught me about issues today that are important to American Indian or Alaska Native people.

Ⓑ Family members

Ⓒ Friends

Ⓓ Teachers

Ⓔ Tribal representatives or elders

Ⓕ Someone else (please specify):_____

VH241518

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241519
b. Ceremonies and gatherings that bring people together from many different American Indian tribes or Alaska Native groups	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241521
c. Other American Indian or Alaska Native activities	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241520

VH240133

6. How often do members of your family talk to each other in your American Indian or Alaska Native language?

Ⓐ Never or hardly ever

Ⓑ Once or twice a month

Ⓒ Once or twice a week

Ⓓ Every day or almost every day

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 Native language.

Ⓑ Never or hardly ever

Ⓒ Once or twice a month

Ⓓ Once or twice a week

Ⓔ Every day or almost every day

VH240136

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.

VH240137

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.

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

Ⓓ Teachers

Ⓔ Tribal representatives or elders

Ⓕ Someone else (please specify):_____

VH240159

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

VH241522

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)	Ⓐ	Ⓑ	VH241523
b. American Indian or Alaska Native art and craft demonstrations	Ⓐ	Ⓑ	VH241526
c. Traditional American Indian or Alaska Native music and/or dance performances	Ⓐ	Ⓑ	VH241525
d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people	Ⓐ	Ⓑ	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	Ⓐ	Ⓑ	VH241528
b. Music club, orchestra, or band	Ⓐ	Ⓑ	VH241532
c. Cultural dances or other American Indian or Alaska Native activities (for example, drum groups)	Ⓐ	Ⓑ	VH241531
d. Academic club (for example, math club)	Ⓐ	Ⓑ	VH241530

VH240160

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

Ⓐ Yes, once or twice

Ⓑ Yes, three or more times

Ⓒ No

VH240161

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

Ⓐ Yes, once or twice

Ⓑ Yes, three or more times

Ⓒ No

VH240142

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?

Ⓐ Yes

Ⓑ No

VH241533

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

VH241539

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.	Ⓐ	Ⓑ	Ⓒ	VH241540
b. I want to be one of the best students in my class.	Ⓐ	Ⓑ	Ⓒ	VH241543
c. I enjoy being challenged in my classes.	Ⓐ	Ⓑ	Ⓒ	VH241542
d. I feel that I belong at school.	Ⓐ	Ⓑ	Ⓒ	VH241541

VH241544

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.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241545
b. If I put in enough effort in school, I will get into college.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241547
c. If I put in enough effort in school, I will get a good job.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241546

VH240156

21. How much do you like school?

Ⓐ Not at all

Ⓑ A little

Ⓒ Somewhat

Ⓓ Very much

VH240162

22. How much are the things you are learning in school preparing you for the life you want to lead?

Ⓐ Not at all

Ⓑ A little

Ⓒ A fair amount

Ⓓ Very much

VH240163

23. During 8th grade, how often have you talked with any of your teachers outside of regular class periods? For example, to get extra help with your assignments, to talk about issues that matter to you, or just to visit.

Ⓐ Never or hardly ever

Ⓑ Once or twice a month

Ⓒ Once or twice a week

Ⓓ Every day or almost every day

VH240155

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

VH241548

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241549
b. A teacher or another adult from my school	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241550
c. Another student	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241553
d. A tribal representative or elder	Ⓐ	Ⓑ	Ⓒ	Ⓓ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241555
b. A teacher	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241556
c. A school counselor	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241557
d. Another student	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241561
e. A tribal representative or elder	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241560
f. Someone else who lives in my community or is a friend of my family	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241558

VH241562

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	Ⓐ	Ⓑ	VH241563
b. Go to college part time	Ⓐ	Ⓑ	VH241564
c. Go to another school (for example, career training, technical, or trade/vocational) full time	Ⓐ	Ⓑ	VH241565
d. Go to another school (for example, career training, technical, or trade/vocational) part time	Ⓐ	Ⓑ	VH241566
e. Join the military	Ⓐ	Ⓑ	VH241572
f. Work full time	Ⓐ	Ⓑ	VH241568
g. Work part time	Ⓐ	Ⓑ	VH241569
h. Travel	Ⓐ	Ⓑ	VH241570
i. Care for family	Ⓐ	Ⓑ	VH241571
j. I don't know.	Ⓐ	Ⓑ	VH241567

VH241573

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241574
b. Student health problems	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241575
c. Student misbehavior in class	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241576
d. Physical conflicts among students	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241580
e. Bullying	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241578
f. Low student motivation	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH241579

VH240157

29. 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

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.

VH242882

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.

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

2019 Operational Grade 4 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
1. **At home**, do you have any of the following? Select **one** answer choice on each row. (2017 Grade 4)	1. **At home**, do you have any of the following? Select **one** answer choice on each row.	NC	N/A
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 (2017 Grade 4)	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	NC	N/A
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 (2017 Grade 4)	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	NC	N/A
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 (2017 Grade 4)	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	NC	N/A

2019 Operational Grade 4 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
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 (2017 Grade 4)	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	NC	N/A
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 (2017 Grade 4)	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	NC	N/A
VH897657 7. Were you taught any of the following **at school**? Select **one** answer choice on each row. (2017 Grade 4)	VH897657 7. Were you taught any of the following **at school**? Select **one** answer choice on each row.	NC	N/A

	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	Ⓐ	Ⓑ	VH270164
d. How to search for information on the Internet	Ⓐ	Ⓑ	VH270152
e. How to use a tablet	Ⓐ	Ⓑ	VH270156
f. How to look up the meaning of a word using a computer	Ⓐ	Ⓑ	VH270157

2019 Operational Grade 4 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
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. b. In most of my classes there are **tablets** that I can use for schoolwork. c. There is **Wi-Fi** or some other **Internet connection** that I can use for schoolwork. d. Most of my teachers use computers when teaching my classes. e. Most of my teachers require us to use computers in the classroom. (2017 Grade 4)	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. b. In most of my classes there are **tablets** that I can use for schoolwork. c. There is **Wi-Fi** or some other **Internet connection** that I can use for schoolwork. d. Most of my teachers use computers when teaching my classes. e. Most of my teachers require us to use computers in the classroom.	NC	N/A
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). (2017 Grade 4)	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).	NC	N/A
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. (2017 Grade 4)	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.	NC	N/A

2019 Operational Grade 4 Computer and Familiarity Study (CAFS) Student

Previous 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. (2017 Grade 4)	11. **This school year**, how often have you used a **laptop or desktop computer** to do each of the following? Select **one** answer choice on each row.	NC	N/A
12. **This school year**, how often have you used a **tablet** to do each of the following? Select **one** answer choice on each row. (2017 Grade 4)	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
13. Which best describes the way you type on a computer keyboard? Ⓐ I don't know how to type using a computer keyboard. Ⓑ I can type with one or two fingers, but I have to search for where the letter keys are. Ⓒ I can type with one or two fingers, and I know where most of the letter keys are. Ⓓ I can type with all ten fingers when I look at the keyboard. Ⓔ I can type with all ten fingers without looking at the keyboard. (2017 Grade 4)	13. Which best describes the way you type on a computer keyboard? Ⓐ I don't know how to type using a computer keyboard. Ⓑ I can type with one or two fingers, but I have to search for where the letter keys are. Ⓒ I can type with one or two fingers, and I know where most of the letter keys are. Ⓓ I can type with all ten fingers when I look at the keyboard. Ⓔ I can type with all ten fingers without looking at the keyboard.	NC	N/A

2019 Operational Grade 4 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH270132 **14.** Would you rather take a test at school using paper and pencil or using a computer? Ⓐ Paper and pencil Ⓑ Computer (2017 Grade 4)	VH270132 **14.** Would you rather take a test at school using paper and pencil or using a computer? Ⓐ Paper and pencil Ⓑ Computer	NC	N/A
VH597769 **15.** Do you think you would be able to do each of the following? Select **one** answer choice on each row. (2017 Grade 4)	VH597769 **15.** Do you think you would be able to do each of the following? Select **one** answer choice on each row.	NC	N/A
VH597784 **16.** How familiar are you with each of the following? Select **one** answer choice on each row. (2017 Grade 4)	VH597784 **16.** How familiar are you with each of the following? Select **one** answer choice on each row.	NC	N/A

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270229
b. Edit text using a computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270218
c. Use a touchscreen on a computer, tablet, or smartphone	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270230
d. Look up the meaning of a word using a computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270225
e. Draw a picture using a computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270196
b. Firewall	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270197
c. Neuro-digital computing	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270199
d. Instant messaging	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270200
e. Cut and paste	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270203
f. Pyramidal browser	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270204
g. Spreadsheet	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270206
h. Limbic wire	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270207
i. Spinalbyte	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270208
j. Server	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270210
k. Callosum board	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270214

Appendix K-1ax: Operational Grade 4 CAFS

VH270138

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	Ⓐ	Ⓑ	VH270141
b. A **laptop or desktop computer** that is shared between you and others	Ⓐ	Ⓑ	VH270142
c. A **tablet** that is only for your use	Ⓐ	Ⓑ	VH270139
d. A **tablet** that is shared between you and others	Ⓐ	Ⓑ	VH270140
e. **Wi-Fi** or some other **Internet connection** you can use	Ⓐ	Ⓑ	VH270143
f. A **smartphone** that is only for your use	Ⓐ	Ⓑ	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

VH597657

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	Ⓐ	Ⓑ	VH270164
d. How to search for information on the Internet	Ⓐ	Ⓑ	VH270152
e. How to use a tablet	Ⓐ	Ⓑ	VH270156
f. How to look up the meaning of a word using a computer	Ⓐ	Ⓑ	VH270157

VH270165

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

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

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.

VH597710

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

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

VH597752

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270183
b. Write a paper for school that was longer than a page	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270188
c. Search the Internet for a school project	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270184
d. Practice things in **mathematics** that you were having trouble learning	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270185
e. Practice things in **reading** that you were having trouble learning	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270186
f. Take a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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 when I look at the keyboard.

Ⓔ 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

VH597769

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270229
b. Edit text using a computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270218
c. Use a touchscreen on a computer, tablet, or smartphone	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270230
d. Look up the meaning of a word using a computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270225
e. Draw a picture using a computer	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270226

VH597794

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270196
b. Firewall	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270197
c. Neuro-digital computing	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270199
d. Instant messaging	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270200
e. Cut and paste	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270203
f. Pyramidal browser	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270204
g. Spreadsheet	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270206
h. Limbic wire	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270207
i. Spinalbyte	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270208
j. Server	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270210
k. Callosum board	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270214

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

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
1. **At home**, do you have any of the following? Select **one** answer choice on each row. (2017 Grade 8)	1. **At home**, do you have any of the following? Select **one** answer choice on each row.	NC	N/A
2. When did you first use a **laptop or desktop computer**? A I have never used one. B Before I was in kindergarten C When I was in kindergarten D When I was in first, second, or third grade E When I was in fourth or fifth grade F When I was in sixth, seventh, or eighth grade (2017 Grade 8)	2. When did you first use a **laptop or desktop computer**? A I have never used one. B Before I was in kindergarten C When I was in kindergarten D When I was in first, second, or third grade E When I was in fourth or fifth grade F When I was in sixth, seventh, or eighth grade	NC	N/A
3. When did you first use a **tablet**? A Never until this assessment B Before I was in kindergarten C When I was in kindergarten D When I was in first, second, or third grade E When I was in fourth or fifth grade F When I was in sixth, seventh, or eighth grade (2017 Grade 8)	3. When did you first use a **tablet**? A Never until this assessment B Before I was in kindergarten C When I was in kindergarten D When I was in first, second, or third grade E When I was in fourth or fifth grade F When I was in sixth, seventh, or eighth grade	NC	N/A
4. When did you first use a **smartphone**? A I have never used one. B Before I was in kindergarten C When I was in kindergarten D When I was in first, second, or third grade E When I was in fourth or fifth grade F When I was in sixth, seventh, or eighth grade (2017 Grade 8)	4. When did you first use a **smartphone**? A I have never used one. B Before I was in kindergarten C When I was in kindergarten D When I was in first, second, or third grade E When I was in fourth or fifth grade F When I was in sixth, seventh, or eighth grade	NC	N/A

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

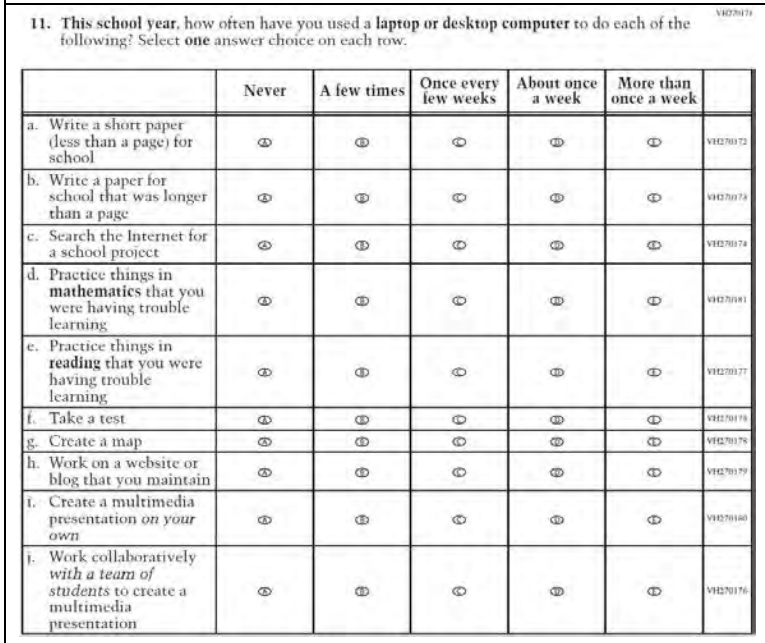
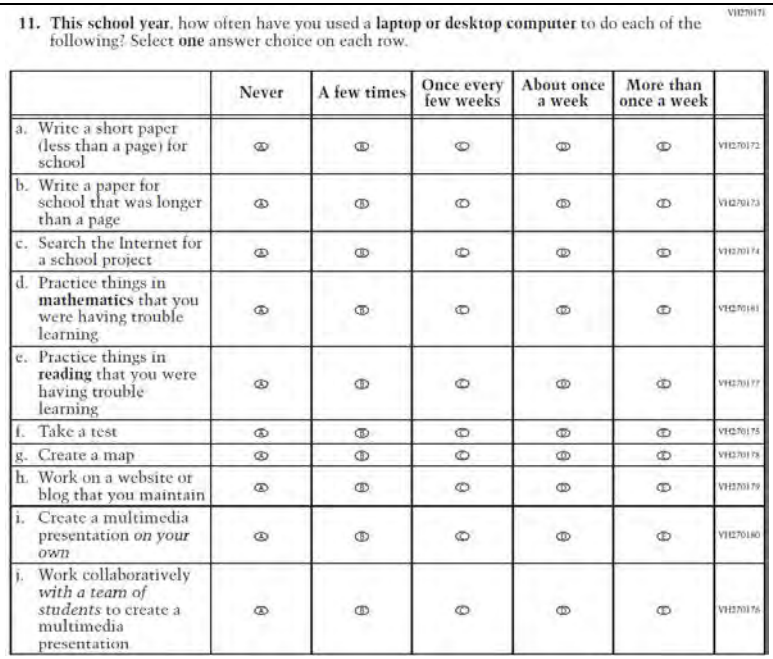
Previous item	2019 item	D/A/ R/NC+	Rationale
5. **On a weekday**, about **how many hours** do you use a **laptop or desktop computer** for doing schoolwork, including homework? Ⓐ None Ⓑ Less than an hour Ⓒ 1 to 2 hours Ⓓ 2 to 3 hours Ⓔ 3 to 4 hours Ⓕ More than 4 hours (2017 Grade 8)	5. **On a weekday**, 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	NC	N/A
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 (2017 Grade 8)	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	NC	N/A
7. Were you taught any of the following **at school**? Select **one** answer choice on each row. (2017 Grade 8)	7. Were you taught any of the following **at school**? Select **one** answer choice on each row.	NC	N/A

	Yes	No	
a. How to type on a computer keyboard using the correct fingers	Ⓐ	Ⓑ	
b. How to write sentences and paragraphs using a computer	Ⓐ	Ⓑ	
c. How to edit text using a computer	Ⓐ	Ⓑ	
d. How to search for information on the Internet	Ⓐ	Ⓑ	
e. How to use a tablet	Ⓐ	Ⓑ	
f. How to look up the meaning of a word using a computer	Ⓐ	Ⓑ	
g. How to create a spreadsheet using a computer	Ⓐ	Ⓑ	
h. How to create a presentation using a 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 computer	Ⓐ	Ⓑ	
l. How to troubleshoot problems with a computer	Ⓐ	Ⓑ	

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH270165 8. Which of the following are true about the ways in which you and your teachers use computers **at school**? Select **one** answer choice on each row. Yes / No a. In most of my classes there are **laptop or desktop computers** that I can use for schoolwork. — VH270166 b. In most of my classes there are **tablets** that I can use for schoolwork. — VH270167 c. There is **Wi-Fi** or some other **Internet connection** that I can use for schoolwork. — VH270170 d. Most of my teachers use computers when teaching my classes. — VH270169 e. Most of my teachers require us to use computers in the classroom. — VH270168 (2017 Grade 8)	VH270165 8. Which of the following are true about the ways in which you and your teachers use computers **at school**? Select **one** answer choice on each row. Yes / No a. In most of my classes there are **laptop or desktop computers** that I can use for schoolwork. — VH270166 b. In most of my classes there are **tablets** that I can use for schoolwork. — VH270167 c. There is **Wi-Fi** or some other **Internet connection** that I can use for schoolwork. — VH270170 d. Most of my teachers use computers when teaching my classes. — VH270169 e. Most of my teachers require us to use computers in the classroom. — VH270168	NC	N/A
VH270116 9. Has your school assigned you a **laptop or desktop computer** that only you can use? A No B Yes, but I cannot take it home with me. C Yes, and I can take it home with me (laptop only). (2017 Grade 8)	VH270116 9. Has your school assigned you a **laptop or desktop computer** that only you can use? A No B Yes, but I cannot take it home with me. C Yes, and I can take it home with me (laptop only).	NC	N/A
VH270117 10. Has your school assigned you a **tablet** that only you can use? A No B Yes, but I cannot take it home with me. C Yes, and I can take it home with me. (2017 Grade 8)	VH270117 10. Has your school assigned you a **tablet** that only you can use? A No B Yes, but I cannot take it home with me. C Yes, and I can take it home with me.	NC	N/A

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
		NC	N/A

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	B	C	D	E	VH270172
b. Write a paper for school that was longer than a page	A	B	C	D	E	VH270173
c. Search the Internet for a school project	A	B	C	D	E	VH270174
d. Practice things in **mathematics** that you were having trouble learning	A	B	C	D	E	VH270161
e. Practice things in **reading** that you were having trouble learning	A	B	C	D	E	VH270177
f. Take a test	A	B	C	D	E	VH270175
g. Create a map	A	B	C	D	E	VH270178
h. Work on a website or blog that you maintain	A	B	C	D	E	VH270179
i. Create a multimedia presentation *on your own*	A	B	C	D	E	VH270180
j. Work collaboratively *with a team of students* to create a multimedia presentation	A	B	C	D	E	VH270176

(2017 Grade 8)

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	B	C	D	E	VH270172
b. Write a paper for school that was longer than a page	A	B	C	D	E	VH270173
c. Search the Internet for a school project	A	B	C	D	E	VH270174
d. Practice things in **mathematics** that you were having trouble learning	A	B	C	D	E	VH270161
e. Practice things in **reading** that you were having trouble learning	A	B	C	D	E	VH270177
f. Take a test	A	B	C	D	E	VH270175
g. Create a map	A	B	C	D	E	VH270178
h. Work on a website or blog that you maintain	A	B	C	D	E	VH270179
i. Create a multimedia presentation *on your own*	A	B	C	D	E	VH270180
j. Work collaboratively *with a team of students* to create a multimedia presentation	A	B	C	D	E	VH270176

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
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 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 f. Take a test g. Create a map h. Work on a website or blog that you maintain i. Create a multimedia presentation *on your own* j. Work collaboratively *with a team of students* to create a multimedia presentation (2017 Grade 8)	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 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 f. Take a test g. Create a map h. Work on a website or blog that you maintain i. Create a multimedia presentation *on your own* j. Work collaboratively *with a team of students* to create a multimedia presentation	NC	N/A
13. Which best describes the way you type on a computer keyboard? A I don't know how to type using a computer keyboard. B I can type with one or two fingers, but I have to search for where the letter keys are. C I can type with one or two fingers, and I know where most of the letter keys are. D I can type with all ten fingers when I look at the keyboard. E I can type with all ten fingers without looking at the keyboard. (2017 Grade 8)	13. Which best describes the way you type on a computer keyboard? A I don't know how to type using a computer keyboard. B I can type with one or two fingers, but I have to search for where the letter keys are. C I can type with one or two fingers, and I know where most of the letter keys are. D I can type with all ten fingers when I look at the keyboard. E I can type with all ten fingers without looking at the keyboard.	NC	N/A
14. Would you rather take a test at school using paper and pencil or using a computer? A Paper and pencil B Computer (2017 Grade 8)	14. Would you rather take a test at school using paper and pencil or using a computer? A Paper and pencil B Computer	NC	N/A

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH270215 15. Do you think you would be able to do each of the following? Select **one** answer choice on each row. (2017 Grade 8)	VH270215 15. Do you think you would be able to do each of the following? Select **one** answer choice on each row.	NC	N/A

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

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

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH270233 **16.** On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices are you**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10 (2017 Grade 8)	VH270233 **16.** On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices are you**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10	NC	N/A
VH270236 **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**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10 (2017 Grade 8)	VH270236 **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**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10	NC	N/A

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH230237 **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 (2017 Grade 8)	VH270237 **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
VH270238 **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 (2017 Grade 8)	VH270238 **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	NC	N/A

2019 Operational Grade 8 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH270239 **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 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10 (2017 Grade 8)	VH270239 **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 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10	NC	N/A
VH270190 **21.** How familiar are you with each of the following? Select **one** answer choice on each row. (2017 Grade 8)	VH270190 **21.** How familiar are you with each of the following? Select **one** answer choice on each row.	NC	N/A

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

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

Appendix K-1az: Operational Grade 8 CAFS

VH270138

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	Ⓐ	Ⓑ	VH270141
b. A **laptop or desktop computer** that is shared between you and others	Ⓐ	Ⓑ	VH270142
c. A **tablet** that is only for your use	Ⓐ	Ⓑ	VH270139
d. A **tablet** that is shared between you and others	Ⓐ	Ⓑ	VH270140
e. **Wi-Fi** or some other **Internet connection** you can use	Ⓐ	Ⓑ	VH270143
f. A **smartphone** that is only for your use	Ⓐ	Ⓑ	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

Ⓕ 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

VH270146

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 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

VH270149

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	Ⓐ	Ⓑ	VH270164
d. How to search for information on the Internet	Ⓐ	Ⓑ	VH270152
e. How to use a tablet	Ⓐ	Ⓑ	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	Ⓐ	Ⓑ	VH270159
j. How to write a computer program or app	Ⓐ	Ⓑ	VH270160
k. How to create a graph or chart using a computer	Ⓐ	Ⓑ	VH270161
l. How to troubleshoot problems with a computer	Ⓐ	Ⓑ	VH270158

VH270165

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

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

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.

VH270171

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

VH270182

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270183
b. Write a paper for school that was longer than a page	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270188
c. Search the Internet for a school project	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270184
d. Practice things in **mathematics** that you were having trouble learning	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270185
e. Practice things in **reading** that you were having trouble learning	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270186
f. Take a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270192
g. Create a map	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270189
h. Work on a website or blog that you maintain	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270190
i. Create a multimedia presentation *on your own*	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270191
j. Work collaboratively *with a team of students* to create a multimedia presentation	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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.

Ⓒ I can type with one or two fingers, and I know where most of the letter keys are.

Ⓓ I can type with all ten fingers when I look at the keyboard.

Ⓔ I can type with all ten fingers without looking at the keyboard.

VH270132

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

Ⓐ Paper and pencil

Ⓑ Computer

VH270215

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

16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices are <u>you</u>**?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ 3

Ⓔ 4

Ⓕ 5

Ⓖ 6

Ⓗ 7

Ⓘ 8

Ⓙ 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**?

Ⓐ 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

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

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

Ⓑ 1

Ⓒ 2

Ⓓ 3

Ⓔ 4

Ⓕ 5

Ⓖ 6

Ⓗ 7

Ⓘ 8

Ⓙ 9

Ⓚ 10

VH270194

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270195
b. Wi-Fi	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270196
c. Firewall	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270197
d. Hyperlink	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270198
e. Neuro-digital computing	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270199
f. Instant messaging	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270200
g. CPU	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270201
h. Cut and paste	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270203
i. Pyramidal browser	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270204
j. Spreadsheet	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270206
k. Limbic wire	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270207
l. Spinalbyte	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270208
m. Cloud computing	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270209
n. Server	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270210
o. Compiler	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270212
p. Callosum board	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270214

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

2019 Operational Grade 12 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH155319 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.
VH155275 2. **At home,** do you have any of the following? Fill in **one** oval on each line. Yes / No a. A **laptop or desktop computer** that is only for your use — Ⓐ Ⓑ — VH155283 b. A **laptop or desktop computer** that is shared between you and others — Ⓐ Ⓑ — VH155284 c. A **tablet** that is only for your use — Ⓐ Ⓑ — VH155280 d. A **tablet** that is shared between you and others — Ⓐ Ⓑ — VH155281 e. **Wi-Fi** or some other **Internet connection** you can use — Ⓐ Ⓑ — VH155285 f. A **smartphone** that is only for your use — Ⓐ Ⓑ — VH155287 (2015 Grade 12)	VH270138 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 — Ⓐ Ⓑ — VH270141 b. A **laptop or desktop computer** that is shared between you and others — Ⓐ Ⓑ — VH270142 c. A **tablet** that is only for your use — Ⓐ Ⓑ — VH270139 d. A **tablet** that is shared between you and others — Ⓐ Ⓑ — VH270140 e. **Wi-Fi** or some other **Internet connection** you can use — Ⓐ Ⓑ — VH270143 f. A **smartphone** that is only for your use — Ⓐ Ⓑ — VH270144	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."

+ 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/ R/NC+	Rationale
VH155339 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 (2015 Grade 12)	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 Ⓕ When I was in sixth, seventh, or eighth grade Ⓖ When I was in high school	NC	N/A
VH155345 4. When did you first use a **tablet**? Ⓐ I have never used one. Ⓑ Before I was in kindergarten Ⓒ When I was in kindergarten Ⓓ When I was in first, second, or third grade Ⓔ When I was in fourth or fifth grade Ⓕ When I was in sixth, seventh, or eighth grade Ⓖ When I was in high school (2015 Grade 12)	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 Ⓕ When I was in sixth, seventh, or eighth grade Ⓖ When I was in high school	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 on the tablet.

+ 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/ R/NC+	Rationale
VH155351 5. 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 or fifth grade Ⓕ When I was in sixth, seventh, or eighth grade Ⓖ When I was in high school (2015 Grade 12)	VH270235 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 or fifth grade Ⓕ When I was in sixth, seventh, or eighth grade Ⓖ When I was in high school	NC	N/A
VH155330 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 Ⓔ 3 to 4 hours Ⓕ More than 4 hours (2015 Grade 12)	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	NC	N/A

+ 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/ R/NC+**	**Rationale**
VH155332 7. **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 (2015 Grade 12)	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	NC	N/A

+ 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/ R/NC+	Rationale
8. Were you taught any of the following **at school**? Fill in **one** oval on each line. VH155373 Yes / No a. How to type on a computer keyboard using the correct fingers VH155375 b. How to write sentences and paragraphs using a computer VH155376 c. How to edit text using a computer VH176918 d. How to search for information on the Internet VH155377 e. How to use a tablet VH155378 f. How to draw a picture using a computer VH155379 g. How to look up the meaning of a word using a computer VH155380 h. How to create a spreadsheet using a computer VH155381 i. How to create a presentation using a computer VH155382 j. How to run simulations using a computer VH155384 k. How to write a computer program or app VH155385 l. How to create a graph or chart using a computer VH155386 m. How to maintain a website or blog VH155387 n. How to install new software or apps VH155388 o. How to troubleshoot problems with a computer VH155383 (2015 Grade 12)	7. Were you taught any of the following **at school**? Select **one** answer choice on each row. VH270149 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 VH270164 d. How to search for information on the Internet VH270152 e. How to use a tablet 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 VH270158 i. How to run simulations using a computer VH270159 j. How to write a computer program or app VH270160 k. How to create a graph or chart using a computer VH270161 l. How to troubleshoot problems with a computer VH270148	R	Previous sub-items “f”, “m”, “n” were dropped. The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to “Select one answer choice on each row."

+ 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/ R/NC+	Rationale
VH155477 9. Which of the following are true about the ways in which you and your teachers use computers **at school**? Fill in **one** oval on each line. Yes / No a. In most of my classes there are **laptop or desktop computers** that I can use for schoolwork. VH155479 Ⓐ Ⓑ b. In most of my classes there are **tablets** that I can use for schoolwork. VH155482 Ⓐ Ⓑ c. There is **Wi-Fi** or some other **Internet connection** that I can use for schoolwork. VH182383 Ⓐ Ⓑ d. Most of my teachers use computers when teaching my classes. VH155484 Ⓐ Ⓑ e. Most of my teachers require us to use computers in the classroom. VH155485 Ⓐ Ⓑ (2015 Grade 12)	VH270165 8. Which of the following are true about the ways in which you and your teachers use computers **at school**? Select **one** answer choice on each row. Yes / No a. In most of my classes there are **laptop or desktop computers** that I can use for schoolwork. Ⓐ Ⓑ VH270166 b. In most of my classes there are **tablets** that I can use for schoolwork. Ⓐ Ⓑ VH270167 c. There is **Wi-Fi** or some other **Internet connection** that I can use for schoolwork. Ⓐ Ⓑ VH270170 d. Most of my teachers use computers when teaching my classes. Ⓐ Ⓑ VH270169 e. Most of my teachers require us to use computers in the classroom. Ⓐ Ⓑ VH270168	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."
VH196393 10. 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). (2015 Grade 12)	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).	NC	N/A
VH196403 11. 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. (2015 Grade 12)	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.	NC	N/A

+ 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/ R/NC+	Rationale
12. **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. 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 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 f. Take a test g. Create a map h. Work on a website or blog that you maintain i. Create a multimedia presentation *on your own* j. Work collaboratively *with a team of students* to create a multimedia presentation (2015 Grade 12)	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 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 f. Take a test g. Create a map h. Work on a website or blog that you maintain i. Create a multimedia presentation *on your own* j. Work collaboratively *with a team of students* to create a multimedia presentation	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."

+ 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/ R/NC+	Rationale
VH155524 13. **This school year**, how often have you used a **tablet** to do each of the following? Fill in **one** oval on each line. 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 — VH155525 b. Write a paper for school that was longer than a page — VH155526 c. Search the Internet for a school project — VH155527 d. Practice things in **mathematics** that you were having trouble learning — VH176938 e. Practice things in **reading** that you were having trouble learning — VH176925 f. Take a test — VH176927 g. Create a map — VH224714 h. Work on a website or blog that you maintain — VH224720 i. Create a multimedia presentation *on your own* — VH224722 j. Work collaboratively *with a team of students* to create a multimedia presentation — VH224725 (2015 Grade 12)	VH270182 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 — VH270183 b. Write a paper for school that was longer than a page — VH270184 c. Search the Internet for a school project — VH270185 d. Practice things in **mathematics** that you were having trouble learning — VH270186 e. Practice things in **reading** that you were having trouble learning — VH270187 f. Take a test — VH270188 g. Create a map — VH270189 h. Work on a website or blog that you maintain — VH270190 i. Create a multimedia presentation *on your own* — VH270191 j. Work collaboratively *with a team of students* to create a multimedia presentation — VH270192	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."
VH155541 14. Which best describes the way you type on a computer keyboard? A. I don't know how to type using a computer keyboard. B. I can type with one or two fingers, but I have to search for where the letter keys are. C. I can type with one or two fingers, and I know where most of the letter keys are. D. I can type with all ten fingers when I look at the keyboard. E. I can type with all ten fingers without looking at the keyboard. (2015 Grade 12)	VH270130 13. Which best describes the way you type on a computer keyboard? A. I don't know how to type using a computer keyboard. B. I can type with one or two fingers, but I have to search for where the letter keys are. C. I can type with one or two fingers, and I know where most of the letter keys are. D. I can type with all ten fingers when I look at the keyboard. E. I can type with all ten fingers without looking at the keyboard.	NC	N/A

+ 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/ R/NC+**	**Rationale**
VH155884 15. Compared to other students in your English/language arts class, how fast do you type on a computer keyboard? Ⓐ I am slower than most students. Ⓑ I type about the same speed as others. Ⓒ I am faster than most students. Ⓓ 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.
VH176993 16. Would you rather take a test at school using paper and pencil or using a computer? Ⓐ Paper and pencil Ⓑ Computer (2015 Grade 12)	VH270132 14. Would you rather take a test at school using paper and pencil or using a computer? Ⓐ Paper and pencil Ⓑ Computer	NC	N/A

+ 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/ R/NC+	Rationale
17. Do you think you would be able to do each of the following? Fill in **one** oval on each line. VH155799 I definitely can't. / I probably can't. / I probably can. / I definitely can. a. Write sentences and paragraphs using a computer VH176967 b. Edit text using a computer VH155803 c. Use a touchscreen on a computer, tablet, or smartphone VH176970 d. Look up the meaning of a word using a computer VH155810 e. Draw a picture using a computer VH155811 f. View or download digital media VH155800 g. Create a presentation using a computer VH155820 h. Create a spreadsheet using a computer VH155802 i. Install new software or apps VH155804 j. Participate in online discussions, forums, social networking sites, or virtual communities VH155805 k. Maintain a website or blog VH155806 l. Search for information on the Internet VH155807 m. Run simulations using a computer VH155808 n. Create a graph or chart using a computer VH155809 o. Write a computer program or app VH155812 p. Troubleshoot a problem with a computer VH196843 q. Figure out how to use new functions of a digital device that I am not yet familiar with VH224738 (2015 Grade 12)	15. Do you think you would be able to do each of the following? Select **one** answer choice on each row. VH270215 I definitely can't. / I probably can't. / I probably can. / I definitely can. a. Write sentences and paragraphs using a computer VH270239 b. Edit text using a computer VH270218 c. Use a touchscreen on a computer, tablet, or smartphone VH270230 d. Look up the meaning of a word using a computer VH270225 e. Draw a picture using a computer VH270226 f. View or download digital media VH270216 g. Create a presentation using a computer VH270228 h. Create a spreadsheet using a computer VH270231 i. Install new software or apps VH270219 j. Participate in online discussions, forums, social networking sites, or virtual communities VH270220 k. Maintain a website or blog VH270221 l. Search for information on the Internet VH270222 m. Run simulations using a computer VH270223 n. Create a graph or chart using a computer VH270224 o. Write a computer program or app VH270227 p. Troubleshoot a problem with a computer VH270232 q. Figure out how to use new functions of a digital device that I am not yet familiar with VH270217	NC	The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to "Select one answer choice on each row."

+ 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/ R/NC+	Rationale
VH155876 18. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices are you**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10 (2015 Grade 12)	VH270233 16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices are you**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10	NC	N/A
VH155881 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. VH155887 19. **Linda** often uses apps to talk to her friends or to play games. She does some of her homework on her laptop and knows how to write and create tables using a computer. Linda cannot type with 10 fingers but is pretty fast with two fingers and mostly finds the right keys. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices do you think Linda is**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10 (2015 Grade 12)	VH270240 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**? Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10	NC	N/A

+ 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/ R/NC+	Rationale
VH155915 20. **Tom** often uses apps to talk to his friends or to play games. He does most of his homework on a computer and knows how to write and edit papers on a computer and how to create complex tables or charts. He also created a few presentations using a computer. Tom can type pretty accurately using ten fingers when looking at the computer keyboard. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices do you think Tom is?** Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10 (2015 Grade 12)	VH270237 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

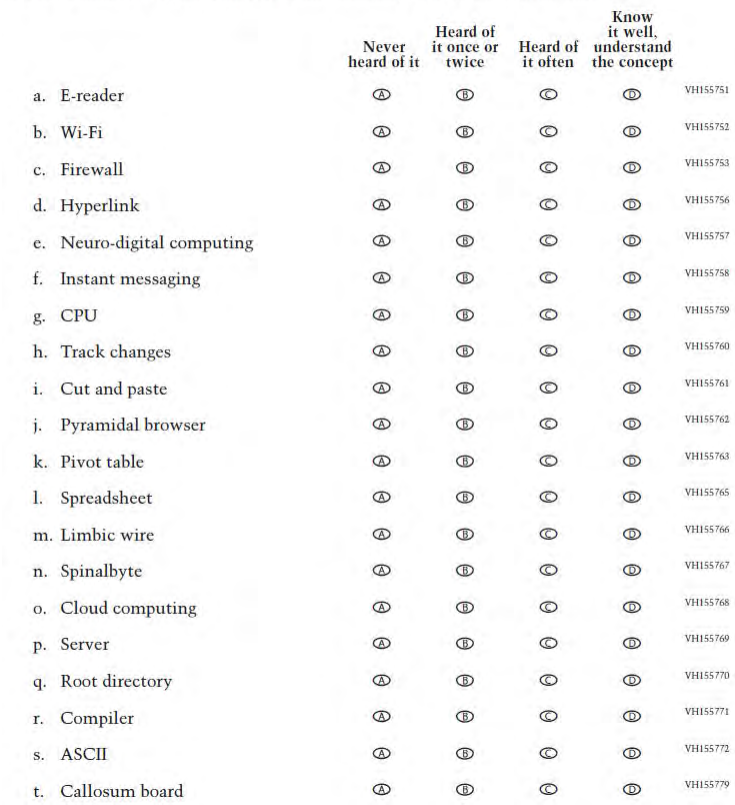
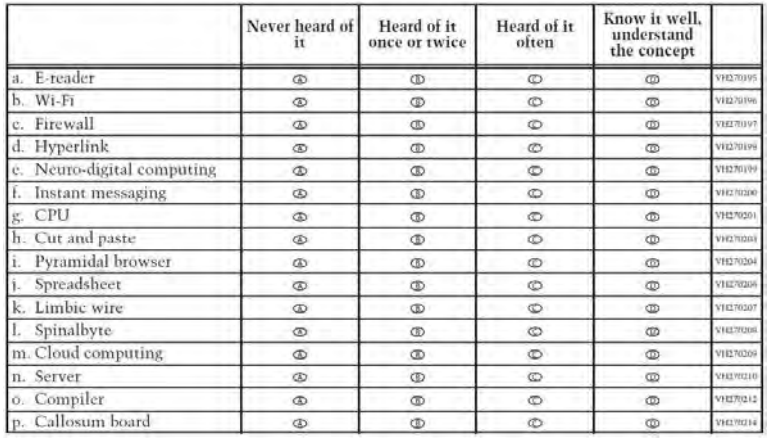
+ This column indicates whether the item was dropped (D), added (A), revised (R), or there was no change (NC).

2019 Operational Grade 12 Computer and Familiarity Study (CAFS) Student

Previous item	2019 item	D/A/ R/NC+	Rationale
VH155939 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?** Ⓐ 0 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10 (2015 Grade 12)	VH270239 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	NC	N/A
VH155944 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 (2015 Grade 12)	VH270239 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 Ⓑ 1 Ⓒ 2 Ⓓ 3 Ⓔ 4 Ⓕ 5 Ⓖ 6 Ⓗ 7 Ⓘ 8 Ⓙ 9 Ⓚ 10	NC	N/A

+ 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/ R/NC+	Rationale
VH155750 23. How familiar are you with each of the following? Fill in one oval on each line.  (2015 Grade 12)	21. How familiar are you with each of the following? Select **one** answer choice on each row. 	R	Previous sub-items “h”, “k”, “q”, “s” were dropped. The in-line direction was adapted from PBA to DBA: "Fill in one oval on each line." was adapted to “Select one answer choice on each row."

+ 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

VH270138

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	Ⓐ	Ⓑ	VH270141
b. A **laptop or desktop computer** that is shared between you and others	Ⓐ	Ⓑ	VH270142
c. A **tablet** that is only for your use	Ⓐ	Ⓑ	VH270139
d. A **tablet** that is shared between you and others	Ⓐ	Ⓑ	VH270140
e. **Wi-Fi** or some other **Internet connection** you can use	Ⓐ	Ⓑ	VH270143
f. A **smartphone** that is only for your use	Ⓐ	Ⓑ	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

Ⓕ 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

Ⓕ When I was in sixth, seventh, or eighth grade

Ⓖ When I was in high school

VH270235

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 or fifth grade

Ⓕ When I was in sixth, seventh, or eighth grade

Ⓖ When I was in high school

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

VH270149

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	Ⓐ	Ⓑ	VH270164
d. How to search for information on the Internet	Ⓐ	Ⓑ	VH270152
e. How to use a tablet	Ⓐ	Ⓑ	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	Ⓐ	Ⓑ	VH270159
j. How to write a computer program or app	Ⓐ	Ⓑ	VH270160
k. How to create a graph or chart using a computer	Ⓐ	Ⓑ	VH270161
l. How to troubleshoot problems with a computer	Ⓐ	Ⓑ	VH270158

VH270165

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

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

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.

VH270171

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

VH270182

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270183
b. Write a paper for school that was longer than a page	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270188
c. Search the Internet for a school project	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270184
d. Practice things in **mathematics** that you were having trouble learning	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270185
e. Practice things in **reading** that you were having trouble learning	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270186
f. Take a test	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270192
g. Create a map	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270189
h. Work on a website or blog that you maintain	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270190
i. Create a multimedia presentation *on your own*	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	VH270191
j. Work collaboratively *with a team of students* to create a multimedia presentation	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	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.

Ⓒ I can type with one or two fingers, and I know where most of the letter keys are.

Ⓓ I can type with all ten fingers when I look at the keyboard.

Ⓔ I can type with all ten fingers without looking at the keyboard.

VH270132

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

Ⓐ Paper and pencil

Ⓑ Computer

VH270215

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

16. On a scale from 0 to 10, where 0 is not at all familiar and 10 is very familiar, **how familiar with using computers and other digital devices are you**?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ 3

Ⓔ 4

Ⓕ 5

Ⓖ 6

Ⓗ 7

Ⓘ 8

Ⓙ 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**?

Ⓐ 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

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

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

Ⓑ 1

Ⓒ 2

Ⓓ 3

Ⓔ 4

Ⓕ 5

Ⓖ 6

Ⓗ 7

Ⓘ 8

Ⓙ 9

Ⓚ 10

VH270194

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	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270195
b. Wi-Fi	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270196
c. Firewall	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270197
d. Hyperlink	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270198
e. Neuro-digital computing	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270199
f. Instant messaging	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270200
g. CPU	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270201
h. Cut and paste	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270203
i. Pyramidal browser	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270204
j. Spreadsheet	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270206
k. Limbic wire	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270207
l. Spinalbyte	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270208
m. Cloud computing	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270209
n. Server	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270210
o. Compiler	Ⓐ	Ⓑ	Ⓒ	Ⓓ	VH270212
p. Callosum board	Ⓐ	Ⓑ	Ⓒ	Ⓓ	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	VH863709 In the last month, how many different homes have you been living in? (If you have moved in the last month, **do not** count the home where you used to live.) Ⓐ Zero homes Ⓑ One home Ⓒ Two homes Ⓓ Three or more homes **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH894192 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	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH894196 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 socio-economic status and household composition.
N/A	VH894198 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 socio-economic status and household composition.

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH894202 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 socio-economic status and household composition.
N/A	VH894204 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 socio-economic status and household composition.
N/A	VH894209 How many adults 18 years and older live with you in Home #2? Ⓐ 1 Ⓑ 2 Ⓒ More than 2 **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863933 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 socio-economic status and household composition.

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863771 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863781 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863784 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863791 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863795 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863863 In the last month, has **your mother** worked for pay? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. 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

2019 Operational Grade 4 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863907 In the last month, did **your mother** work at one job, or did this adult work at two or more jobs? Ⓐ One job Ⓑ Two or more jobs Ⓒ I don't know. **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother, your second mother, your stepmother, your foster mother, your grandmother or female relative , the female adult taking care of you, your father, your second father, your stepfather, your foster father, your grandfather or male relative, the male adult taking care of you

Appendix K-1bd: Operational Grade 4 ESQ

VH863709

1. In the last month, how many different homes have you been living in? (If you have moved in the last month, **do not** count the home where you used to live.)

Ⓐ Zero homes

Ⓑ One home

Ⓒ Two homes

Ⓓ Three or more homes

VH894192

2. Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894196

3. How many adults 18 years and older live with you?

Ⓐ 1

Ⓑ 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?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894202

5. How many adults 18 years and older live with you in Home #1?

Ⓐ 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?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894209

7. How many adults 18 years and older live with you in Home #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

Ⓓ 4

Ⓔ More than 4

VH863771

9. 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: _____)

VH863781

10. You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1?

Ⓐ Mother

Ⓑ 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: _____)

11. 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: _____)

12. 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: _____)

VH863795

13. 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: _____)

VH863863

14. In the last month, has **your mother** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863875

15. In the last month, has **your second mother** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863867

16. 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?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863877

19. In the last month, has **the female adult taking care of you** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863882

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

Ⓒ I don't know.

VH863890

23. In the last month, has **your foster father** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

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?

Ⓐ 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?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863909

28. In the last month, did **your stepmother** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863911

29. In the last month, did **your foster mother** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863913

30. In the last month, did **your grandmother or female relative** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863918

31. In the last month, did **the female adult taking care of you** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863919

32. In the last month, did **your father** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863929

33. In the last month, did **your second father** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863920

34. In the last month, did **your stepfather** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863924

35. In the last month, did **your foster father** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863927

36. In the last month, did **your grandfather or male relative** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863930

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

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863709 In the last month, how many different homes have you been living in? (If you have moved in the last month, **do not** count the home where you used to live.) Ⓐ Zero homes Ⓑ One home Ⓒ Two homes Ⓓ Three or more homes **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH894192 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	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH894196 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 socio-economic status and household composition.
N/A	VH894198 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 socio-economic status and household composition.

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH894202 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 socio-economic status and household composition.
N/A	VH894204 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 socio-economic status and household composition.
N/A	VH894209 How many adults 18 years and older live with you in Home #2? Ⓐ 1 Ⓑ 2 Ⓒ More than 2 **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863933 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 socio-economic status and household composition.

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863771 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863781 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863784 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863791 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863795 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863810 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	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother / your second mother / your stepmother / your foster mother / your grandmother or female relative / the female adult taking care of you / your father / your second father / your stepfather / your foster father / your grandfather or male relative / the male adult taking care of you

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863863 In the last month, has **your mother** worked for pay? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. 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

2019 Operational Grade 8 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863907 In the last month, did **your mother** work at one job, or did this adult work at two or more jobs? Ⓐ One job Ⓑ Two or more jobs Ⓒ I don't know. **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother, your second mother, your stepmother, your foster mother, your grandmother or female relative , the female adult taking care of you, your father, your 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.)

Ⓐ Zero homes

Ⓑ One home

Ⓒ Two homes

Ⓓ Three or more homes

VH894192

2. Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894196

3. How many adults 18 years and older live with you?

Ⓐ 1

Ⓑ 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?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894202

5. How many adults 18 years and older live with you in Home #1?

Ⓐ 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?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894209

7. How many adults 18 years and older live with you in Home #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

Ⓓ 4

Ⓔ More than 4

VH863771

9. 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: _____)

VH863781

10. You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1?

Ⓐ Mother

Ⓑ 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: _____)

11. 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: _____)

12. 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: _____)

VH863795

13. 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: _____)

VH863810

14. 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.

VH863822

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.

VH863814

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.

VH863820

18. How far in school did **your grandmother or female relative** go?

Ⓐ She did not finish high school.

Ⓑ She graduated from high school or has a high school degree.

Ⓒ She had some college but did not graduate.

Ⓓ She graduated from college.

Ⓔ I don't know.

VH863825

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.

VH863856

21. How far in school did **your second father** go?

Ⓐ He did not finish high school.

Ⓑ He graduated from high school or has a high school degree.

Ⓒ He had some college but did not graduate.

Ⓓ He graduated from college.

Ⓔ I don't know.

VH863846

22. How far in school did **your stepfather** go?

Ⓐ He did not finish high school.

Ⓑ He graduated from high school or has a high school degree.

Ⓒ He had some college but did not graduate.

Ⓓ He graduated from college.

Ⓔ I don't know.

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.

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.

Ⓓ He graduated from college.

Ⓔ I don't know.

VH863863

26. In the last month, has **your mother** worked for pay?

Ⓐ 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.

VH863867

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?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863877

31. In the last month, has **the female adult taking care of you** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863882

32. In the last month, has **your father** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863898

33. In the last month, has **your second father** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know

VH863885

34. In the last month, has **your stepfather** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863890

35. In the last month, has **your foster father** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

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?

Ⓐ 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.

VH863909

40. In the last month, did **your stepmother** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863911

41. In the last month, did **your foster mother** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863913

42. In the last month, did **your grandmother or female relative** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863918

43. In the last month, did **the female adult taking care of you** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

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.

VH863927

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.

VH863930

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

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863709 In the last month, how many different homes have you been living in? (If you have moved in the last month, **do not** count the home where you used to live.) Ⓐ Zero homes Ⓑ One home Ⓒ Two homes Ⓓ Three or more homes **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH894192 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	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH894194 Not including you, 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 socio-economic status and household composition.
N/A	VH894198 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 socio-economic status and household composition.

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH894200 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 socio-economic status and household composition.
N/A	VH894204 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 socio-economic status and household composition.
N/A	VH894207 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 socio-economic status and household composition.
N/A	VH863933 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 socio-economic status and household composition.

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863771 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863781 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863784 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.
N/A	VH863791 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863795 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: _____) **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition.

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863810 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	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother / your second mother / your stepmother / your foster mother / your grandmother or female relative / the female adult taking care of you / your father / your second father / your stepfather / your foster father / your grandfather or male relative / the male adult taking care of you

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
	VH863863 In the last month, has **your mother** worked for pay? Ⓐ Yes Ⓑ No Ⓒ I don't know. **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. 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

2019 Operational Grade 12 Extended Student Questionnaire (ESQ) Student			
Previous item	**2019 item**	**D/A/ R/NC+**	**Rationale**
N/A	VH863907 In the last month, did **your mother** work at one job, or did this adult work at two or more jobs? Ⓐ One job Ⓑ Two or more jobs Ⓒ I don't know. **Issue:** Socioeconomic Status	A	This item was added as part of the ESQ special study for enhanced measurement of socio-economic status and household composition. Please note that this item includes the caregiver title provided by the respondent in a prior item. Possible answers include: your mother, your second mother, your stepmother, your foster mother, your grandmother or female relative , the female adult taking care of you, your father, your second father, your stepfather, your foster father, your grandfather or male relative, the male adult taking 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

Ⓓ Three or more homes

VH894192

2. Think about all the people who live with you in your home. Not including you, how many children 17 years or younger live with you?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894194

3. Not including you, how many adults 18 years and older live with you?

Ⓐ 1

Ⓑ 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?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894200

5. Not including you, how many adults 18 years and older live with you in Home #1?

Ⓐ 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?

Ⓐ 0

Ⓑ 1

Ⓒ 2

Ⓓ More than 2

VH894207

7. Not including you, how many adults 18 years and older live with you in Home #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

Ⓓ 4

Ⓔ More than 4

VH863771

9. 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: _____)

VH863781

10. You said more than one adult is taking care of you. Think about the first adult (you can tell us about up to four adults). We will call them Adult #1. Who is Adult #1?

Ⓐ Mother

Ⓑ 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: _____)

11. 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: _____)

12. 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: _____)

VH863795

13. 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: _____)

VH863810

14. 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.

VH863822

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.

VH863814

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.

VH863820

18. How far in school did **your grandmother or female relative** go?

Ⓐ She did not finish high school.

Ⓑ She graduated from high school or has a high school degree.

Ⓒ She had some college but did not graduate.

Ⓓ She graduated from college.

Ⓔ I don't know.

VH863825

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.

VH863856

21. How far in school did **your second father** go?

Ⓐ He did not finish high school.

Ⓑ He graduated from high school or has a high school degree.

Ⓒ He had some college but did not graduate.

Ⓓ He graduated from college.

Ⓔ I don't know.

VH863846

22. How far in school did **your stepfather** go?

Ⓐ He did not finish high school.

Ⓑ He graduated from high school or has a high school degree.

Ⓒ He had some college but did not graduate.

Ⓓ He graduated from college.

Ⓔ I don't know.

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.

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.

Ⓓ He graduated from college.

Ⓔ I don't know.

VH863863

26. In the last month, has **your mother** worked for pay?

Ⓐ 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.

VH863867

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?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863877

31. In the last month, has **the female adult taking care of you** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863882

32. In the last month, has **your father** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863898

33. In the last month, has **your second father** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know

VH863885

34. In the last month, has **your stepfather** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

VH863890

35. In the last month, has **your foster father** worked for pay?

Ⓐ Yes

Ⓑ No

Ⓒ I don't know.

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?

Ⓐ 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.

VH863909

40. In the last month, did **your stepmother** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863911

41. In the last month, did **your foster mother** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863913

42. In the last month, did **your grandmother or female relative** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

VH863918

43. In the last month, did **the female adult taking care of you** work at one job, or did this adult work at two or more jobs?

Ⓐ One job

Ⓑ Two or more jobs

Ⓒ I don't know.

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.

VH863927

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.

VH863930

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.