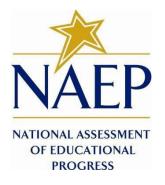
NATIONAL CENTER FOR EDUCATION STATISTICS NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

National Assessment of Educational Progress (NAEP) 2021 Materials Update #1

Appendix F1

NAEP 2019 Computer Assess and Familiarity Study (CAFS) Student and Teacher Survey Questionnaires

OMB# 1850-0928 v.20



April 2020

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The 2021 Student Operational Grade 4 CAFS survey questionnaires were previously submitted and approved for use in 2019 (OMB# 1850-0928 v.17, Appendix F, pp 334-342) and remain the same for 2021 administration.

Appendix F1-A: 2019 Student Operational Grade 4 CAFS

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

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

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 grade
- 3. When did you first use a

tablet? $\mathbf A$ Never until this

assessment ${f B}$ 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 grade

VH270100

VH270138

- 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 grade

- **5.** On a weekday, about how many hours do you use a laptop or desktop computer for doing schoolwork, including homework?
 - A None
 - B Less than an hour
 - C 1 to 2 hours
 - D 2 to 3 hours
 - E 3 to 4 hours
 - F More than 4 hours

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

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

VH50	7657
v n59	100/

VH270165

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

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

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

- 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).

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.
- **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	А	в	С	D	Е	VH270172
b. Write a paper for school that was longer than a page	А	в	С	D	Е	VH270173
c. Search the Internet for a school project	А	в	С	D	Е	VH270174
d. Practice things in mathematics that you were having trouble learning	А	в	С	D	E	VH270181
e. Practice things in reading that you were having trouble learning	А	в	С	D	E	VH270177
f. Take a test	А	в	С	D	E	VH270175

	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	А	в	С	D	Е	VH270183
b. Write a paper for school that was longer than a page	А	в	С	D	Е	VH270188
c. Search the Internet for a school project	А	в	С	D	Е	VH270184
d. Practice things in mathematics that you were having trouble learning	А	в	С	D	E	VH270185
e. Practice things in reading that you were having trouble learning	А	в	С	D	Е	VH270186
f. Take a test	A	в	C	D	E	VH270192

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

VH270130

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

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

I definitely I probably I definitely I probably can. can't. can't. can. a. Write sentences and paragraphs using a \mathbf{A} \mathbf{B} \mathbf{C} \mathbf{D} VH270229 computer b. Edit text using a computer \mathbf{B} \mathbf{C} \mathbf{D} VH270218 Α c. Use a touchscreen on a computer, tablet, or Α \mathbf{B} \mathbf{C} \mathbf{D} VH270230 smartphone d. Look up the meaning of a Α \mathbf{B} \mathbf{C} \mathbf{D} VH270225 word using a computer e. Draw a picture using a \mathbf{C} Α \mathbf{B} \mathbf{D} VH270226 computer

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

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

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

The 2021 Student Operational Grade 8 CAFS survey questionnaires were previously submitted and approved for use in 2019 (OMB# 1850-0928 v.17, Appendix F, pp 342-356) and remain the same for 2021 administration

Appendix F1-B: 2019 Student Operational Grade 8 CAFS

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

VH270138

			· · · · ·
	Ye	Νο	
	S		
a. A laptop or desktop computer that is only for your use	А	В	VH270141
b. A laptop or desktop computer that is shared between you and others	А	В	VH270142
c. A tablet that is only for your use	А	В	VH270139
d. A tablet that is shared between you and others	А	В	VH270140
e. Wi-Fi or some other Internet connection you can use	А	В	VH270143
f. A smartphone that is only for your use	A	В	VH270144

VH270145

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

	F	W
3. When did you first use a		h e
tablet? A Never until this		n
assessment ${f B}$ Before I was		Ι
in kindergarten ${f C}$ When I		w a
was in kindergarten		S
D When I was in first, second, or third grade		i
E When I was in fourth or fifth grade		n

sixth, seventh, or eighth grade

- 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

VH270147

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

- A None
- B Less than an hour
- C 1 to 2 hours
- D 2 to 3 hours
- E 3 to 4 hours
- F More than 4 hours

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

- Ye No S a. How to type on a computer keyboard Α VH270150 \mathbf{B} using the correct fingers b. How to write sentences and VH270151 Α \mathbf{B} paragraphs using a computer c. How to edit text using a computer VH270164 Α \mathbf{B} d. How to search for information on the VH270152 Α \mathbf{B} Internet e. How to use a tablet \mathbf{B} VH270156 Α f. How to look up the meaning of a word VH270157 \mathbf{B} Α using a computer g. How to create a spreadsheet using a VH270154 Α \mathbf{B} computer h. How to create a presentation using a Α \mathbf{B} VH270155 computer i. How to run simulations using a computer VH270159 Α \mathbf{B} j. How to write a computer program or app Α VH270160 \mathbf{B} k. How to create a graph or chart VH270161 Α \mathbf{B} using a computer I. How to troubleshoot problems with a VH270158 Α \mathbf{B} computer
- 7. Were you taught any of the following **at school**? Select **one** answer choice on vH270149 each row.

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

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

VH270116

VH270165

- **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).

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.

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

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

	Never	A few times	Once every few weeks	About once a week	More than once a week	
a. Write a short paper (less than a page) for school	А	в	С	D	E	VH270183
b. Write a paper for school that was longer than a page	А	в	С	D	E	VH270188
c. Search the Internet for a school project	А	в	С	D	E	VH270184
d. Practice things in mathematics that you were having trouble learning	А	в	С	D	Е	VH270185
e. Practice things in reading that you were having trouble learning	А	в	С	D	Е	VH270186
f. Take a test	А	в	С	D	E	VH270192
g. Create a map	А	в	С	D	E	VH270189
h. Work on a website or blog that you maintain	Α	в	С	D	E	VH270190
i. Create a multimedia presentation on your own	Α	В	С	D	E	VH270191
j. Work collaboratively with a team of students to create a multimedia presentation	А	в	С	D	E	VH270187

- **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.

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

- A Paper and pencil
- B Computer

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

	l definitely can't.	l probably can't.	l probably can.	l definitely can.	
a. Write sentences and paragraphs using a computer	А	в	С	D	VH27022 9
b. Edit text using a computer	А	В	C	D	VH27021 8
c. Use a touchscreen on a computer, tablet, or smartphone	А	В	С	D	VH27023 0
d. Look up the meaning of a word using a computer	А	в	С	D	VH27022 5
e. Draw a picture using a computer	А	в	С	D	VH27022 6
f. View or download digital media	А	в	С	D	VH27021 6
g. Create a presentation using a computer	А	в	C	D	VH27022 8
h. Create a spreadsheet using a computer	А	в	С	D	VH27023 1
i. Install new software or apps	А	в	C	D	VH27021 9
j. Participate in online discussions, forums, social networking sites, or virtual communities	А	в	С	D	VH27022 0
k. Maintain a website or blog	А	В	С	D	VH27022 1
I. Search for information on the Internet	А	в	С	D	VH27022 2
m. Run simulations using a computer	А	в	С	D	VH27022 3
n. Create a graph or chart using a computer	А	в	С	D	VH27022 4
o. Write a computer program or app	А	в	С	D	VH27022 7
p. Troubleshoot a problem with a computer	А	в	С	D	VH27023 2
 q. Figure out how to use new functions of a digital device that I am not yet familiar with 	А	в	С	D	VH27021 7

- **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>?
 - A 0
 - B 1
 - C 2
 - D 3
 - E 4
 - F 5
 - G 6
 - Н 7
 - ...,
 - I 8
 - J 9
 - K 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** <u>Linda</u> is?

- A 0
- B 1
- C 2
- D 3
- E 4
- F 5
- G 6
- Н 7
- 1 8
- | 9
- , -, -
- K 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** <u>Tom</u> is?

- A 0
- B 1
- C 2
- D 3
- E 4
- F 5
- G 6
- H 7
- 1 8
- | 9
- к 10

computer and has experience with creating complex tables and charts. Susan can type fast and accurately with 10 fingers without looking at the computer keyboard. She also knows a couple of programming languages. This school year, she built her first app.

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

A 0

- B 1
- C 2
- D 3
- E 4
- F 5
- G 6
- H 7
- 1 8
- J 9
- К 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 <u>Kevin</u> is?

- A 0
- B 1
- C 2
- D 3
- E 4
- F 5
- G 6
- Н 7
- 1 8
- . .
- J 9
- K 10

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

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

The 2021 Teacher Operational Grades 4 & 8 CAFS survey questionnaires were previously submitted and approved for use in 2019 (OMB# 1850-0928 v.17, Appendix F, pp 657-661) and remain the same for 2021 administration

Appendix F1-C: 2019 Teacher Operational Grade 4 & 8 CAFS

Questions on Teachers' Use of Digital Technology for Cognitive Testing

We are interested in how digital technology is being used in your classroom as part of a larger study on the role of student access to and familiarity with digital technology in student academic performance.

When we use the term "digital technology", we include *devices* such as desktops, laptops (including Chromebooks and convertible laptops), tablets, and smart phones, as well as *software* such as computer programs, digital apps for smartphones and tablets, and web-based or cloud-based applications.

- 1. To what degree is digital technology (as defined above) used in your school to help students meet specific goals related to the school's curriculum?
 - a. <u>Not at all</u>
 - b. ____To a minor degree
 - c. ____To a substantial degree
 - d. ____Completely
- 2. To what degree does the *curriculum* in your school demand that *students use* digital technology to demonstrate learning outcomes, if at all?
 - a. ____Not at all
 - b. ____To a minor degree
 - c. ____To a substantial degree
 - d. ____Completely
- 3. How important is it for *students in your classes* to use digital technology in order to understand and apply the concepts that you teach:
 - a. ____Not at all important
 - b. ____Somewhat important
 - c. ____Substantially important
 - d. ____Critically important
- 4. To what degree does your instruction depend upon *your own use* of digital technology to support students in mastering important learning objectives?
 - a. <u>Not at all</u>
 - b. ____To a minor degree
 - c. ____To a substantial degree
 - d. ____Completely

5. There are various ways that teachers can use digital technology to teach key concepts. Please indicate how often *you* use the following as part of your instruction:

	Never	Occasionally	Often
a. Interactive whiteboards	1	2	3
b. Slideshow presentation tools	1	2	3
c. Videos found on the Internet	1	2	3
d. Photographs, diagrams, and infographics found on the Internet	1	2	3
e. Digital graphic organizers to visually represent and connect key concepts	1	2	3

6. *** There are various ways that students can use digital technology as part of instruction. Please indicate how often *students* are *required* to use digital technology in your class for the following:

	Never	Occasionally	Often
a. Participating in whole-class activities	1	2	3
b. Participating in small group activities	1	2	3
c. Doing in-class individual activities	1	2	3
d. Doing homework	1	2	3

7. *** Digital technology can be used to support students with differing learning needs. Please indicate how often *you* use digital technology for the following:

	Never	Occasionally	Often
a. To provide additional practice for low performing students	1	2	3
b. To extend learning opportunities for high performing students	1	2	3
c. To provide a modification or accommodation to comply with an IEP	1	2	3
d. To provide support for students who are English Language Learners	1	2	3

8. *** With regards to providing additional practice for low performing students...

8 a how often do	you ask them to complete the work using:

	Never	Occasionally	Often
a. Paper and pencil	1	2	3
b. Desktop computer	1	2	3
c. Laptop computer	1	2	3
d. Tablet	1	2	3
e. Smartphone	1	2	3

8.b ...which of the above are you most likely to have students use (choose one)?

- ____paper and pencil
- ____Desktop computer
- ____Laptop computer
- ____Tablet
- ____Smartphone
- 9. There are various ways that digital technology and tools can be used to support student learning. Please indicate how often your instructional activities require your students to use the following technologies:

	Never	Occasionally	Often
a. Digital textbooks and reading materials			
to expand the range of available materials	1	2	3
beyond print			
b. Informational websites to build			
background knowledge about key	1	2	3
concepts			
c. Web-based search engines to answer	1	2	3
questions about key concepts	T	2	5
d. Library databases (e.g., Google Scholar)	1	2	3
to access specialized information	T	2	5
e. Digital graphic organizers to visually	1	2	3
represent and connect key concepts	L	2	3
f. Digital collaborative writing and			
annotation tools (e.g., Google Docs) to	1	2	3
jointly compose, share, and comment on	T	2	5
writing			
g. Digital annotation tools (e.g., to highlight,			
markup, or comment on a text, image, or	1	2	3
photograph)			
h. Multimedia presentation tools to share	1	2	3
ideas with an audience	T	2	3

i. Screencasting tools to record a video that documents thinking about digital work on the screen	1	2	3
j. Digital composition tools to design creative products that combine text, photos, video, animation, sound, music, and/or audio narration	1	2	3
k. Simulation tools to explore real-life phenomena	1	2	3
I. Mathematical modeling tools to expand opportunities to engage in mathematical practices	1	2	3
m. Virtual laboratories to carry out scientific inquiries	1	2	3
n. Social media tools to share, view, and comment on each other's work using social media (e.g., blogs, Twitter)	1	2	3
o. Student portfolio tools to compile, organize, and annotate work that represents learning over time	1	2	3

10. Please indicate how often you provide opportunities for your students to use digital technology to do the following:

	Never	Occasionally	Often
a. My students have opportunities to consume (e.g. view, read) and construct meaning from information on the Internet created by others	1	2	3
b. My students have opportunities to_ create or produce and share their own ideas with others on the Internet	1	2	3