Georgia

Milestones

Assessment System

Study/Resource Guide for Students and Parents

Grade 5

Study/Resource Guide

The Study/Resource Guides are intended to serve as a resource for parents and students. They contain practice questions and learning activities for each content area. The standards identified in the Study/Resource Guides address a sampling of the state-mandated content standards.

For the purposes of day-to-day classroom instruction, teachers should consult the wide array of resources that can be found at www.georgiastandards.org.

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THE GEORGIA MILESTONES ASSESSMENT SYSTEM

Dear Student,

This **Georgia Milestones Grade 5 Study/Resource Guide for Students and Parents** is intended as a resource for parents and students. It contains sample questions and helpful activities to give you an idea of what test questions look like on Georgia Milestones and what the Grade 5 End-of-Grade (EOG) assessment covers.

These sample questions are fully explained and will tell you why each answer is either correct or incorrect.

Get ready—open this guide—and get started!

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HOW TO USE THIS GUIDE

Let's get started!

- **Get it together!**
  - This guide
  - Pen or pencil
  - Highlighter
  - Paper

- **Gather materials**
  - Classroom notebooks
  - Textbooks

- **Study space**
  - Find a comfortable place to sit.
  - Use good lighting.
  - Time to focus—no TV, games, or phones!

- **Study time**
  - Set aside some time after school.
  - Set a goal—how long are you going to study?
  - Remember—you cannot do this all at one time.
  - Study a little at a time every day.

- **Study buddy**
  - Work with a friend, sister, brother, parent—anyone who can help!
  - Ask questions—it is better to ask now and get answers.
  - Make sure you know what you need to do—read the directions before you start.
  - Ask your teacher if you need help.

- **Test-taking help**
  - Read each question and all of the answer choices carefully.
  - Be neat—use scratch paper.
  - Check your work!

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PREPARING FOR TAKING TESTS

Getting ready!

Here are some ideas to think about before you take a test.

- Get plenty of rest and eat right. Take care of your body and your mind will do the rest.
- If you are worried about a test, don't be. Talk with a teacher, parent, or friend about what is expected of you.
- Review the things you have learned all year long. Feel good about it.
- Remember that a test is just one look at what you know. Your class work, projects, and other tests will also show your teachers how much you have learned throughout the year.

Try your best!

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OVERVIEW OF THE END-OF-GRADE ASSESSMENT

What is on the End-of-Grade Assessment?

- **English Language Arts (ELA)**
- **Mathematics**
- **Science**

TYPES OF ITEMS

- **Selected-response items**—also called multiple-choice questions
  - Appear in English Language Arts (ELA), Mathematics, and Science
  - There is a question, problem, or statement that is followed by four answer choices.
  - There is only ONE right answer, so read EACH answer choice carefully.
  - Eliminate the answers that you know are wrong.
  - Look for the answer that is the BEST choice.

- **Technology-enhanced items**
  - These types of items appear in English Language Arts (ELA), Mathematics, and Science and are worth one or two points. Partial credit may be awarded on two-point items if you select some but not all of the correct answers or if you get one part of the question correct but not the other part.
  - There is a question, problem, or statement.
  - Read the directions for each item carefully.
  - Eliminate the answers you know are wrong.
  - In multi-select items, you will be asked to select more than one right answer.
  - In multi-part items, the items will have more than one part. You will need to provide an answer in each part. Sometimes, the different parts of the items are dependent on each other.
  - In evidence-based selected-response (EBSR) items, you will be asked to answer the first part of the question. Then, you will answer the second part of the question based on the answer to the first part.
  - In drag-and-drop items, you will be asked to use a mouse, touchpad, or touchscreen to move responses to designated areas on the screen.
  - In drop-down menu items, you will be asked to use a mouse, touchpad, or touchscreen to open a drop-down menu and select an option from the menu. A drop-down menu item may have more than one drop-down menu.
  - In keypad-input items, you will be asked to use a physical keyboard or the pop-up keyboard on a touchscreen to type a number, expression, or equation into an answer box.
  - In coordinate-graph items, you will be asked to use a mouse, touchpad, or touchscreen to draw lines and/or plot points on a coordinate grid on the screen.
  - In line-plot items, you will be asked to use a mouse, touchpad, or touchscreen to place Xs above a number line to create a line plot.

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- In bar-graph items, you will be asked to use a mouse, touchpad, or touchscreen to select the height of each bar to create a bar graph.
- In number-line items, you will be asked to use a mouse, touchpad, or touchscreen to plot a point and/or represent inequalities.
- Since some technology-enhanced items in this guide were designed to be used in an online, interactive-delivery format, some of the item-level directions will not appear to be applicable when working within the format presented in this document (for example, "Move the characteristics into boxes," "Create a scatter plot," or "Click To Respond").
- This icon ➲ identifies special directions that will help you answer technology-enhanced items as shown in the format presented within this guide. These directions do not appear in the online version of the test but explain information about how the item works that would be easily identifiable if you were completing the item in an online environment.
- To practice using technology-enhanced items in an online environment very similar to how they will appear on the online test, visit "Experience Online Testing Georgia."
  1. Go to the website "Welcome to Experience Online Testing Georgia" (http://gaexperienceonline.com/).
  2. Select "Test Practice."
  3. On the right side of the page, you will see "End-of-Grade (EOG) Spring Main." Select "Online Tools Training" which appears underneath it.
  4. Select "EOG Test Practice."
  5. Select "Technology Enhanced Items."
  6. Select "All Grades."
  7. You will be taken to a login screen. Use the username and password provided on the screen to log in and practice navigating technology-enhanced items online.

  Please note that Google Chrome is the only supported browser for this public version of the online testing environment.

✻ **Constructed-response items**

- Appear in English Language Arts (ELA) only
- There is a question, problem, or statement but no answer choices.
- Read the question carefully and think about what you are asked to do.
- You must write your answer.
- Go back to the passage to look for details and information.
- You will be scored on accuracy and how well you support your answer with evidence.

✻ **Extended constructed-response items**

- Appear in English Language Arts (ELA) only
- These are similar to the constructed-response items.
- Sometimes they have more than one part, or they require a longer answer.
- Check that you have answered all parts of the question.

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- **Extended writing-response**
  - Appears in English Language Arts (ELA) only
  - There is a question, problem, or statement.
  - You may be asked to do more than one thing.
  - You will be asked to read two passages and then write an essay.
  - You will be scored on how well you answer the question and the quality of your writing.
  - Organize your ideas clearly.
  - Use correct grammar, punctuation, and spelling.
  - Support your answer with evidence from the text.

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DEPTH OF KNOWLEDGE

Test questions are designed with a Depth of Knowledge (DOK) level in mind. As you go from Level 1 to Level 4, the questions get more and more challenging. They take more thinking and reasoning to answer. You may have experienced these types of questions in your classroom as your teachers find ways to challenge you each day.

A Level 1 item may not require as much thinking as a Level 4 item—but that does not mean it's easy.

A Level 4 item may have more than one part or ask you to write something.

Here is some information to help you understand just what a DOK level really is.

Level 1 (Recall of Information)

- Identify, list, or define something.
- Questions may start with *who, what, when*, and *where*.
- Recall facts, terms, or identify information.

Level 2 (Basic Reasoning)

- Think about things—it is more than just remembering something.
- Describe or explain something.
- Answer the questions "how" or "why."

Level 3 (Complex Reasoning)

- Go beyond explaining or describing "how and why."
- Explain or justify your answers.
- Give reasons and evidence for your response.
- Make connections and explain a concept or a "big idea."

Level 4 (Extended Reasoning)

- Complex thinking required!
- Plan, investigate, or apply a deeper understanding.
- These items will take more time to write.
- Connect and relate ideas.
- Show evidence by doing a task, creating a product, or writing a response.

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Depth of Knowledge

Level 1—Recall of Information	
Level 1 asks you to identify, list, or define. You may be asked to recall *who, what, when*, and *where*. You may also be asked to recall facts and terms or identify information in documents, quotations, maps, charts, tables, graphs, or illustrations. Items that ask you to "describe" and/or "explain" could be Level 1 or Level 2. A Level 1 item requires that you just recall, recite, or repeat information.	
Skills Demonstrated	**Question Cues**
• Make observations • Recall information • Recognize formulas, properties, patterns, processes • Know vocabulary, definitions • Know basic concepts • Perform one-step processes • Translate from one representation to another • Identify relationships	• Tell who, what, when, or where • Find • List • Define • Identify; label; name • Choose; select • Compute; estimate • Express as • Read from data displays • Order

Level 2—Basic Reasoning	
Level 2 includes some thinking that goes beyond recalling or repeating a response. A Level 2 "describe" and/or "explain" item would require that you go beyond a description or explanation of information to describe and/or explain a result or "how" or "why."	
Skills Demonstrated	**Question Cues**
• Apply learned information to abstract and real-life situations • Use methods, concepts, and theories in abstract and real-life situations • Perform multi-step processes • Solve problems using required skills or knowledge (requires more than habitual response) • Make a decision about how to proceed • Identify and organize components of a whole • Extend patterns • Identify/describe cause and effect • Make basic inferences or logical predictions from data or text • Interpret facts • Compare or contrast simple concepts/ideas	• Apply • Calculate; solve • Complete • Describe • Explain how; demonstrate • Construct data displays • Construct; draw • Analyze • Extend • Connect • Classify • Arrange • Compare; contrast • Predict

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Level 3—Complex Reasoning	
Level 3 requires reasoning, using evidence, and thinking on a higher level than Level 1 and Level 2. You will go beyond explaining or describing "how and why" to justifying the "how and why" through reasons and evidence. Level 3 items often involve making connections across time and place to explain a concept or a "big idea."	
Skills Demonstrated	**Question Cues**
• Solve an open-ended problem with more than one correct answer • Create a pattern • Generalize from given facts • Relate knowledge from several sources • Draw conclusions • Translate knowledge into new contexts • Compare and discriminate between ideas • Assess value of methods, concepts, theories, processes, and formulas • Make choices based on a reasoned argument • Verify the value of evidence, information, numbers, and data	• Plan; prepare • Create; design • Ask "what if?" questions • Generalize • Justify; explain why; support; convince • Assess • Rank; grade • Test; judge • Recommend • Select • Conclude

Level 4—Extended Reasoning	
Level 4 requires the complex reasoning of Level 3 with the addition of planning, investigating, applying deeper understanding, and/or developing that will require a longer period of time. You may be asked to connect and relate ideas and concepts *within* the content area or *among* content areas in order to be at this highest level. The Level 4 items would be a show of evidence—through a task, a product, or an extended response—that the higher level demands have been met.	
Skills Demonstrated	**Question Cues**
• Analyze and synthesize information from multiple sources • Examine and explain alternative perspectives across a variety of sources • Describe and illustrate how common themes are found across texts from different cultures • Apply mathematical models to illuminate a problem or situation • Design a mathematical model to inform and solve a practical or abstract situation • Combine and synthesize ideas into new concepts	• Design • Connect • Synthesize • Apply concepts • Critique • Analyze • Create • Prove

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ENGLISH LANGUAGE ARTS (ELA)

DESCRIPTION OF TEST FORMAT AND ORGANIZATION

The Grade 5 English Language Arts (ELA) EOG assessment has a total of 51 items.

You will answer a variety of item types on the test. Some of the items are selected-response (multiple-choice), which means you choose the correct answer from four choices. Some items will ask you to write your response using details from the text. There will also be a writing prompt that will ask you to write an essay.

The test will be given in three sections.

- Section 1 will be given on Day 1. You will be given a maximum of 90 minutes to complete the section.
- Sections 2 and 3 will be given over one or two days. You may have up to 80 minutes to complete each section.

CONTENT

The Grade 5 English Language Arts (ELA) EOG assessment will measure the Grade 5 standards that are described at www.georgiastandards.org.

The content of the assessment covers standards that are reported under these domains:

- Reading and Vocabulary
- Writing and Languages

There are two kinds of texts—literary and informational text.

There are two kinds of essays students may be asked to write—an opinion essay and an informational or explanatory essay.

Students will also write an extended constructed-response using narrative techniques. Students may be asked to continue a story or perhaps write a new beginning, for example. The stimulus text may be literary or informational. (Item 5 on page 33 gives an example of a prompt that requires a narrative response.)

ITEM TYPES

The English Language Arts (ELA) portion of the Grade 5 EOG assessment consists of selected-response (multiple-choice), technology-enhanced, constructed-response, extended constructed-response, and extended writing-response items.

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ENGLISH LANGUAGE ARTS (ELA) DEPTH OF KNOWLEDGE EXAMPLE ITEMS

Example items that represent applicable DOK levels are provided for you on the following pages. The items and explanations of what is expected of you to answer them will help you prepare for the test.

All example and sample items contained in this guide are the property of the Georgia Department of Education.

Example Item 1

Selected-Response

DOK Level 1: This is a DOK level 1 item because it requires the student to recall how to indicate the title of a book.

English Language Arts (ELA) Grade 5 Content Domain II: Writing and Language

Standard: ELAGSE5L2d. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

d. Use underlining, quotation marks, or italics to indicate titles of works.

Which sentence shows the correct way to write the title of a book?

A. During the summer I read a great novel, Because of Winn-Dixie.
B. During the summer I read a great novel, BECAUSE OF WINN-DIXIE.
C. During the summer I read a great novel, Because of Winn-Dixie.
D. During the summer I read a great novel, “Because of Winn-Dixie.”

Correct Answer: C

Explanation of Correct Answer: The correct answer is choice (C) During the summer I read a great novel, Because of Winn-Dixie. Underlining or italics are appropriate for book titles. Choice (A) does not show the reader that Because of Winn-Dixie is a title. Choice (B) uses all caps, which is not correct for a book title. Choice (D) uses a format that would be appropriate for a short story but not for a novel.

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Read the article and answer example items 2 and 3.

Making Hockey Safer

Hockey is a popular sport in North America. Players skate across a sheet of ice. They use special sticks to pass the puck, a small disc of hard rubber. Then the players try to score by shooting the puck into the opposing goal. The game moves fast, so it can be dangerous without the right gear for protection. Fortunately, protective equipment has improved over the years.

History

When the National Hockey League began in 1917, players wore minimal gear. Helmets were not required. Goaltenders did not wear masks. This allowed players to see everything on the ice. However, it also increased the risk of getting hurt. Surprisingly, players were not forced to wear helmets until 1979. This was only required of new players, though. Players who had signed with the league before 1979 could choose for themselves. The last player to skate without a helmet retired in 1997.

Present

Today, the league is clearer on player safety. All new players in the National Hockey League have to wear a partial visor on their helmets. A visor is a clear shield that protects the eyes. The rule applies to new players and is in response to eye injuries over the years. Players who have already been in the league do not have to follow the rule. When asked why they didn't want the added protection, some players claimed that wearing the gear makes it hard for them to see the puck clearly. Does this new rule mean that audiences will never see players without helmets shoot the puck? Not exactly. Another rule allows players to continue skating if their helmets fall off. But, once the players leave the ice, they cannot return without helmets. Goalies, however, have a different rule. If they lose their helmets, play stops immediately.

The Future

Each year, experts try to make hockey safer. Some of their attempts are successful, while others are not. Clearly, the league and the players need to work together to make the game safer. The debate continues over how much protection is enough.

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Example Item 2

Selected-Response

DOK Level 2: This is a DOK level 2 item because the correct response is based directly on details and evidence from the text.

English Language Arts (ELA) Grade 5 Content Domain I: Reading and Vocabulary

Genre: Informational/Explanatory

Standard: ELAGSE5RI1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

Which sentence from the article BEST supports the idea that the National Hockey League now has a stronger focus on safety?

A. The game moves fast, so it can be dangerous without the right gear for protection.
B. When the National Hockey League began in 1917, players wore minimal gear.
C. The rule applies to new players and is in response to eye injuries over the years.
D. Another rule allows players to continue skating if their helmets fall off.

Correct Answer: C

Explanation of Correct Answer: The correct answer is choice (C) The rule applies to new players and is in response to eye injuries over the years. The goal of the rule the sentence refers to is to protect players from injury. Choice (A) is incorrect. This is a reason for the new rule. Choice (B) is incorrect. This sentence tells only how much gear players wore at the time professional hockey began. Choice (D) is incorrect. This is an exception to the safety rule.

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Example Item 3

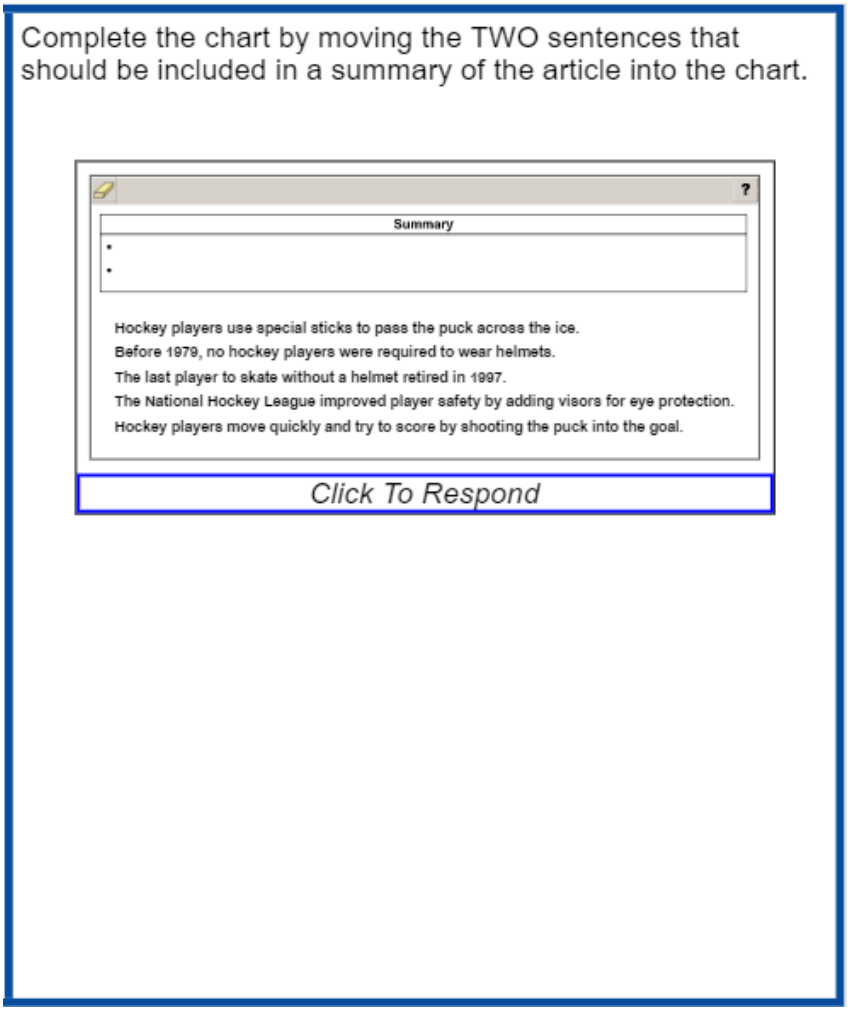
Drag-and-Drop Technology-Enhanced

DOK Level 3: This is a DOK level 3 item because it requires the students to think about what they read and to consider the text as a whole when summarizing the key ideas that are developed over the course of the text.

English Language Arts (ELA) Grade 5 Content Domain I: Reading and Vocabulary

Genre: Informational/Explanatory

Standard: ELAGSE5RI2. Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.



Due to the size of the response area, this item has a “Click To Respond” button on the screen. Clicking this button will bring up the response area at full size.

Go on to the next page to finish example item 3.

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Example Item 3. ***Continued*.**

Summary
•
•

Hockey players use special sticks to pass the puck across the ice.

Before 1979, no hockey players were required to wear helmets.

The last player to skate without a helmet retired in 1997.

The National Hockey League improved player safety by adding visors for eye protection.

Hockey players move quickly and try to score by shooting the puck into the goal.

Use a mouse, touchpad, or touchscreen to move the descriptions below the chart into the chart next to the bullets.

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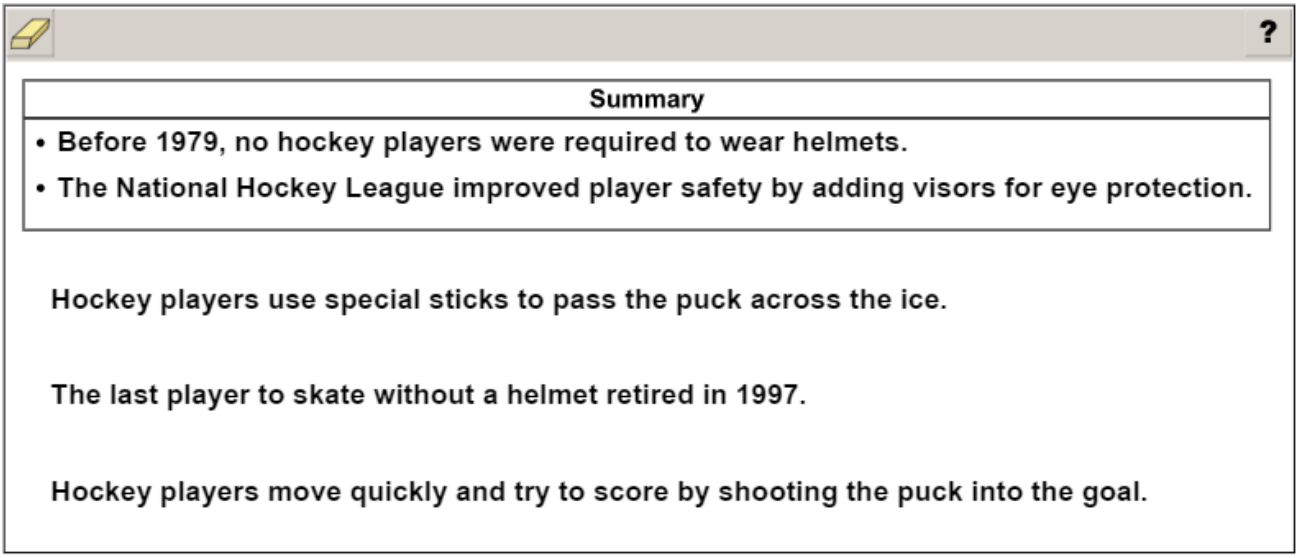
Example Item 3. *Continued*.

Scoring Rubric

Points	Description
2	The student correctly fills in both bullets (order within the box does not matter).
1	The student correctly fills in one bullet (order within the box does not matter).
0	The student does not correctly fill in either bullet.

Exemplar Response

The correct response is shown below.



The two correct responses are “Before 1979, no hockey players were required to wear helmets,” and “The National Hockey League improved player safety by adding visors for eye protection.” These responses are correct because they reference key details from the passage that summarize the topic of hockey safety. NOTE: The response order does not affect scoring.

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Example Item 4

Extended Writing-Response

DOK Level 4: This is a DOK level 4 item because the student must plan and write an essay and evaluate information from two passages in order to form an opinion.

English Language Arts (ELA) Grade 5 Content Domain II: Writing and Language

Genre: Opinion

Standards:

ELAGSE5W1. Write opinion pieces on topics or texts, supporting a point of view with reasons.

ELAGSE5L1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

ELAGSE5L2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

This section of the test assesses your skill to comprehend reading passages and use information from the passages to write an opinion essay.

Before you begin writing your essay, you will read two passages.

As you read the passages, think about details you may use in an opinion essay about the development of wind energy.

These are the titles of the passages you will read:

1. The Wind Energy Trap
2. Winning with Wind

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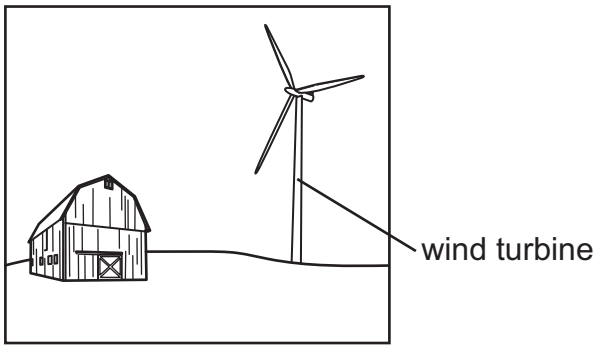
The Wind Energy Trap



Wind power lets people capture and use wind for energy. The structures that capture wind are called wind turbines. They are tall structures with blades similar to propellers on aircrafts. The blades turn in the wind to generate electricity. Supporters applaud wind for its environmental friendliness, but that is not the whole story. Wind farms, groups of turbines, may not emit air pollution or destroy habitats, but they do impact nature and humans.

First, the blades create noise pollution. When turning, the heavy blades produce significant noise. Some blame this noise for confusing birds and causing them to fly toward the noise and perish. Some humans living near wind farms have complained about this sound too. Farms that are too close may have to deal with constant noise. It is easy to support wind farms when you don't have to live next to one.

Wind energy is unreliable. It is plentiful when it is windy outside, but what happens during calm days? You can't store wind energy like you can solar energy. You can't allow it to build up for weeks to make up for calm days. There are some battery-powered storage options, but these are not used everywhere.

Energy from wind is also inconvenient. Windy conditions don't always match up with the need for electricity. For example, winds might increase at night when the demand for electricity is lower. When people are sleeping, they don't need as much power.

Wind farms are more likely to be located in rural areas, away from large groups of people. But these large populations are the ones who need the extra energy. The only way to get that energy to the city is to build transmission lines, which are cables that let electricity move from one place to another. This is very expensive and time-consuming. Spending money to transmit or send wind power erases any savings wind power may have created.

Wind farms also require a large amount of space. You can't just put a wind farm anywhere. For instance, a hilly area might have trouble catching wind, as the hills break up the airflow. Some farmers don't want wind farms taking up valuable acres of land. Others do not like the look of wind farms. To please both groups, wind farms would need to be moved to areas with no people. There again, the cost of installing lines to send the power to a city would not make sense.

While wind energy may have some benefits, the costs are too big to ignore. People do not want the noise pollution. Birds fly into the tall structures. The energy is not always available when needed. Perhaps most importantly, few people want wind farms on their land. It is clear that wind is not the answer to our energy needs.

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Winning with Wind

It is very easy to take electricity for granted. We simply flip a switch and our lights turn on. Plug in a toaster, and bread cooks to a crisp. Both of these simple but important things are possible because of energy. One of the most promising types of energy comes from wind. It is plentiful, pollution free, and cheap.

Wind energy is a type of solar energy. As long as the sun exists, wind will exist. It will never run out. Other resources like natural gas and oil will run out some day. No matter how much wind power is used, some amount of its energy will be available tomorrow.

So far, there is no energy source completely free from consequences. However, wind energy has the least impact on the environment by far. There is no digging, mining, or injecting chemicals into the ground. No gases are released into the air.

Critics claim that wind farms threaten birds and other wildlife. However, wind energy is far less threatening to these animals than other buildings and towers.

Additionally, thanks to wind power's lack of pollution, wildlife actually benefits from this energy. Other energy sources pollute the air, water, or soil. Wind energy is completely clean, ensuring no negative effects on nearby birds and animals.

The cost of this energy declines yearly. Start-up costs may exceed those of other energy sources, but prices drop sharply after the initial expense. In the short term, people may think it is expensive. Once it is set up, though, wind energy is affordable. Wind power requires no fuel and limited costs for management. Other types of energy require constant management. Coal, for instance, requires mining. It is very dangerous, expensive, and can have long-term effects on the health of the workers. With wind energy, wind does the work. It turns the blades to harness the energy.

Wind energy is produced in the United States. Any energy this country creates and keeps is less energy that it has to buy from other countries. It allows the United States to rely more on itself for energy. That saves money.

When you study each energy source and weigh the pros and cons, the clear winner is wind. It is an available resource. It can be harnessed easily. It keeps energy costs low and does not pollute Earth.

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WRITING TASK

There is currently a discussion about the advantages and disadvantages of using wind energy.

Think about BOTH sides of the discussion. Then write an **opinion essay** in your own words supporting either side. In your essay, explain your opinion about the use of wind energy and give reasons to support your opinion.

Be sure to use information from BOTH passages in your **opinion essay**.

Writer's Checklist

Be sure to:

- Introduce your opinion.
- Support your opinion with reasons and details from the passages.
- Give your reasons and details in a clear order.
- Develop your ideas clearly and use your own words, except when quoting directly from the passages.
- Identify the passages by title or number when using details or facts directly from the passages.
- Use linking words, phrases, and clauses to connect reasons.
- Use clear language and vocabulary.
- Have a strong conclusion that supports your opinion.
- Check your work for correct usage, grammar, spelling, capitalization, and punctuation.

Now write your opinion essay on your answer document. Refer to the Writer's Checklist as you write and proofread your essay.

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The following are examples of a seven-point response. See the seven-point, two-trait rubric for a text-based opinion response on pages 96 and 97 to see why these examples would earn the maximum number of points.

Wind energy is good in many ways. It is cheap and can be found everywhere. It also does not hurt animals and nature. People should support using wind energy.

Wind is a free resource. In "Winning with Wind," the author states, "No matter how much wind power is used, some amount of its energy will be available tomorrow." It will never completely run out. Oil, natural gas, and coal will all run out, but wind will always be here.

The low price of wind energy is also helpful. After start-up costs, it is very cheap to catch. "Wind power requires no fuel and limited costs for management," according to the second article. It also saves money because the more wind energy the United States uses, the less energy it has to buy from other countries.

The first author does make a good point that "it is easy to support wind farms when you don't have to live next to one." It is easy for people in cities to push for wind farms because they don't have to live by them. For those people who live with the noise, wind energy isn't so good. Wind farms should be moved farther away from people's homes. It will cost more to build transmission lines, but it is worth the cost.

Wind energy should be a benefit for everyone. By making this change and paying the extra money, everyone can be safe from the few downsides.

OR

Things that seem too good to be true often are. Wind energy sounds like a good solution to bring cheap energy to American homes, but there is more to the issue.

First, people can suffer from health issues because of farms. Although those in favor of wind farms say that wind farms don't cause pollution, they cannot deny that the farms do fill the air with noise. The constant loud noise is more than annoying. It is harmful. Animals are also at risk. Birds, for instance, fly into wind turbines and die. In "Winning with Wind," the author claims that ". . . wind energy is far less threatening to these animals than other buildings and towers." That does not mean that it is okay to put animals at risk. People and animals should not have to deal with these problems.

People cannot rely on wind energy. One day it could be very windy and then calm the next. For it to be reliable, it would have to be windy every day. Solar energy is more reliable; it is available more often than wind and can be stored very easily for later use.

Another problem with wind energy is that people don't agree about where to build wind farms. People don't want them on their land. The noise and the sight of them bother people. Moving wind farms to the middle of nowhere would work if it weren't so costly. We would have to build transmission lines, and that would cost too much.

Wind energy may be a better solution than coal and oil, but it is far from perfect. Before Americans can rely on wind, more research needs to be done. Experts need to find ways to make it safer.

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ENGLISH LANGUAGE ARTS (ELA) CONTENT DESCRIPTION AND ADDITIONAL SAMPLE ITEMS

In this section, you will find information about what to study in order to prepare for the Grade 5 English Language Arts EOG assessment. This includes main ideas and important vocabulary words. This section also contains practice questions, with explanations of the correct answers, and activities that you can do on your own or with your classmates or family to prepare for the test.

All example and sample items contained in this guide are the property of the Georgia Department of Education.

Unit 1: Reading Literary Text

READING PASSAGES: LITERARY TEXT

CONTENT DESCRIPTION

The literary passages in the English Language Arts test are used to identify main ideas and details, cite evidence, make inferences, determine themes, and understand vocabulary. You may be asked to write a narrative in response to a prompt based on a literary passage. For more information about narrative writing, please refer to Unit 3.

Key Ideas and Details

- Think about the passage and visualize, or make a mental picture, as you read.
- Look for ideas and details that tell you what the passage is about.
- Use those ideas and details when writing or speaking about the passage.
- Think about the message or what the author is trying to say.
- Look for themes as you read. Ask yourself—what is this about?
- Think about the characters, setting, and events in the passage.
- Summarize the important details and ideas after you read.

Craft and Structure

- Make sure you understand the words and phrases as you read.
- Think about how the author's word choice and types of figurative language are used to provide imagery and improve the passage.
- Look at the structure of the passage. Pay attention to how the parts of the passage (e.g., section, chapter, scene, stanza) work with each other and the passage as a whole.
- Think about the point of view of the passage.

Integration of Knowledge and Ideas

- Look at the pictures or drawings that are in the passage. Think about what additional information these images may add to the text.
- Think about the similarities and differences in two passages. Understand how the information is connected in the passages.
- Use your knowledge of setting, plot, characterization, and other story elements when you compare and contrast the theme and topics.

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KEY TERMS

Literary texts: Passages that are stories, dramas, or poems. (RL)

Quote: Repeating or writing out exactly what a source says, word for word. Quotes are always put inside quotation marks. (RL1)

Inference: To infer means to come to a reasonable conclusion based on evidence found in the literary text. By contrast, an **explicit** idea or message is stated directly by the author. The author tells the readers exactly what they need to know. (RL1)

Theme: The theme of a literary text is its lesson or message. For example, a story could be about two friends who like to do things together, and the theme might be the importance of friendship. (RL2, RL9)

Summarize: To give the main events of a story in the order in which they happen. (RL2)

Compare vs. contrast: Though similar, comparing is analyzing two things, such as characters or stories, in relation to each other, while contrasting is specifically analyzing the *differences* between two things, such as two different characters or stories. (RL3, RL9)

Character: A person or thing in a work of literature. Goldilocks is a character in "Goldilocks and the Three Bears." (RL3)

Setting: Where and when a story takes place, including the time of day, the season, or the location. (RL3)

Plot: The events that happen in the beginning, middle, and end of a literary text. (RL3)

Narrator: The character who tells the story in a literary text from his or her point of view. (RL3, RL6)

Speaker: The voice of a literary text that speaks about the writer's feelings or situation. The speaker is not always the author because the author may be writing the text from a different perspective. In poems and stories, the speaker may not be an actual person but an imagined one. In poems, the speaker is often not named or identified by gender or any other characteristics. (RL3, RL6)

Interact: How characters behave toward each other in a literary work. These interactions may include dialogue, actions, or descriptions of how characters' feelings affect others. (RL3)

Figurative language: To understand figurative language, you cannot simply define the words in the phrase. You will need to distinguish between literal and figurative meanings of words and phrases. (Literal refers to the "actual meaning of a word or phrase.") For example, if someone tells you to "open the door," you can open a real door. If someone tells you to "open the door to your heart," you are not expected to find a door in your chest. Instead, you are to open up your feelings and emotions. Examples of figurative language are similes and metaphors. (RL4)

- **Similes** make a comparison using a linking word such as *like*, *as*, or *than*. (Her shirt was as green as the grass.) (RL4)
- A **metaphor** makes a comparison without a linking word; instead of one thing being *like* another, one thing *is* another. If someone describes recess by saying "It was a zoo," he or she is using a metaphor. Recess was chaotic, with lots of different people running around; it was not literally a zoo. (RL4)

Structure: In literary writing, writers use structure to convey meaning. This structure helps break longer pieces of writing into smaller portions that are grouped together because they happened around the same time or because they share a similar meaning. (RL5)

- **Chapter:** A section of a book. Books are often divided into chapters. (RL5)
- **Scene:** A section of a drama or play. Plays are often divided into scenes. (RL5)
- **Stanza:** A section of a poem. Poems are often divided into stanzas. (RL5)

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Point of view: The perspective from which a story is told. The point of view depends upon who the narrator is and how much he or she knows. The point of view could be first person (*I* went to the store), second person (*You* went to the store), or third person (*He* went to the store). The point of view used by the author can have a big influence on the story. (RL6)

Visual elements: Pictures, drawings, cartoons or comics, or diagrams that help a reader create a mental picture of the text. (RL7)

Tone: The tone found in writing is the attitude of an author about a subject or an audience. The author will choose words and language to create a tone and express a viewpoint in a text. (RL7)

Genre: A **genre** is a category of composition. Each genre has a particular style, form, and content. For example, mysteries and adventure stories are literary genres. (RL9)

Important Tips

- Use details to support ideas and to answer *what* you know and *how* you know it.
- When responding to an item, try to answer the question being asked before you read the answer choices.
- Look for familiar prefixes, suffixes, and word roots to help you decide the meaning of an unknown word.

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Sample Items 1–5

Read the story and answer questions 1 through 5.

Doctor Dolittle

by Hugh Lofting

ONCE upon a time, many years ago when our grandfathers were little children—there was a doctor; and his name was Dolittle—John Dolittle, M.D. "M.D." means that he was a proper doctor and knew a whole lot.

He lived in a little town called, Puddleby-on-the-Marsh. All the folks, young and old, knew him well by sight. And whenever he walked down the street in his high hat everyone would say, "There goes the Doctor!—He's a clever man." And the dogs and the children would all run up and follow behind him; and even the crows that lived in the church tower would caw and nod their heads.

The house he lived in, on the edge of the town, was quite small; but his garden was very large and had a wide lawn and stone seats and weeping-willows hanging over. His sister, Sarah Dolittle, was housekeeper for him; but the Doctor looked after the garden himself.

He was very fond of animals and kept many kinds of pets. Besides the goldfish in the pond at the bottom of his garden, he had rabbits in the pantry, white mice in his piano, a squirrel in the linen closet and a hedgehog in the cellar. He had a cow with a calf too, and an old lame horse—twenty-five years of age—and chickens, and pigeons, and two lambs, and many other animals. But his favorite pets were Dab-Dab the duck, Jip the dog, Gub-Gub the baby pig, Polynesia the parrot, and the owl Too-Too.

His sister used to grumble about all these animals and said they made the house untidy. And one day when an old lady with rheumatism came to see the Doctor, she sat on the hedgehog who was sleeping on the sofa and never came to see him anymore, but drove every Saturday all the way to Oxenthorpe, another town ten miles off, to see a different doctor.

Then his sister, Sarah Dolittle, came to him and said, "John, how can you expect sick people to come and see you when you keep all these animals in the house? It's a fine doctor who would have his parlor full of hedgehogs and mice! That's the fourth personage these animals have driven away. Squire Jenkins and the Parson say they wouldn't come near your house again—no matter how sick they are. We are getting poorer every day. If you go on like this, none of the best people will have you for a doctor."

"But I like the animals better than the 'best people,'" said the Doctor.

"You are ridiculous," said his sister, and walked out of the room.

So, as time went on, the Doctor got more and more animals; and the people who came to see him got less and less. Till at last he had no one left—except the Cat's-meat Man, who didn't mind any kind of animals. But the Cat's-meat Man wasn't very rich and he only got sick once a year—at Christmas-time, when he used to give the Doctor sixpence for a bottle of medicine.

Sixpence a year wasn't enough to live on—even in those days, long ago; and if the Doctor hadn't had some money saved up in his money-box, no one knows what would have happened.

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And he kept on getting still more pets; and of course it cost a lot to feed them. And the money he had saved up grew littler and littler.

Then he sold his piano, and let the mice live in a bureau-drawer. But the money he got for that too began to go, so he sold the brown suit he wore on Sundays and went on becoming poorer and poorer.

And now, when he walked down the street in his high hat, people would say to one another, "There goes John Dolittle, M.D.! There was a time when he was the best known doctor in the West Country—Look at him now—He hasn't any money and his stockings are full of holes!"

But the dogs and the cats and the children still ran up and followed him through the town—the same as they had done when he was rich.

Item 1

Selected-Response

Read the paragraphs from the story.

> **Then his sister, Sarah Dolittle, came to him and said, "John, how can you expect sick people to come and see you when you keep all these animals in the house? It's a fine doctor who would have his parlor full of hedgehogs and mice! That's the fourth personage these animals have driven away. Squire Jenkins and the Parson say they wouldn't come near your house again—no matter how sick they are. We are getting poorer every day. If you go on like this, none of the best people will have you for a doctor."**
>
> **"But I like the animals better than the 'best people,'" said the Doctor.**

Based on the paragraphs, which sentence BEST describes Doctor Dolittle?

A. He does not like the people who live in his small town.
B. He feels more appreciated by animals than patients.
C. He is happier being around animals than people.
D. He resents his sister for not taking his side.

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Item 2

Selected-Response

Read the sentence from the story.

> **"You are ridiculous," said his sister, and walked out of the room.**

Why does Sarah MOST LIKELY say this to Doctor Dolittle?

A. to reveal her disinterest in his work
B. to express her dislike for his choices
C. to share her thoughts about his hygiene
D. to convey her concern for his garden

Item 3

Evidence-Based Selected-Response Technology-Enhanced

This question has two parts. Answer Part A, and then answer Part B.

Part A

Which word BEST describes how Sarah Dolittle feels about her brother?

A. proud
B. annoyed
C. confident
D. suspicious

Part B

Which sentence from the story BEST supports the answer in Part A?

A. The house he lived in, on the edge of the town, was quite small; but his garden was very large and had a wide lawn and stone seats and weeping-willows hanging over.
B. His sister, Sarah Dolittle, was housekeeper for him; but the Doctor looked after the garden himself.
C. His sister used to grumble about all these animals and said they made the house untidy.
D. And the money he had saved up grew littler and littler.

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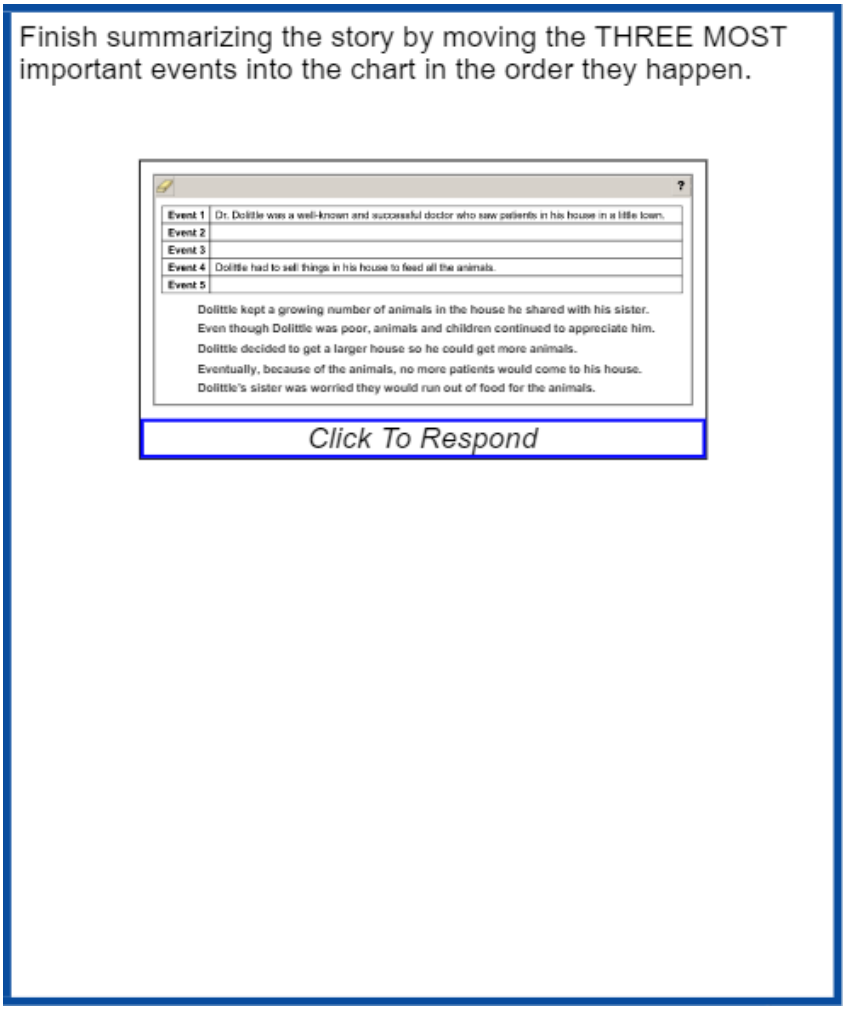
Item 4

Drag-and-Drop Technology-Enhanced



➲ Due to the size of the response area, this item has a “Click To Respond” button on the screen. Clicking this button will bring up the response area at full size.

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Item 4. *Continued*.

Event 1	Dr. Dolittle was a well-known and successful doctor who saw patients in his house in a little town.
Event 2	
Event 3	
Event 4	Dolittle had to sell things in his house to feed all the animals.
Event 5	

Dolittle kept a growing number of animals in the house he shared with his sister.

Even though Dolittle was poor, animals and children continued to appreciate him.

Dolittle decided to get a larger house so he could get more animals.

Eventually, because of the animals, no more patients would come to his house.

Dolittle's sister was worried they would run out of food for the animals.

Use a mouse, touchpad, or touchscreen to move the descriptions below the chart into the boxes in the chart.

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Item 5

Extended Constructed-Response

Rewrite the story from Sarah's point of view.

Be sure to include only the portions of the story that involve Sarah. Include details that support her viewpoint.

Narrative Writer's Checklist

Be sure to:

- Write a narrative response that develops a real or imagined experience.
- Establish a situation and introduce a narrator and/or characters.
- Organize events in a clear and logical order.
    - Use a variety of transitional words and phrases to sequence the events.
- Use dialogue, description, and/or pacing to:
    - develop events.
    - show how characters respond to situations.
- Use concrete words, phrases, and sensory details to describe the events.
- Include a conclusion.
- Use ideas and/or details from the passage(s).
- Check your work for correct usage, grammar, spelling, capitalization, and punctuation.

Now write your narrative on your answer document. Refer to the Writer's Checklist as you write and proofread your narrative.

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Unit 2: Reading Informational Text

READING PASSAGES: INFORMATIONAL TEXT

CONTENT DESCRIPTION

The informational and explanatory passages in the English Language Arts test can be used to determine central ideas, write an objective summary, analyze ideas, and provide supporting text evidence. You may be asked to write a narrative in response to a prompt based on an informational passage. For more information about narrative writing, please refer to Unit 3.

Key Ideas and Details

- Think about the passage and visualize, or make a mental picture, as you read.
- Read closely to know exactly what the passage says.
- Look for ideas and details that tell what the passage is about.
- Use those details when writing or speaking about the passage.
- Think about the message and what the author is trying to say.
- Look for the main ideas in the passage. Ask yourself—what is this about?
- Think about the reasons for interactions between parts of a passage; is one thing meant to show contrast to the other, complement it, or explain it?
- Summarize the important ideas and details in the passage.

Craft and Structure

- Make sure you understand the words in the passage.
- Think about the similarities and differences in the overall structure of passages.
- Compare and contrast multiple accounts of the same event or topic.
- Think about the author's point of view in the passage.

Integration of Knowledge and Ideas

- Look for details or evidence in the passage that support the author's points.
- Use information from multiple passages to learn more about a topic. Integrate information from these passages to show an understanding of a topic.

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KEY TERMS

Informational texts: Passages that explain or inform. (RI)

Inference: To infer means to come to a reasonable conclusion based on evidence found in the passage. By contrast, an **explicit** idea or message is stated directly by the author. The author tells the readers exactly what they need to know. (RI1)

Main ideas: What the text is mostly about. These are also called the central or controlling ideas. (RI2)

Key details: The facts and ideas that support the central idea. (RI2)

Summarize: To summarize means to provide an overview of a text that captures the main points but does not give all the details. (RI2)

Relationships: The connections between two or more people or things. When reading for information, it is important to examine the way individuals, events, ideas, and concepts interact. (RI3)

Interactions: Interactions in text refer to how ideas influence individuals or events or how individuals influence ideas or events. (RI3)

Organization: Organization refers to the way in which a piece of writing is structured. Each sentence, paragraph, or chapter fits into the overall structure of a text and contributes to the development of ideas. **Organizational structures** include chronological order, cause and effect, comparison and contrast, order of importance, and problem and solution. (RI5)

- **Chronological order:** The order in which a series of events happened. A text that is arranged in order of time from the beginning to the end is in chronological order. (RI5)
- **Order of Importance:** Ideas are organized from least important to most important or from most important to least important. (RI5)
- **Cause and effect:** Events and their outcomes. A text may be organized by problems and solutions or actions and reactions. These are all referred to as cause and effect. (RI5)
- **Comparison and contrast:** The structure of comparison and contrast analyzes the relationships between ideas in a text. Comparing analyzes the similarities, while contrasting analyzes the differences. (RI5, RI6)
- **Problem and solution:** Text that is organized by problem and solution identifies a problem and proposes one or more solutions. An author may use problem and solution to try to persuade readers about a certain topic or course of action. (RI5)

Point of view: The specific perspective or position the author has on a topic. (RI6)

Account: A description of events. A **firsthand account** is a description of events written or told by someone who was actually there. If your friend tells you she fell and hurt her knee, it is a firsthand account. A **secondhand account** is a description of events written or told by someone who was not actually there but got the story from another source. If your friend tells you that your other friend fell and hurt her knee, but the friend who is telling you didn't see the fall happen, it is a secondhand account. (RI6)

Reasons: Details that support the author's particular points in a text. (RI8)

Evidence: Something that proves the truth of something else. Informational texts may contain evidence in the form of key words, illustrations, maps, or photographs to prove that the information is correct. (RI8)

Integrate: Putting together key details and evidence from sources in a way that supports your main idea. (RI9)

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Important Tips

- Try to read the questions about an informational text before you read the text so that you know what to look out for.
- Cite strong evidence from a text to support analysis of what the text says explicitly and what can be inferred.
- Locate support for important ideas and concepts within the text to answer *what* you know and *how* you know it.

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Sample Items 6–8

Read the article and answer questions 6 through 8.

Are You Ready for a Pet?

1 There are many factors to consider when adding a pet to your family. First, you need to be sure that you are able to care for the animal for life. Many people think they want a pet, but they don't realize the work it takes. Puppies, for instance, need lots of attention. They need activities to burn off extra energy. They also need training.

2 It is not fair to bring an animal into your home only to ignore it or fail to take care of it. Like humans, animals require not only food and shelter but also love and attention. Owners will also need to pay for various expenses. Pets need regular visits to their doctors. They need special food, the cost of which ranges from reasonable to pricy. Collars and leashes are important too. Some pets need training. Make sure that your budget can stretch to meet the needs of a pet.

3 When you are confident that you want a pet and are able to care for it forever, you must choose an animal whose needs work with your lifestyle. For instance, someone who is away from home all day and unable to let a dog outside might want to consider a cat, turtle, or bird. Similarly, if you don't have time to walk your pet, opt for a smaller breed of dog. Often, they do not require as much activity as large dogs. Bored dogs develop undesirable habits like chewing shoes and destroying furniture.

4 Pets are not the only ones who benefit from living with humans. Research shows that just interacting with their pets can make people happier and healthier. Petting a dog provides unexpected benefits. For example, it can improve a person's ability to resist disease. It can also lower high blood pressure. There are even some chemical benefits, including lowered stress. Of course, pets also tend to make their owners feel happier.

5 Consider adopting from an animal shelter. So many animals have been abandoned and neglected and need a forever home. Many of these pets are turned over to shelters because their families can no longer afford them. Some are left behind when their families move to housing that does not allow pets. Some families simply don't want the responsibility of a pet anymore.

6 Animal shelters have pets of all ages and needs. This means there is an ideal animal for every home. If you don't have time to train a puppy, you might prefer an adult or senior dog. Some breeds have excess energy and need to run. Others prefer to sit in your lap and relax.

7 There are several factors to consider before adding a pet to your family. Remember that pets need as much love and care as any other family member. Be sure you are able to provide these needs before inviting an animal into your home.

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Item 6

Selected-Response

Which sentences BEST state two main ideas of the article?

A. It is important to consider the different responsibilities of pet ownership before getting a pet. Owning a pet can be positive for both the owners and the pets.
B. Busy families should consider cats or other animals that do not need much care. Sometimes bored dogs develop bad habits and destroy household items.
C. Animal shelters provide a range of animals to choose from. Animals are left at shelters for various reasons, such as owners moving or no longer being able to care for their pets.
D. Pets can help lower human stress levels. There is research showing that pet ownership can have a number of other health benefits as well.

Item 7

Selected-Response

Based on paragraph 2, what is the meaning of *various*?

Owners will also need to pay for <u>various</u> expenses.

A. large
B. many
C. unnecessary
D. unplanned

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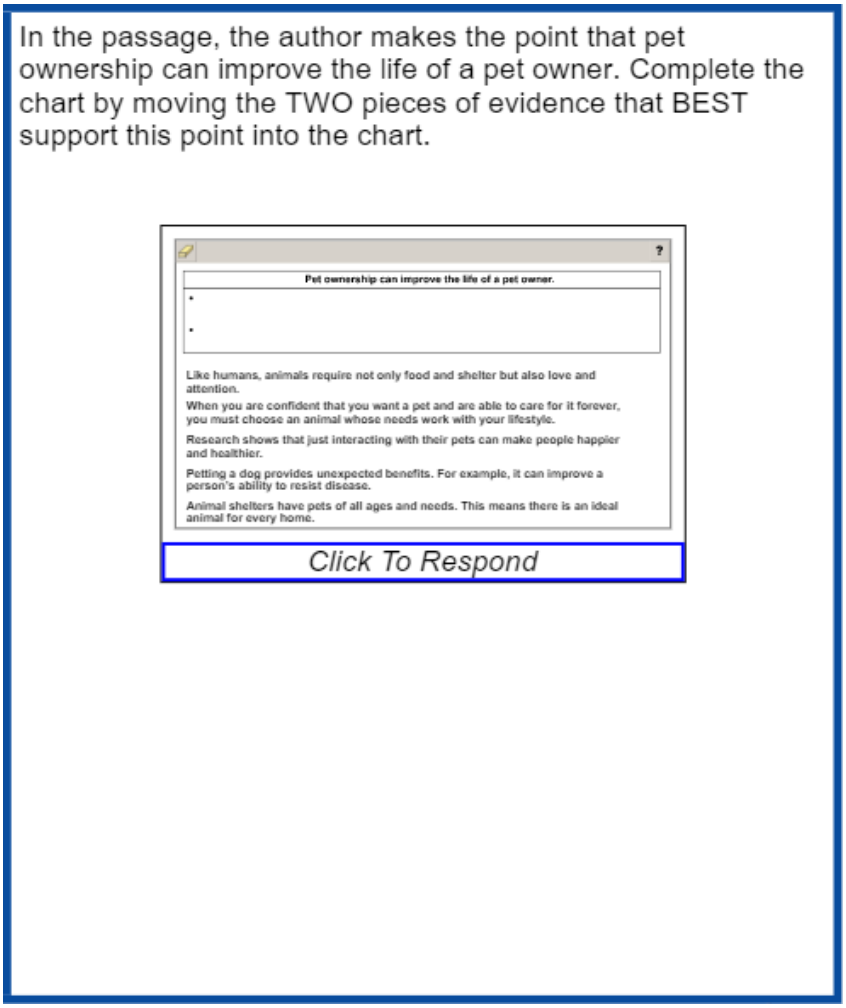
Item 8

Drag-and-Drop Technology-Enhanced



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Item 8. ***Continued*.**

Pet ownership can improve the life of a pet owner.
•
•

Like humans, animals require not only food and shelter but also love and attention.

When you are confident that you want a pet and are able to care for it forever, you must choose an animal whose needs work with your lifestyle.

Research shows that just interacting with their pets can make people happier and healthier.

Petting a dog provides unexpected benefits. For example, it can improve a person's ability to resist disease.

Animal shelters have pets of all ages and needs. This means there is an ideal animal for every home.

Use a mouse, touchpad, or touchscreen to move the descriptions below the chart into the chart next to the bullets.

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Unit 3: Writing

CONTENT DESCRIPTION

In this unit, you will be reading passages that are similar to passages you may read in the Georgia Milestones End-of-Grade assessment. You will use the passages as sources of support for opinion and informational/explanatory essays and as jumping-off points for narrative writing.

Some informational passages will help you develop opinions and support your point of view on a topic in an opinion essay. In your writing, you will use evidence to develop and support your opinion. Other informational passages will help you develop an informational/explanatory essay. In your writing, you will state ideas, summarize information, and use details from more than one source to develop and support your ideas.

You will also write a narrative in response to a prompt based on a literary or informational passage or a paired passage set you have read. A paired passage set may consist of two literary passages, two informational passages, or one of each passage type. Narrative prompts will vary depending on the passage(s) you are shown. For example, you may be asked to write a new beginning or ending to a literary story, write an original story based on information from an informational text, or rewrite a scene from a specific character's point of view. In your writing, you will use narrative techniques to develop the reader's understanding of a real or imagined experience.

There will also be writing standalone items that assess your revision skills and your understanding of opinion, informational/explanatory, and narrative writing. For example, you may be asked to answer a selected-response question that focuses on introducing a topic in an informational text. In addition, there will be writing standalone items that assess your planning and research skills.

Writing Types and Purposes

Opinion Essay

- An opinion essay states an opinion or agrees or disagrees with a point of view.
- Some common opinion words are "agree," "disagree," "for," or "against."
- When you state your opinion, you need to support it with reasons, examples, and evidence.

Informational/Explanatory Essay

- An informational/explanatory essay states ideas and information clearly and accurately.
- When you develop your topic, use multiple facts, definitions, concrete details, quotations, or other information and examples related to the topic.

Narrative

- A narrative develops a real or imagined experience or event.
- When you develop your narrative, use narrative techniques, descriptive details, and event sequence.

Production and Distribution of Writing

- Use the writing process to develop opinion essays, informational/explanatory essays, and narratives.
- Produce writing with an organization and style that fit the task, purpose, and audience.
- Strengthen your writing by reviewing or revising, if needed.

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Opinion Essay

- Introduce a topic or text clearly by stating your opinion and create an organizational structure in which related ideas are grouped to support your opinion.
- Develop your opinion by providing logically ordered reasons that are supported by facts and details.
- Use linking words and phrases to connect opinions and reasons.
- Provide a concluding statement related to the opinion you present.

Informational/Explanatory Essay

- Introduce a topic clearly and provide a general observation and focus. Group related information in a way that will make sense for the reader.
- Develop your topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.
- Link your ideas within and across categories of information using words, phrases, and clauses.
- Use precise language to inform about or explain the topic.
- Provide a concluding statement or section related to the information or explanation.

Narrative

- Include a situation and introduce a narrator and/or characters.
- Organize an event sequence that unfolds naturally.
- Develop your narrative using techniques, such as dialogue, description, and pacing, to develop experiences and events or to show how the characters respond to situations.
- Use a variety of transitional words and phrases to sequence the events in the narrative.
- Use concrete words and phrases and sensory details to clearly describe experiences and events.
- Include a conclusion that follows from the narrated experiences or events.

Audience, Purpose, and Voice

- As you write, remember who your audience will be.
- Remember, you are writing for a purpose—think about *what* you are writing and *why*.
- As you write opinion or informational/explanatory essays, reveal your writing voice by using language that matches the content, connects with your intended readers, and reveals your personality and writing style.
- As you write your narrative, reveal your writing voice by choosing a narrator and point of view that allow your readers to experience the story and relate to the characters in a meaningful way.

Research to Build and Present Knowledge

- Conduct a short research project that uses several sources to build knowledge through investigation of different aspects of a topic.
- Gather information from different types of sources, including print and digital sources.
- Summarize or paraphrase information from sources. Provide a list of sources you used in your notes and finished work.
- Use evidence from literary or informational texts to support analysis, reflection, and research.

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Range of Writing

- Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Scoring Rubrics

- A narrative scoring rubric can be found beginning on page 92. An informational/explanatory scoring rubric can be found beginning on page 94. An opinion scoring rubric can be found beginning on page 96. You may find it helpful to read and discuss these rubrics with a parent or another adult.
- The rubrics are important to understand because they show you what is needed to produce a strong piece of opinion, informational/explanatory, or narrative writing.
- Opinion, informational/explanatory, and narrative writing on the EOG assessment will be scored using these rubrics.

KEY TERMS

Opinion text: An opinion text states an opinion or agrees or disagrees with a point of view. (W1)

Point of view: The opinion or perspective of the writer on a specific topic. (W1)

Topic: What a piece of writing is about. When writing your opinion, choose topics about which you have strong feelings and a lot to say. (W1a, W2a)

Introduction: The beginning of a piece of writing. The introduction should let readers know what they will be reading about, and it should set up the main idea, or thesis, of the writing. (W1a, W2a)

Organization: The way in which a piece of writing is structured. Similar ideas and illustrations should be grouped together and the order of the information should make sense. Each sentence, paragraph, or text feature fits into the overall structure of a passage and contributes to the development of ideas. Writers structure their texts to match their purpose and audience. For example, if you were writing an opinion essay in which you wanted to show the negative effects of something, you might choose cause and effect as an organizational structure. (W1a, W4)

Reasons: Details that support your opinion in a piece of writing. (W1b)

Fact and opinion: A **fact** is a statement that can be proven. An **opinion** is a statement that cannot be proven because it states a writer's belief or judgment about something. Deciding whether or not a statement is a fact or an opinion often comes down to a single question: "Can you prove it?" If you can prove a statement somehow, then it is a fact. If not, it's an opinion. (W1b)

Linking words and phrases: Words or groups of words that link one idea to the next. Writing should not jump from one idea to the next without transitions that guide the reader along. Examples of linking words include *also*, *another*, *and*, *more*, *because*, *therefore*, *since*, and *but*. Examples of linking phrases are *to begin*, *on the other hand*, *for example*, and *in conclusion*. (W1c, W2c)

Concluding statement: The end of a piece of writing. The concluding statement should sum up the main purpose of the writing and provide an overall takeaway for the reader. (W1d, W2e)

Informational/explanatory texts: Pieces of writing that inform or explain something to the reader. (W2)

Formatting: The way in which a piece of writing is organized. For example, a writer can use headings and subheadings to organize the writing and present the information in a clear way. (W2a)

Precise language: Good writers choose their words carefully. Specific and vivid words and phrases describe or explain and make meaning clear. The sentence *A bird was on the ground* is very general and

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does not use precise language. However, that sentence could be rewritten using more specific nouns and verbs: *A robin landed in the grassy field*. (W2d)

Narrative: A narrative is a real or imaginary story. It may be about a situation, a single moment in time, or a series of related events and experiences. Narratives may be about a single moment in time but focus on how one character thinks and feels about it. Narratives may be about a single moment in time but focus on how several different characters think and feel about it. Narratives may also be about a series of related events and experiences and how a character feels about them. Good writers order the thoughts, feelings, events, and experiences in a way that makes sense to the reader. (W3)

Experience: An experience is an event or series of events that happen to or are seen by a character. In a narrative, characters learn, grow, or find meaning by going through an experience. Any experience in a narrative may be described as a single event (*Mary's team won the soccer game*) or as a series of events (*Mary kicked the ball toward the goal*. *The goalie dived but missed the ball*. *The ball landed inside the goal*. *Mary had scored the winning point*. *Her team won the game!*). A character may be part of an experience (*Mary kicked the soccer ball into the goal*). A character may also watch or observe an experience without being part of it (*Mary watched as her two older brothers played against each other on different soccer teams*). A narrative may include more than one experience. (W3)

Event: An event is a single thing that happens to a character or that a character sees. For example, *John caught the soccer ball* is an event. It is a single thing that happened to the character John. (W3)

Orient the reader: Readers need to understand who is telling the story. Readers also need to know the setting, characters, and conflict or challenge of the story. Good writers share this information early in a narrative so that readers can follow the events, thoughts, and experiences of a story and understand the story's meaning or message. Sharing this information in a meaningful way is called orienting the reader. (W3a)

- **Introduction:** The introduction is the first few paragraphs of a narrative that orient the reader to the story. Good writers create an introduction that interests the reader and shares just enough information to keep the reader reading and learning more. There is no one right way to write an introduction. Introductions may include dialogue, a description of the setting, an introduction of the narrator, a description of a character, an explanation of the situation, or any combination of these. Good writers create a unique introduction that best fits their story and its meaning. (W3a)
- **Narrator:** The narrator is the person the writer chooses to tell a story. The narrator may be a character in the story. The narrator may also record the characters' actions, words, and thoughts but not be a character in the story. (W3a)
- **Characters:** Characters are persons, things, or beings in stories. The characters may be real or imaginary. The details you share about characters—the way they think, talk, and act—help readers understand the characters' personalities. (W3a)

Sequence: Sequence is the order of events in a narrative. Often, the events in a story are told in the exact order they happened. Sometimes a story is told out of order to create surprise or help the reader learn more about the characters and how they think and behave. (W3, W3a)

Narrative techniques: Narrative techniques are the tools writers use to create interesting experiences, events, and characters in a story. (W3, W3b)

- **Dialogue:** Writers use dialogue to show the reader the exact words the characters are saying. Dialogue usually has quotation marks around it. Each time a new character speaks, a new paragraph begins. The reader learns about characters from the way characters speak or respond to a situation. Dialogue can also move the action forward in a story or cause a character to decide something. (W3b)
- **Description:** Good writers use description to help the reader imagine the characters, settings, and events. Description helps readers feel like the reader is living the events of the story, both seeing what

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the character sees and feeling what the character feels. This sentence does not have good description: *The kids at my new school were friendly*. These sentences use description to help the reader see and feel what the character experiences: *I stepped into the classroom*. *I worried that I would not make new friends in my class*. *After the teacher introduced me, she asked me to tell the class where I was from*. "*I moved to Georgia from India*," *I said*. "*This is my first time in the United States*." *Everyone in the class smiled at me with shining eyes*. "*Welcome to our class*," *a girl in the front row said*. "*Would you like to sit with me at lunch today?*" (W3b)

- **Pacing:** Pacing is the speed at which a story is told. The pace of a story is influenced by the description of characters, settings, and thoughts or reflections; the use of sensory language; the number of telling details related; the length of sentences, paragraphs, and scenes; dialogue and how many words or sentences a character speaks at one time; and the use of precise word choice. Writers may choose to slow the pace in one part of the narrative and speed up the pace in another or to keep the same pace throughout the narrative. (W3b)

Transitional words and phrases: The reader needs clues in a story to help them know how time is passing and how events are ordered. Transitional words and phrases link one idea to the next and help the reader understand how time is passing in the story. Transitional words and phrases also make clear the order in which events happen. Examples of transitional words are *first*, *next*, *before*, *during*, and *finally*. Examples of transitional phrases are *after that*, *in the beginning*, *it started when*, and *the next day*. (W3c)

Concrete words and phrases: Concrete words and phrases refer to physical things that can be seen, heard, smelled, tasted, or touched. Examples are *sidewalk*, *pizza*, *plate*, *tree*, and *puppy*. Good writers use concrete details to help the reader understand exactly what the writer means and picture a scene clearly. The sentence *Ani wanted a friend* is not concrete because the word *friend* means different things to different people. This sentence uses concrete words to help the reader understand exactly what Ani wants: *Ani wanted a striped furry kitten that would rub against his pant legs, chase toy balls, and curl up next to him in bed at night.* (W3d)

Sensory details: Sensory details describe concrete words and phrases in a way that allows readers to experience the way things look, sound, smell, taste, or feel through imagination. Good writers share sensory details to help the reader imagine what it would be like to live the experience in the story. For example, the sentence *The hot spring stank* does not help readers imagine what the hot spring smelled like. The sentence *The hot spring smelled like rotten eggs that had blown up in the microwave* helps readers better imagine the smell. (W3d)

Conclusion: Every story needs to have an end that matches the beginning and middle. In other words, the ending needs to follow what happened in all parts of the story before that point. The reader needs to feel like the story is over. Good writers create this feeling of ending with a conclusion. In the conclusion, the events of the story end logically, and the reader understands one or more of these ideas: what the story meant, what characters learned, how characters felt about the experiences or events, how characters changed, and what readers can learn from the story. (W3e)

Audience: The people who will be reading the piece of writing. Writers should keep their audience in mind and adjust their ideas and vocabulary so that they can be best understood. (W4)

Purpose: The writer's reason for writing his or her essay or article. All writing has a purpose, whether it is to persuade, inform, explain, or entertain. (W4)

Revision: The process of editing and rewriting a piece of writing. All good writing requires a lot of revision in order to catch mistakes and make ideas clearer. (W5)

Research: Gathering information in order to learn more about a topic. (W7, W9)

Source: A book, article, website, person, or piece of media that contains information. (W7, W8)

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Evidence: Something that proves the truth of something else. Informational texts may include facts, opinions of experts, quotes, statistics, and definitions that can be used as evidence. In literary text, the characters' thoughts, words, or actions may be used as evidence. (W9)

Important Tips

Opinion and Informational/Explanatory Essays

- Organize your writing by using an organizational structure in which your ideas are logically grouped together.
- In your opinion essay, be sure to develop your opinion with reasons supported by facts and details. In your informational/explanatory essay, be sure to develop your informational topic with details such as facts, definitions, quotations, or other information that supports your topic.
- Make sure your writing has a concluding statement that supports the opinion or information presented.

Narrative

- Organize thoughts, ideas, or events in a sequence that unfolds naturally.
- Use narrative techniques, such as dialogue, description, and pacing to develop events and to show how characters respond to situations.
- Make sure your narrative has a conclusion.

Opinion, Informational/Explanatory, and Narrative Writing

- Strengthen your writing by planning, revising, editing, rewriting, or trying a new approach.
- **Use the writer's checklist before, during, and after writing to make sure you are meeting the criteria.**

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SAMPLE ITEMS

The practice writing items for this unit include an extended writing-response item, an extended constructed-response item, and writing standalone items. There are also sample reading comprehension items connected to the passages you will read in this unit. You will have sample selected-response, evidence-based selected-response, and/or constructed-response items in this section. In the actual assessment, there is often a mix of reading comprehension and extended constructed-response and/or extended writing-response items connected to one passage or passage set.

Sample Items 9–13

Extended Writing-Response (Opinion or Informational/Explanatory Essay)

In Section 1 of the Georgia Milestones End-of-Grade assessment, you will be asked to comprehend a pair of informational passages and use information from the passages to write an opinion or informational/explanatory essay. In the End-of-Grade assessment, the task will include the following items:

1. Three selected-response (multiple-choice) questions (three in this example)
2. A constructed-response question (one in this example)
3. An extended writing-response question (one in this example)

The instructions for the extended writing prompt are in the same form as those that appear on the Georgia Milestones assessment. In the actual assessment, you will receive either an opinion or an informational/explanatory writing task. The sample provided in this resource is an example of an opinion writing task.

This section of the test assesses your skill to comprehend reading passages and use information from the passages to write an opinion essay.

Before you begin writing your essay, you will read two passages and answer three multiple-choice questions and one short constructed-response question about what you have read.

As you read the passages, think about details you may use in an opinion essay about new school lunch guidelines.

These are the titles of the passages you will read:

1. So-Called “Healthier” School Lunches
2. Bravo for Making Students Healthier

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So-Called “Healthier” School Lunches

Dear Editor,

I was so excited to hear that our local schools would finally be serving more healthy lunches. For years I have felt guilty for allowing my kids to eat the processed foods offered by the school lunch program. Sadly, it seems that the new guidelines have not made much of a difference. Children are still eating chicken nuggets, fish sticks, and pizza every month. Some of the fruits and vegetables that are supposed to be so healthy come from cans. They are not the fresh and healthy produce I was expecting.

Another problem with the new guidelines is the portion sizes. Children are given a calorie maximum based on their age, without taking into account their different sizes and needs. A 220-pound high school football player doing two-a-day practices is getting the same amount of food as smaller children or children who are not as active. That hardly seems fair.

Both of my children have told me that they are hungry all day. One of my children has lunch at 10:45 a.m. And that is supposed to last until school is over at 3:15 p.m.? My children hunt for junk food every day right after school. I know that many schools are struggling to meet these guidelines, but they have to do better than this.

I have no choice but to send my children to school with packed lunches. This way I can control the portions myself. I can also be sure that they have fresh, not processed, fruits and vegetables every day.

Frustrated with food,

Palmer Ross

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Bravo for Making Students Healthier

Dear Editor,

Before retiring ten years ago, I had been an elementary school teacher for thirty-seven years. During my first year, students were filled with energy. They ran around all during recess. Then they would come back in the classroom and complete their lessons.

At the start of my career, students ate in the classroom. Their parents packed them fairly healthy lunches. They often consisted of leftover home-cooked meals rather than processed foods. I often saw vegetables that seemed to have come straight from the garden.

Over the years, students seemed to become less energetic. I noticed more students sitting and talking during recess. Many were eating non-nutritional snacks. Fewer were playing and burning off extra energy. When they returned to class, their minds wandered. They struggled to focus.

Prepared lunches at school did not help. In fact, they added to the problem. Students received regular servings of pizza, burgers, and mashed potatoes from a box. Many students loved it, but it didn't seem right to me. Our students deserved better. They deserved healthy foods to nourish their brains and bodies.

Now, students are finally getting more healthy foods at schools. Our country recently revealed a change in school lunches. No more processed chicken fingers, pizza, and sugary chocolate milk. Students now enjoy more healthy baked options, fruits, vegetables, and low-fat dairy products. These options are offered at every meal. Students can fill up on brain-healthy foods.

I have also heard that school leaders plan to change vending machine options. They will swap sugary snacks for more healthy whole-grain options. Hats off to health!

There are so many distractions like the Internet, video games, and smartphones. Real foods like vegetables and fruits will help students focus in class. It will help them feel healthier and have more energy to be active.

Sincerely,

Tyra Watts

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Item 9

Selected-Response

Which statement expresses one way the letter writers BOTH support their ideas?

A. Both list questions about the healthiness of school lunches.
B. Both include information about children they have known.
C. Both include interviews with principals of schools.
D. Both discuss their personal experiences when they were children.

Item 10

Selected-Response

Which sentence BEST states a point of view shared by BOTH letter writers?

A. They agree that school lunches are the best option for kids.
B. They both are doubtful that school lunches have improved over time.
C. They agree that school lunches are more important than recess.
D. They both are critical of processed foods in school lunches.

Item 11

Selected-Response

Which choice BEST describes the text structure of "So-Called 'Healthier' School Lunches" and "Bravo for Making Students Healthier"?

A. "So-Called 'Healthier' School Lunches" compares what kids like to eat with what they are served at school and concludes that school lunches are better than lunches from home. "Bravo for Making Students Healthier" compares eating healthy food with exercising regularly and concludes that kids need more exercise.
B. "So-Called 'Healthier' School Lunches" compares current school lunches with previous ones and concludes that the author will send his children with lunches from home. "Bravo for Making Students Healthier" compares how past and recent school lunches affect kids and concludes that new changes are positive.
C. "So-Called 'Healthier' School Lunches" compares how well kids do in school and the time of day when they eat their lunch and concludes that early lunch times are better. "Bravo for Making Students Healthier" compares how well kids focus and how they are eating and concludes that current school lunches need improvement.
D. "So-Called 'Healthier' School Lunches" compares lunches brought from home with school lunches and concludes that both offer benefits. "Bravo for Making Students Healthier" compares how much recess time kids get and how that affects their eating habits and concludes that kids need longer recesses.

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Item 12

Constructed-Response

Explain one idea that the author of "So-Called 'Healthier' School Lunches" and the author of "Bravo for Making Students Healthier" agree on regarding school lunches.

Use details from BOTH passages to support your answer. Write your answer on the lines on your answer document.

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Item 13

Extended Writing-Response

WRITING TASK

There is an ongoing discussion about the new school lunch guidelines.

Think about BOTH sides of the discussion. Then write an **opinion essay** in your own words supporting either side of the discussion. Are the new school lunch guidelines helping students?

Be sure to use information from BOTH passages in your **opinion essay**.

Writer's Checklist

Be sure to:

- Introduce your opinion.
- Support your opinion with reasons and details from the passages.
- Give your reasons and details in a clear order.
- Develop your ideas clearly and use your own words, except when quoting directly from the passages.
- Identify the passages by title or number when using details or facts directly from the passages.
- Use linking words, phrases, and clauses to connect reasons.
- Use clear language and vocabulary.
- Have a strong conclusion that supports your opinion.
- Check your work for correct usage, grammar, spelling, capitalization, and punctuation.

Now write your opinion essay on your answer document. Refer to the Writer's Checklist as you write and proofread your essay.

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Sample Items 14–17

Extended Constructed-Response (Narrative)

On the Georgia Milestones End-of-Grade assessment, you will write a narrative in response to a prompt based on a literary or informational passage or a paired passage set you have read. In the actual assessment, you will also respond to reading comprehension questions before writing your narrative. Narrative prompts will vary depending on passage type. The sample provided in this resource is an example of a narrative prompt based on an informational passage.

Read the passage and answer questions 14 through 17.

Clothing That Changed the World

In 1853, thousands of newcomers roamed the dusty streets of San Francisco, California. They had come across land and sea with visions of wealth. Only a few years earlier, gold had been discovered in the area. People flooded into California in 1849. They were hoping to strike it rich as gold miners.

While all of these people thought gold would be their ticket to wealth, Levi Strauss thought differently. Gold miners needed clothing tough enough not to tear or wear out as they worked. Strauss planned to provide that clothing. He and his partner patented pants that not only brought them success but also became an important part of history.

A Young Businessman

Levi Strauss was born in Germany in 1829. He followed his brothers to New York when he was 18. His brothers had started a dry goods company there. They sold clothing, blankets, and other household goods. Strauss worked hard and gained an understanding of the business.

When Strauss heard about the gold rush in California, he did not plan to be a miner. Instead, he traveled to San Francisco and opened a dry goods store. There were 117 dry goods businesses in the city, but many often ran out of goods. Strauss's brothers supplied the stock for his shop, so he always had plenty to sell. Before long, Strauss's business was doing well.

A New Idea

In 1872, one of Strauss's customers, Jacob Davis, contacted him. Davis was a tailor in Nevada. He designed heavy work pants for miners. Pockets and seams ripped easily when miners carried heavy things. Davis had come up with a way to make the seams stronger. He hammered metal rivets on the pocket corners.

Davis wanted to take out a patent for the pants. A patent would protect his idea. He didn't want other tailors using his idea to make durable pants. He wanted to make large numbers of his pants to sell. He could not afford to do this, but he knew Strauss could. So he proposed a partnership. "The secret of them Pents[1]," Davis wrote to Strauss, "is the Rivits[2] that I put in those Pockets and I found the demand so large that I cannot make them up fast enough."

Strauss realized the value of Davis's idea. Together, they patented the idea of the pants. Davis moved to San Francisco to become head tailor for the company. By 1873, thousands of miners in San Francisco were wearing the new work pants. Later, the partners trademarked the name "Levi's" for the pants. By trademarking their name, no one else could call their pants "Levi's" and sell them.

[1]**Pents**—pants
[2]**Rivits**—rivets

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A Brilliant Design

At first, the pants were called “waist overalls,” but today we know them as jeans. They were dyed a dark-blue color. This was partly because indigo was cheap. Also, the color could hide stains easily. The first Levi’s were made of canvas. But after a few years, Strauss began buying denim. Denim is a cotton fabric that was popular in France. All Levi’s included copper rivets. The pants also had orange stitching across the back pockets. The reason for the stitching is not known. Company records from this time have been lost.

A Growing Legacy

The new trousers made Strauss a millionaire. However, he knew he could sell even more pairs. He believed people all over the country would like the denim pants. Levi Strauss & Co. sent employees across the United States and to other nations to sell this new clothing design. Jeans became popular across the globe. Everywhere, people appreciated these tough, sturdy, comfortable pants.

Besides making blue jeans, Strauss took part in other businesses, such as banking. He also gave large amounts of money away to help those in need. Strauss donated to an orphanage and to other organizations. He also set up 28 scholarships at the University of California, Berkeley. Those scholarships help students pay for their college education. Strauss’s scholarships are still in effect today.

Strauss died in 1902, but his legacy continued to grow. Jeans became a symbol of youth and independence. Young people and movie stars wore them. Levi Strauss and his friend Jacob Davis turned fabric and bits of metal into what became the most popular clothing item in the world.

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Item 14

Selected-Response

Why does the author mention the trouble miners were having with ripped seams and pockets?

A. to explain why Davis thought a new type of work pants was needed
B. to describe the physical demands that miners faced in California
C. to show that there was a shortage of work clothes at the time in California
D. to give an example of the kinds of repairs that Davis was making for miners

Item 15

Evidence-Based Selected-Response Technology-Enhanced

This question has two parts. Answer Part A, and then answer Part B.

Part A

Which statement BEST explains the reason why Strauss benefited from the gold rush in California?

A. Strauss was one of the few miners who was able to find gold.
B. Strauss was a businessman who recognized the needs of miners.
C. Strauss was able to give jobs to people in the mining business.
D. Strauss was eager to help miners improve their working conditions.

Part B

Which evidence from the passage BEST supports the answer in Part A?

A. They were hoping to strike it rich as gold miners.
B. Davis moved to San Francisco to become head tailor for the company.
C. By 1873, thousands of miners in San Francisco were wearing the new work pants.
D. Besides making blue jeans, Strauss took part in other businesses, such as banking.

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Item 16

Selected-Response

Which set of sentences BEST summarizes the passage?

A. In the 1800s, people came to California hoping to find gold. These people made Levi Strauss successful by purchasing more items from his store than any other dry goods stores in the area.

B. Levi Strauss worked at his brothers' company for many years until he understood how to run his own business. Then Strauss moved to California and opened a successful dry goods store that sold clothing, blankets, and other goods to gold miners.

C. In the 1800s, Levi Strauss saw an opportunity to open a store in California while others mined for gold. He met a tailor named Jacob Davis and helped him create Levi's, which became a popular clothing item around the world.

D. Levi Strauss agreed to help a tailor named Jacob Davis create Levi's because Strauss believed miners needed clothing that would last. Strauss wanted to buy the jeans that Davis created.

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Item 17

Extended Constructed-Response

Imagine that you are Levi Strauss. You have just learned that the pants your company sells have made you a millionaire. Write a journal entry that describes how you feel and what you do to celebrate your success. Use ideas from the passage in your journal entry.

Narrative Writer's Checklist

Be sure to:

- Write a narrative response that develops a real or imagined experience.
- Establish a situation and introduce a narrator and/or characters.
- Organize events in a clear and logical order.
  - Use a variety of transitional words and phrases to sequence the events.
- Use dialogue, description, and/or pacing to:
  - develop events.
  - show how characters respond to situations.
- Use concrete words, phrases, and sensory details to describe the events.
- Include a conclusion.
- Use ideas and/or details from the passage(s).
- Check your work for correct usage, grammar, spelling, capitalization, and punctuation.

Now write your narrative on your answer document. Refer to the Writer's Checklist as you write and proofread your narrative.

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Sample Items 18–25

Writing Standalone Items

On the Georgia Milestones End-of-Grade assessment, there will be writing standalone items that assess your understanding of opinion, informational/explanatory, and narrative writing and revision skills. There will also be writing standalone items that assess your writing planning and research skills.

Item 18

Selected-Response

Read the paragraph from a student's letter.

> **Dear Mr. Jenkins,**
>
> **For our next field trip, I think our class should visit one of the national parks in Georgia. Visiting a national park would give students the chance to participate in outdoor activities. Our class could arrange for a park ranger to give us a tour of the park so we can learn about history and the environment. We may also have the opportunity to observe wildlife in its natural environment. Best of all, the fees to visit national parks are usually very low. It will be less expensive and more fun for our class than any of the other field trips you are considering.**
>
> **Sincerely,**
>
> **Jesse Alvarez**

Which detail should be added to the letter to BEST support the student's opinion?

A. Each year, millions of people visit national parks across the United States mainly because of their natural beauty.

B. Each student could experience a new activity at the national park, such as learning how to fish, ride horses, or photograph nature.

C. National park rangers not only protect the park but also teach visitors about natural science and the environment.

D. If our class goes on a tour of the national park, students will need to be paired together to ensure that everyone stays safe.

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Item 19

Selected-Response

Mike is writing a note for a pet-sitter. Which information would be MOST helpful to add to the note?

A. why pet-sitting is an important job
B. the date he got each pet
C. reasons why pet ownership builds responsibility
D. the times of day the pets eat

Item 20

Selected-Response

A student is writing a report about plastic water bottles. Read the draft of one paragraph from the report.

> **[1]Plastic water bottles are convenient. [2]They are lightweight and easy to carry. [3]They can be packed in a backpack or sports bag and then thrown out, or ideally, recycled. [4]_____ even though they are handy, they are also bad for the environment.**

Which word or phrase should be used at the beginning of sentence 4?

A. For example,
B. In several cases,
C. However,
D. Certainly,

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Item 21

Selected-Response

Read the paragraph from a student's narrative.

> **[1]Sarah carefully mixed the ingredients for cookies in a bowl. [2]Then she used her hands to roll bits of cookie dough into small balls and placed them on a cookie sheet. [3]Sarah put the cookie sheet in the warm oven and set the timer for twelve minutes. [4]She waited anxiously as the cookies baked until the timer finally beeped. [5]Sarah put on her oven mitts and carefully removed the cookies from the oven. [6]The cookies smelled good.**

Which sentence should replace sentence 6 to provide more sensory details?

A. Sarah closely examined the cookies and was happy with how they had turned out.
B. The sugary smell of the warm, soft cookies drifted into Sarah's nose, making her mouth water.
C. The cookies looked like they were going to taste exactly how Sarah had remembered them tasting the last time.
D. Sarah lifted the cookies close to her face and took a deep breath to smell the dough that had now been cooked.

Item 22

Selected-Response

Read the paragraph from a student's personal essay about spending time outdoors.

> **[1]Even though I love hiking, one of my favorite things to do is just sit still. [2]It is a lot harder to do than it looks! [3]My parents got me in the habit of stopping along the trail to look at nature. [4]I used to roll my eyes and complain when they'd tell me to take a break or look at some kind of moss or rock. [5]My goal was to get to the end of the hike as quickly as possible. [6]But now I try to follow their advice. [7]Hearing the birds or the sound of water and noticing clouds or animal footprints is part of the fun. [8]Last weekend I counted eight different kinds of bird songs when I hiked Mt. Crimsey. [9]An important stop for migrating birds, Mt. Crimsey was named after an explorer and mapmaker named Theobold Crimsey, who came to the area in the late 1860s.**

Which sentence does NOT help the author's purpose and should be removed?

A. sentence 3
B. sentence 5
C. sentence 7
D. sentence 9

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Item 23

Selected-Response

A student is doing research on an inventor. Read the information the student found in an online article.

> **In the 1940s, Marion Donovan was an inventor and young mother. She was dissatisfied with the cloth diapers that were available at the time. She eventually invented a semi-disposable diaper made from a washable nylon covering that could be filled with disposable paper. At the time she invented it, most businesspeople who made baby products were men. They often were not involved in child and baby care. They were not interested in her idea and thought that parents would not be interested in buying disposable diapers. Donovan began making the diapers herself. Initially, she sold the diapers at only one store in New York. The diapers were very popular, and the store sold out of them. Today, disposable diapers are common and most babies in the United States wear them.**

Which sentences BEST summarize the information?

A. Although businessmen were not interested in her invention, Marion Donovan made a successful semi-disposable diaper that many people bought.

B. Although her idea was good, Marion Donovan had to try hard to convince some businessmen to sell the semi-disposable diaper she invented.

C. Marion Donovan invented a diaper that had a nylon covering and contained paper that could be thrown away.

D. Marion Donovan was a young mother and inventor whose unhappiness with cloth diapers led her to think about a different kind of diaper.

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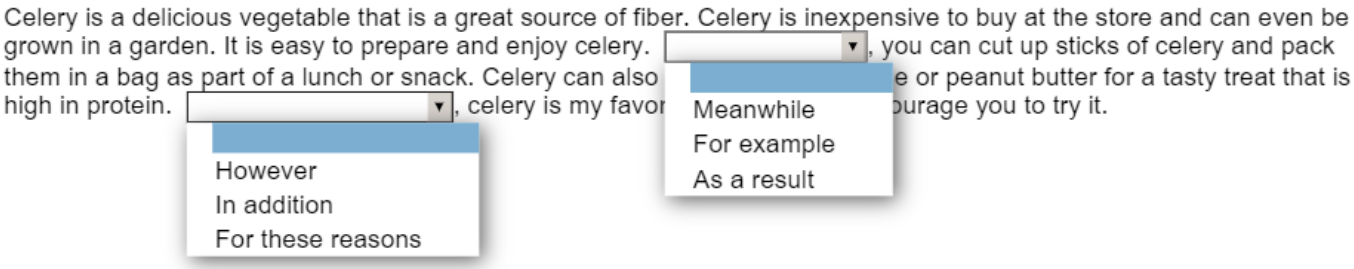
Item 24

Drop-Down Technology-Enhanced

A student is writing a report about her favorite vegetable. Read the paragraph from the student's rough draft. Then choose the correct word or phrase from each drop-down menu to connect the ideas in the paragraph.

Celery is a delicious vegetable that is a great source of fiber. Celery is inexpensive to buy at the store and can even be grown in a garden. It is easy to prepare and enjoy celery. [ ], you can cut up sticks of celery and pack them in a bag as part of a lunch or snack. Celery can also be eaten with cheese or peanut butter for a tasty treat that is high in protein. [ ], celery is my favorite snack, and I encourage you to try it.

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the two blank boxes. When you click the arrow, a drop-down menu will appear, showing you all the possible options for that blank. Each drop-down menu with its options is shown below.



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Item 25

Drag-and-Drop Technology-Enhanced

Read the paragraph from a student's draft of a narrative. Move the TWO sentences that provide the BEST conclusion for the narrative onto the lines.

"Three, two, one, begin!" Mrs. Harris exclaimed to the students in the library. Instantly, Sanjay, Dina, and Lauren grabbed the paper bag from the middle of their table and dumped out the contents. Sanjay studied the picture of the puzzle they would be assembling for their school's puzzle contest while Dina and Lauren spread out the puzzle pieces on the table. Meanwhile, ten other teams were also working together to organize their puzzle pieces. Dina started searching for puzzle pieces with straight edges.

_____

_____

Sanjay and Lauren focused on sorting puzzle pieces by their colors and patterns.

Sanjay's favorite puzzle at home did not even have a photo on the box.

The three friends hoped they had what it took to win the puzzle contest.

Their school had never held a puzzle contest before.

Many of the students had practiced putting puzzles together after school.

Use a mouse, touchpad, or touchscreen to move the descriptions below the paragraph onto the lines in the paragraph.

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Unit 4: Language

CONTENT DESCRIPTION

The language portion of the English Language Arts test focuses on the conventions of Standard English, including grammar and usage and the proper use of capitalization, punctuation, and spelling.

Conventions of Standard English

- Use correct grammar and usage when writing.
- Use correct capitalization, punctuation, and spelling.

Knowledge of Language

- Express yourself clearly in an interesting way.
- Choose your words carefully so readers understand what you are writing.

Vocabulary Acquisition and Use

- Vary the words you use in your writing.
- Use different strategies (e.g., context, affixes, roots) to help you determine the meaning of unknown or multiple-meaning words.
- Show an understanding of figurative language (i.e., similes, metaphors) and word relationships (i.e., synonyms, antonyms, homographs).
- Recognize and explain the meaning of common idioms, adages, and proverbs.
- Use reference materials to determine the precise meanings of words or phrases.

KEY TERMS

Grammar: The set of rules for language. (L1)

Usage: Using the correct word when there is a choice (e.g., *to*, *too*, and *two*). (L1)

Conjunction: A word that joins together different sentences, clauses, or phrases. Examples of conjunctions are *with*, *and*, *but*, and *although*. (L1a)

Preposition: A word or phrase that is used to show direction, location, or time. Examples of prepositions are *on*, *in*, *around*, *by*, *through*, *over*, and *behind*. (L1a)

Interjection: A word or phrase that expresses sudden or strong feelings. Examples of interjections are *oh*, *alas*, and *wow*. (L1a)

Perfect tense: Used to indicate a completed or "perfected" action. Verbs can appear in one of three perfect tenses: present perfect, past perfect, and future perfect. (L1b)

- **Present perfect:** Indicates an action that started in the past and continues in the present. This tense is usually formed using the helping verb *has* or *have* and is paired with the past participle of a verb. For example, *I have lived in Georgia since 2011*. (L1b)
- **Past perfect:** Indicates an action that was completed in the past before something else happened. This tense is usually formed using the helping verb *had* and is paired with the past participle of a verb. For example, *I had finished my math homework by lunchtime*. (L1b)
- **Future perfect:** Indicates an action that will be completed at some point in the future. This tense is usually formed with the helping verb *will* plus *have* plus the past participle of a verb. For example, *By next summer, I will have learned to swim*. (L1b)

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Verb tense: Variation in a verb to convey various times, sequences, states, and conditions. Verb tenses include past, present, future, progressive, and perfect. (L1c, L1d)

- **Present tense:** Describes things that are happening right now. An example is *Today I walk to school*. (L1c, L1d)
- **Past tense:** Describes things that have already happened. Past tense verbs are usually constructed by adding *–ed* to the end of a verb. An example is *Yesterday I walked to school*. (L1c, L1d)
- **Future tense:** Describes things that have not happened yet. Future tense verbs are usually constructed using the word "will" + a verb in the present tense. An example is, *I will walk to school tomorrow*. (L1c, L1d)
- **Progressive tense:** Describes an ongoing action that is still in progress at some point in time. Progressive tense verbs are usually constructed using a form of "to be" + a verb ending in *–ing*. An example is *I am walking to school right now*. (L1c, L1d)

Correlative conjunction: A type of conjunction in which pairs of words work together to join words, phrases, clauses, or sentences. Examples of correlative conjunctions are *either/or*, *neither/nor*, *not only/but also*, and *both/and*. An example of a sentence that includes a pair of correlative conjunctions is *Her new bicycle is* not only *fast* but also *very shiny*. (L1e)

Punctuation: Writing marks that help to separate and clarify ideas. Examples of punctuation are periods, colons, commas, exclamation marks, and question marks. A comma can be used to separate an introductory element from the rest of the sentence. Commas can also set off the words *yes* and *no*, set off a tag question from the rest of the sentence, and indicate direct address. (L2, L2b, L2c, L3)

Style: The personality of the writing and how you say things. (L3a)

Context: Words and phrases that surround another word and help to explain its meaning. Sometimes a word cannot be understood without the context of the words and phrases around it. For example, the word *leaves* is a **multiple-meaning word** because it could mean several things. When a full sentence is included, such as *The leaves of the tree were swaying in the wind* or *She needs to remember to grab her backpack before she leaves for school*, the meaning is clear. (L4, L4a)

Context clues: The words, facts, or ideas in a text that explain a difficult or unusual word. For example, *dehydrated* is a difficult word. However, you can use clues included in the context of a piece of writing to figure out the meaning of *dehydrated*. *After running in gym class, I was dehydrated. I felt much better after drinking two glasses of water*. Using the context clues in the sentences, it is clear the meaning of *dehydrated* is *in need of water*. (L4a)

Root word: The base word. Knowing the meaning of the root word can help a reader determine the meaning of other forms of the word. For example, if you know that the root word *school* is a place that provides knowledge, you may be able to guess that a *scholar* is someone who is seeking knowledge. (L4b)

Affix: Letters added to a root word that change its meaning. For example, when the prefix *dis–* is added to the word *interest*, the word *disinterest* means the opposite of the root word *interest*. (L4b)

Dictionary: A reference book that provides the **precise**, or exact, meanings of words and phrases. (L4c)

Glossary: An alphabetical list of words and phrases and their meanings. A glossary is often found at the end of a text. (L4c)

Figurative language: To understand figurative language, you cannot simply define the words in the phrase. You will need to distinguish between literal and figurative meanings of words and phrases. (Literal refers to the "actual meaning of a word or phrase.") For example, if someone tells you to "open the door," you can open a real door. If someone tells you to "open the door to your heart," you are not expected to find a door in your chest. Instead, you are to open up your feelings and emotions. (L5)

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- **Simile:** A comparison using *like* or *as*; for example, "She is as pretty as a picture." (L5a)
- **Metaphor:** A direct comparison that states one thing is another. It isn't meant to be literal, but descriptive. For example, if someone describes recess by saying "It was a zoo," he or she is using a metaphor. Recess was chaotic, with many different people running around; it was not literally a zoo. (L5a)
- **Adage:** A saying that is repeated and is generally accepted as truth over time. An example is "A penny saved is a penny earned." (L5b)
- **Proverb:** A short saying that gives a piece of advice, such as "Don't rock the boat." (L5b)
- **Idioms:** Quirky sayings and expressions specific to a language. For example, "Solving that puzzle was *a piece of cake*" means that the puzzle was easy, not that it was something to be eaten. If a saying seems unfamiliar or is not understood, it may be an idiom that needs to be researched. (L5b)

Synonyms: Words that have the same meaning. *Small* and *little* are synonyms. (L5c)

Antonyms: Words that have opposite meanings. *Small* and *large* are antonyms. (L5c)

Homographs: Words that are spelled the same but have different meanings. A *bow* to put in a girl's hair and a *bow* that is used to shoot an arrow are homographs. In the case of homographs, **context** becomes especially important. (L5c)

Important Tips

- ✍ To study for this part of the EOG, concentrate on the kinds of errors you typically make in your own writing. Then review grammar rules for those specific kinds of errors. Use books or free online resources to find practice items that you can try. You can work with a partner and question each other on grammar rules or try editing sentences together. Focus your review time on strengthening the areas or skills that need it the most.
- ✍ When you are faced with an unknown word, go back to the passage. Start reading two sentences before the word appears, and continue reading for two sentences afterward. If that doesn't give you enough clues, look elsewhere in the passage. By reading the context in which the word appears, you may be able to make an educated guess.

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Sample Items 26–33

Item 26

Selected-Response

Which sentence uses commas correctly?

A. "There goes your little sister Nathaniel," I said.
B. "Yes it was me, I did phone you, last night."
C. "Jason, you called last night, didn't you?"
D. "No she is home sick today," Nathaniel replied.

Item 27

Selected-Response

Which sentence BEST combines all the ideas into one clear statement?

> **Richard went to a museum. It was his first museum visit. He was amazed by the variety of items. He was also amazed by the quality of items.**

A. Having never visited a museum before, Richard was amazed by the variety and quality of the items.
B. The quality and variety of items at the museum amazed Richard during his first trip to a museum.
C. Because he was impressed by the quality of items and their variety, Richard visited a museum.
D. Both the quality and variety of items impressed Richard at the museum for his first visit.

Item 28

Selected-Response

Which revision of sentence 3 makes the verb tense consistent with the rest of the paragraph?

> **[1]Animals need to visit their doctors regularly. [2]Veterinarians administer shots regularly to keep pets healthy. [3]They also check pets' teeth, just like dentists, to make sure they had no dangerous plaque. [4]Veterinarians can even provide grooming services to keep your pet's nails at a comfortable length.**

A. They also would check pets' teeth, just like dentists, to make sure they had no dangerous plaque.
B. They also checked pets' teeth, just like dentists, to make sure they have no dangerous plaque.
C. They also check pets' teeth, just like dentists, to make sure they have no dangerous plaque.
D. They also are checking pets' teeth, just like dentists, to make sure they had no dangerous plaque.

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Item 29

Selected-Response

Which sentence uses the underlined word as a preposition?

A. Derrick always forgets to bring his winter gloves.
B. Jasmine called to ask whether I wanted to come over later.
C. While visiting your cousin, complete your homework.
D. Iris decided to walk home with her friends after school.

Item 30

Selected-Response

What is the correct way to write the title of an article from a magazine?

A. "Five Ways to Improve Your Health"
B. Five Ways to Improve Your Health
C. *Five Ways to Improve Your Health*
D. Five Ways to Improve Your Health

Item 31

Selected-Response

Read the sentence.

> **Riding a skateboard hiking a hilly trail and swimming in a pool or lake are all activities that will help a person to become physically fit.**

How should the sentence be rewritten to use commas correctly?

A. Riding a skateboard hiking a hilly trail, and swimming in a pool or lake, are all activities that will help a person to become physically fit.
B. Riding a skateboard, hiking a hilly trail and, swimming in a pool or lake are all activities that will help a person to become physically fit.
C. Riding a skateboard, hiking a hilly trail, and swimming in a pool or lake are all activities that will help a person to become physically fit.
D. Riding a skateboard hiking a hilly trail, and swimming in a pool, or lake are all activities that will help a person to become physically fit.

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Item 32

Selected-Response

Which verb phrase correctly completes the sentence?

> **Before you agree to meet after school, you _____ your sister whether she can wait for you.**

A. will have needed to ask
B. will need to ask
C. had needed to ask
D. had asked

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Item 33

Drop-Down Technology-Enhanced

Choose the options from each drop-down menu that show the correct use of commas.

There are a few types of animals that work well for a class pet. Some classrooms have pets that live in aquariums like [ ]. Pets such as [ ] require a cage. No matter what kind of pet your classroom may have, it is important to learn to care properly for this pet.

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the two blank boxes. When you click the arrow, a drop-down menu will appear, showing you all the possible options for that blank. Each drop-down menu with its options is shown below.

There are a few types of animals that work well for a class pet. Some classrooms have pets that live in aquariums like [ ]. Pets such as [ ] require a cage. No matter what

t is importan

fish frogs, geckos, and snakes
fish, frogs, geckos, and snakes

hamsters, rabbits, and hedgehogs
hamsters rabbits, and hedgehogs,

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Item 34

Drag-and-Drop Technology-Enhanced

Read the paragraph. Complete the chart to show how each of the underlined words in the paragraph is used.

"Ugh!" exclaimed the mail delivery person. She was placing mail in a mailbox when the sky suddenly opened up and poured down rain. Normally she didn't mind getting a little wet, but this rain was causing all of the mail in her bag to get soaked.

?

Word	What part of speech is the word?	What does the word do?
"Ugh!"		
in		
but		

What part of speech is the word?	What does the word do?
conjunction	**shows where an object is located**
interjection	**connects clauses or sentences**
preposition	**demonstrates sudden emotion**
adverb	**describes how, when, or where**

Use a mouse, touchpad, or touchscreen to move the descriptions below the chart into the boxes in the chart.

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ENGLISH LANGUAGE ARTS (ELA) ADDITIONAL SAMPLE ITEM KEYS

Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
1	ELAGSE5RL1 Literary	2	C	The correct answer is choice (C) He is happier being around animals than people. The Doctor will not get rid of his animals so that more patients will come because he likes the animals too much. Choice (A) is incorrect because while he prefers his animals, there is no indication that he does not like the people in his town. Choice (B) is incorrect because there is no evidence to support whether he feels appreciated. Choice (D) is incorrect because he does not show concern about his sister criticizing him.
2	ELAGSE5RL4 Literary	3	B	The correct answer is choice (B) to express her dislike for his choices. This sentence shows that she is upset with how Doctor Dolittle is more concerned with his animals than his patients. Choice (A) is incorrect because her comment doesn't show disinterest in his work. Choice (C) is incorrect because their conversation does not revolve around the Doctor's cleanliness or lack thereof. Choice (D) is incorrect because this discussion doesn't pertain to the Doctor's garden.
3	ELAGSE5RL1 Literary	3	B/C	The correct answer is choice (B) annoyed **and** choice (C) His sister used to grumble about all these animals and said they made the house untidy. Sarah doesn't appreciate having to clean up after the animals and is annoyed by the fact that the animals are driving off patients. The answer choice for Part B of the item shows text that supports this. In Part A, Choice (A) is incorrect because Sarah is clearly unhappy about her brother's choices. Choice (C) is incorrect because Sarah does not think her brother is making wise decisions. Choice (D) is incorrect because while Sarah thinks her brother is making poor choices, she doesn't show suspicion toward him. The incorrect options in Part B support incorrect answers in Part A.
4	ELAGSE5RL2 Literary	3	N/A	See scoring rubric and exemplar response on page 81.
5	ELAGSE5W3	4	N/A	See scoring rubric beginning on page 92 and sample responses on page 82.

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Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
6	ELAGSE5RI2 Informational/ Explanatory	2	A	The correct answer is choice (A) It is important to consider the different responsibilities of pet ownership before getting a pet. Owning a pet can be positive for both the owners and the pets. Choices (B), (C), and (D) are incorrect because they are too specific to a single paragraph of the passage and don't encompass two or more ideas.
7	ELAGSE5RI4 Informational/ Explanatory	2	B	The correct answer is choice (B) many. A list of several expenses follows the sample sentence. Choices (A), (C), and (D) are incorrect because they are not synonyms for "various."
8	ELAGSE5RI8 Informational/ Explanatory	2	N/A	See scoring rubric and exemplar response on page 83.
9	ELAGSE5RI8 Informational/ Explanatory	2	B	The correct answer is choice (B) Both include information about children they have known. This is correct because the writer of the first passage includes information about his children and the writer of the second passage includes information about children she has taught. Choice (A) is incorrect because neither writer provides a list of questions. Choice (C) is incorrect because neither includes an interview with principals. Choice (D) is incorrect because neither discusses personal experience as a child.
10	ELAGSE5RI6 Informational/ Explanatory	3	D	The correct answer is choice (D) They both are critical of processed foods in school lunches. This choice is correct because both writers share the viewpoint that fresh, whole foods are best and processed foods are problematic. Choice (A) is incorrect because the writer of the first passage does not conclude that school lunches are best. Choice (B) is incorrect because the writer of the second passage stresses the improvement in school lunches over the years. Choice (C) is incorrect because the writers do not suggest that lunches are more important than recess.
11	ELAGSE5RI5 Informational/ Explanatory	3	B	The correct answer is choice (B) "So-Called 'Healthier' School Lunches" compares current school lunches with previous ones and concludes that the author will send his children with lunches from home. "Bravo for Making Students Healthier" compares how past and recent school lunches affect kids and concludes that new changes are positive. Choices (A), (C), and (D) are incorrect because some of the grounds of comparison and some of the conclusions do not match the passages.

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Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
12	ELAGSE5RI9 Informational/ Explanatory	3	N/A	See scoring rubric and sample responses on page 84.
13	ELAGSE5W1 ELAGSE5L1 ELAGSE5L2	4	N/A	See scoring rubric beginning on page 96 and sample response on page 85.
14	ELAGSE5RI8	2	A	The correct answer is choice (A) to explain why Davis thought a new type of work pants was needed. Repairing miners' pants is what led Davis to come up with the idea to use rivets and work with Strauss to patent Levi's. Choice (B) is incorrect because, although this may be true, it is not the reason the author included this detail. Choice (C) is incorrect because, although the work clothes were not holding up for miners, there is no support for there being a shortage. Choice (D) is incorrect because, although Davis was a tailor, it is not the reason the author mentions this detail.
15	ELAGSE5RI3	3	B/C	The correct answers are choice (B) Strauss was a businessman who recognized the needs of miners **and** choice (C) By 1873, thousands of miners in San Francisco were wearing the new work pants. The author develops the idea that Strauss saw an opportunity to make money from the California gold rush without mining. He opened a dry goods store, which led him to meet Davis, and together they patented Levi's. Strauss sold jeans all over the world. The correct answer choice for Part B of the item shows text that supports this. In Part A, choice (A) is incorrect because, while Strauss traveled to California because of the gold rush, he did not find gold. Choice (C) is incorrect because, although Strauss's customers were in the mining business, the passage does not mention whether he employed these people. Choice (D) is incorrect because Strauss was not eager to help miners improve their working conditions; he was eager to make money by providing supplies they needed. The incorrect options in Part B support incorrect answers in Part A.

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Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
16	ELAGSE5RI2	2	C	The correct answer is choice (C) In the 1800s, Levi Strauss saw an opportunity to open a store in California while others mined for gold. He met a tailor named Jacob Davis and helped him create Levi's, which became a popular clothing item around the world. This is the best set of sentences to summarize the passage because it describes two of the main ideas from the passage. Choice (A) is incorrect because the sentences do not mention the pants, which should be included in a summary since Levi's are what Strauss is most known for. Choice (B) is incorrect because the sentences summarize the first part of the passage but do not mention any key information about working with Davis or the creation of Levi's. Choice (D) is incorrect because it only focuses on the pants and does not mention anything about the gold rush or Strauss's store.
17	ELAGSE5W3	4	N/A	See scoring rubric beginning on page 92 and sample responses on page 86.
18	ELAGSE5W1b	2	B	The correct answer is choice (B) Each student could experience a new activity at the national park, such as learning how to fish, ride horses, or photograph nature. This is the only option that is an additional benefit directly tied to students visiting the national park. Choice (A) is incorrect because it is a general statement about how many people visit national parks. Choice (C) is incorrect because, although the student's letter mentions a park ranger, this sentence does not strengthen the student's opinion to visit a national park. Choice (D) is incorrect because, although the sentence mentions the national parks, it does not provide additional support for the student's opinion.
19	ELAGSE5W2b	2	D	The correct answer is choice (D) the times of day the pets eat. This information would be most helpful to a potential pet-sitter. Choices (A), (B), and (C) are incorrect because none of this information will help a pet-sitter do his/her job.
20	ELAGSE5W2c	2	C	The correct answer is choice (C) However,. This provides the correct transition between ideas since the first idea is that plastic water bottles have positive qualities and a contrasting word is needed to make a proper transition to the idea that these water bottles have drawbacks. Choices (A), (B), and (D) do not provide a contrasting word or phrase that works for the ideas in the paragraph and sentence.

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Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
21	ELAGSE5W3d	2	B	The correct answer is choice (B) The sugary smell of the warm, soft cookies drifted into Sarah's nose, making her mouth water. This is the most descriptive detail that is relevant to the original idea in sentence 6. Choice (A) is incorrect because the sentence does not mention smell, which is the original idea in sentence 6. Choice (C) is incorrect because the sentence is too general to improve sentence 6 with a sensory detail. Choice (D) is incorrect because the sentence describes Sarah's actions rather than the cookies.
22	ELAGSE5W4	3	D	The correct answer is choice (D) sentence 9. This sentence is scholarly and very formal in its tone and provides a level of detail that is irrelevant to the passage. Thus, it should be removed. Choice (A) is incorrect because the information about the parents and stopping along the trail is relevant and in the right informal tone to match the rest of the paragraph. Choice (B) is incorrect because sentence 5 expands upon an idea in sentence 4 and provides a transition of thought to sentence 6 while maintaining an informal tone. Choice (C) is incorrect because sentence 7 provides helpful details and maintains an informal tone.
23	ELAGSE5W8	2	A	The correct answer is choice (A) Although businessmen were not interested in her invention, Marion Donovan made a successful semi-disposable diaper that many people bought. This choice covers the crucial information that Donovan made a successful diaper despite the fact that businessmen questioned her and she had to do it on her own. Choice (B) is incorrect because it leaves open the idea that the businessmen were actually convinced to help, and this is not accurate. It also does not include her success. Choice (C) is incorrect because it is so specific to the diaper's construction and includes no information about the bigger picture—how Donovan succeeded in making and marketing the diaper. Choice (D) is incorrect because it is so specific to what inspired Donovan to invent a diaper and includes none of the subsequent important main points.
24	ELAGSE5W2c	2	N/A	See scoring rubric and exemplar response on page 87.
25	ELAGSE5W3e	2	N/A	See scoring rubric and exemplar response on page 88.
26	ELAGSE5L2c	2	C	The correct answer is choice (C) "Jason, you called last night, didn't you?" Choice (A) is incorrect because it needs a comma before "Nathaniel." Choices (B) and (D) are incorrect because "yes" and "no" require commas after them.

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Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
27	ELAGSE5L3a	3	A	The correct answer is choice (A) Having never visited a museum before, Richard was amazed by the variety and quality of the items. Choice (B) is incorrect because it repeats "museum." Choice (C) is incorrect because it shows an inaccurate cause and effect relationship. Choice (D) is incorrect because the prepositional phrases create an awkward, unclear construction.
28	ELAGSE5L1d	2	C	The correct answer is choice (C) They also check pets' teeth, just like dentists, to make sure they have no dangerous plaque. Sentence 3 is written in the present tense, and "have" is present tense. Choice (A) is incorrect because "would check" is future tense. Choice (B) is incorrect because "checked" is past tense. Choice (D) is incorrect because "had" is past tense.
29	ELAGSE5L1a	2	D	The correct answer is choice (D) Iris decided to walk home <u>with</u> her friends after school. "With her friends" is a prepositional phrase. Choice (A) uses an infinitive. Choice (B) has an adverb underlined, and choice (C) has a subordinating conjunction underlined.
30	ELAGSE5L2d	1	A	The correct answer is choice (A) "Five Ways to Improve Your Health." This is the correct way to write the title of an article. Choices (B), (C), and (D) are incorrect because underlining, italicizing, and leaving text plain are not valid ways to designate an article title.
31	ELAGSE5L2a	2	C	The correct answer is choice (C) Riding a skateboard, hiking a hilly trail, and swimming in a pool or lake are all activities that will help a person to become physically fit. Choice (A) is incorrect because it leaves out the comma after "skateboard" and no comma is needed after "lake." Choice (B) is incorrect because a comma is needed after "trail" and no comma is needed after "and." Choice (D) is incorrect because it leaves out a comma after "skateboard" and there is no need for a comma after "pool."
32	ELAGSE5L1c	2	B	The correct answer is choice (B) will need to ask. This is the verb phrase that makes sense in the sentence. Choices (A), (C), and (D) are incorrect because these verb phrases are not grammatically correct in the sentence.
33	ELAGSE5L2a	2	N/A	See scoring rubric and exemplar response on page 89.
34	ELAGSE5L1a	2	N/A	See scoring rubric and exemplar response on page 90.

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ENGLISH LANGUAGE ARTS (ELA) EXAMPLE SCORING RUBRICS AND EXEMPLAR RESPONSES

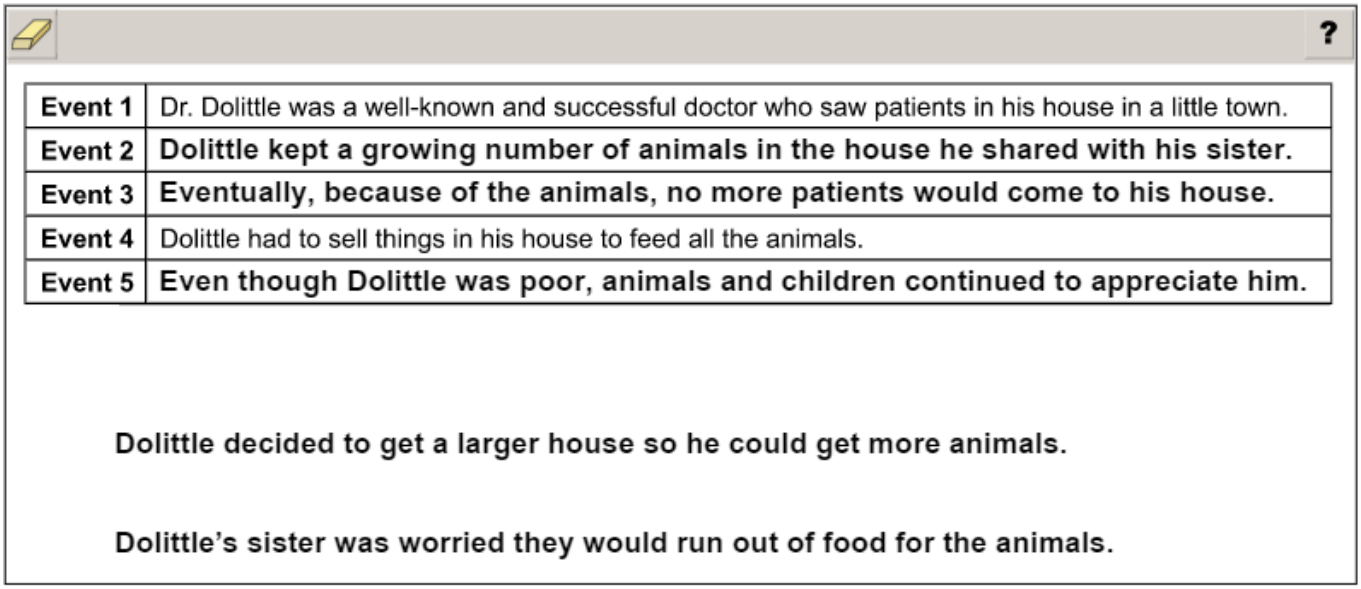
Item 4

Scoring Rubric

Points	Description
2	The student correctly fills in all three rows.
1	The student correctly fills in two rows.
0	The student does not correctly fill in at least two rows.

Exemplar Response

The correct response is shown below.



Event 1	Dr. Dolittle was a well-known and successful doctor who saw patients in his house in a little town.
Event 2	**Dolittle kept a growing number of animals in the house he shared with his sister.**
Event 3	**Eventually, because of the animals, no more patients would come to his house.**
Event 4	Dolittle had to sell things in his house to feed all the animals.
Event 5	**Even though Dolittle was poor, animals and children continued to appreciate him.**

Dolittle decided to get a larger house so he could get more animals.

Dolittle's sister was worried they would run out of food for the animals.

The correct response for event 2 is "Dolittle kept a growing number of animals in the house he shared with his sister." The correct response for event 3 is "Eventually, because of the animals, no more patients would come to his house." The correct response for event 5 is "Even though Dolittle was poor, animals and children continued to appreciate him." These responses are correct because they represent key details of the passage. NOTE: The response order does affect scoring.

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Item 5

To view the four-point rubric for a narrative response, see pages 92 and 93.

Exemplar Response

Points Awarded	Sample Response
4	I used to think I was so lucky to have a doctor for a brother. I even worked for him, cleaning his house. I tried to be patient with my brother and his animals, but I could only take so much. Everywhere I turned there were signs of animals: fur, chewed paper, dirty paw prints. I would barely get one mess cleaned up when another one appeared. It was ridiculous. When he started losing his patients and their money, I had to say something. I said, “John, you’re losing your patients because of these animals. Soon we won’t have enough money to put food on the table. Nobody will want you for their doctor.” “I like the animals better anyway,” he said. Then things got worse. It was bad enough when it was just a few animals, but the house was beginning to look like a zoo. Couldn’t my brother at least have kept the animals outside instead of letting the mice live in his dressers? They have taken over the house. Each day he welcomes a new animal, and each day I feel less welcome. With our small town, there was no chance that we could hide it for long. He sold his piano and dress clothes just to keep food on the table. People used to look at my brother with respect and awe. Now they look down on him.
3	I used to think I was so lucky to have a doctor for a brother. I even worked for him, cleaning his house. But the animals took over. Everywhere I turned there were signs of animals: fur, chewed paper, dirty paw prints. I would barely get one mess cleaned up when another one appeared. “You are ridiculous,” I told him. When he started losing his patients and their money, I had to say something. I warned him that we would go broke and not be able to put food on the table. He didn’t listen. It was bad enough when it was just a few animals, but the house was beginning to look like a zoo. Couldn’t my brother at least have kept the animals outside instead of letting the mice live in his dressers? They have taken over the house. We get new animals every day.
2	I cleaned house for my brother, the doctor. His pets had taken over. There was fur and messes everywhere. I didn’t want to clean anymore. Nobody wanted John to be their doctor anymore. We didn’t have enough money to buy food. He sold things to take care of the animals. He was paying to run a zoo. The animals took over the house. They were living in the furniture. “You are ridiculous,” I told him.
1	The animals took over the house. They lived in the furniture. We couldn’t afford to feed them, so Doctor Dolittle sold his piano.
0	Doctor Dolittle and I lived together for many years. Then the animals took over.

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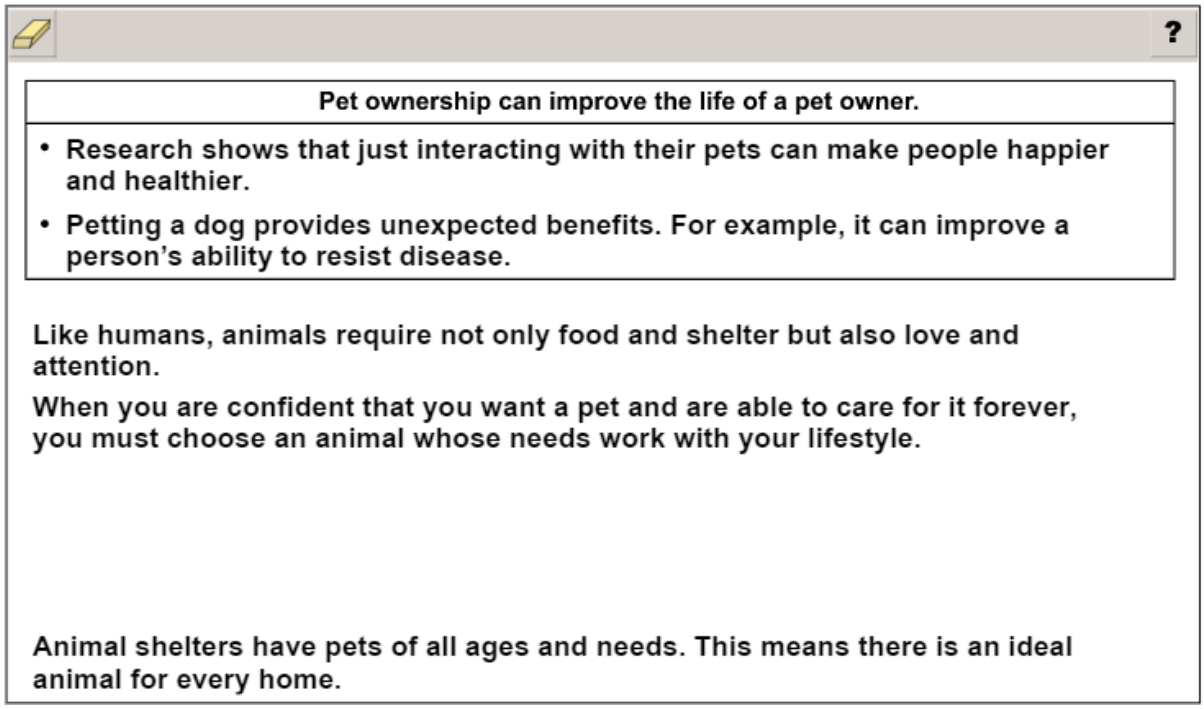
Item 8

Scoring Rubric

Points	Description
2	The student correctly fills in both bullets (order within the box does not matter).
1	The student correctly fills in one bullet (order within the box does not matter).
0	The student does not correctly fill in either bullet.

Exemplar Response

The correct response is shown below.



The correct responses are "Petting a dog provides unexpected benefits. For example, it can improve a person's ability to resist disease." and "Research shows that just interacting with their pets can make people happier and healthier." These sentences are the correct responses because they provide specific examples of ways pet interaction benefits people's health and happiness. Both details provide the best support for the claim that pet ownership can improve the life of a pet owner.

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Item 12

Scoring Rubric

Points	Description
2	The exemplar shows a full-credit response. It achieves the following: • Gives sufficient evidence of the ability to integrate information from texts on the same topic in a piece of writing • Includes specific examples/details that make clear reference to the texts • Adequately explains an idea that is common to both texts using clearly relevant information based on the texts
1	The exemplar shows a 1-point response. It achieves the following: • Gives limited evidence of the ability to integrate information from texts on the same topic in a piece of writing • Includes vague/limited examples/details that make reference to the texts • Explains an idea that is common to both texts with vague/limited information from the texts
0	The exemplar shows a response that would earn no credit. It achieves the following: • Gives no evidence of the ability to integrate information from texts on the same topic in a piece of writing

Exemplar Response

Points Awarded	Sample Response
2	In the passages “So-Called ‘Healthier’ School Lunches” and “Bravo for Making Students Healthier,” both writers agree that children need healthy lunches at school. They do not want kids to eat processed foods from a box or a can. Instead, they want kids to eat fresh foods. Palmer Ross, the parent writing in the first letter, says that he was expecting “fresh and healthy produce” but was upset that the fruits and vegetables in his kids’ lunches “come from cans.” He also does not like the processed foods like “chicken nuggets, fish sticks, and pizza” in school lunch. Tyra Watts, the teacher writing in the second letter, says that kids used to have more energy in school when they would eat “home-cooked meals rather than processed foods” and vegetables from the garden. She is glad schools are getting rid of “processed chicken fingers” and “pizza” and kids will be eating healthy foods like fruits and vegetables again.
1	Both passages talk about why a healthy lunch is important and why kids need to eat vegetables and fruit instead of sugar and food from cans.
0	Lunches at school are not very healthy at all.

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Item 13

The following is an example of a seven-point response. See the seven-point, two-trait rubric for a text-based opinion response on pages 96 and 97 to see why this example would earn the maximum number of points.

Although schools are taking steps in the right direction, the new school lunch guidelines are not working. For them to work, the lunches must provide fresh and healthy foods. More has to be done to help kids get easy access to healthy foods every day.

Currently, school guidelines require students to get fruits, vegetables, and whole grains. In some areas, fresh produce may not be available. This means that students have only canned vegetables, which do not provide them with the nutrition they need.

In addition, the guidelines are not fair. Palmer Ross writes, "Children are given a calorie maximum based on their age, without taking into account their different sizes and needs. A 220-pound high school football player doing two-a-day practices is getting the same amount of food as smaller children or children who are not as active." The guidelines should not only match age but also match a person's activity level.

Tyra Watts points out that "students now enjoy more healthy baked options, fruits, vegetables, and low-fat dairy products. These options are offered at every meal." But, this is not always the case. School budgets do not always allow schools to buy the healthiest foods. Schools would need to have more money available to pay for these healthier foods.

For students to really get healthier, they need more than a new school lunch program. Students need chances to be active. There is only so much the schools can do, providing one meal a day. While they are taking steps in the right direction, there is so much more work to be done.

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Item 17

To view the four-point holistic rubric for a text-based narrative response, see pages 92 and 93.

Exemplar Response

Points Awarded	Sample Response
4	May 10, 1874 Today was the best day of my life! This afternoon, as I was getting ready to close my store, Jacob stopped by. He started to talk about why our new pants were so popular. He thinks that the reason was his idea of using rivets. I think that my store has something to do with our success, but I didn't say anything. I just agreed with him that everyone seems to be buying our new style of pants. I was about to go to the bank and deposit today's money from the store, so I asked Jacob if he wanted to come along and help me carry it. He grabbed a bag of coins and we both walked down the street to the bank. It was getting late and the sun was begining to disappear. "Hello, Mr. Strauss" said the banker when I walked in. We handed him the money. He counted it. Then he pulled out some papers and started adding numbers together. "Excuse me, Mr. Strauss," said the banker excitedly. "Did you know you are now a millionaire?" I couldn't believe my ears. I asked the banker if he was sure. He just smiled at me and nodded. I knew I had a lot of money saved up, but I had no idea it was that much. Then Jacob yelled, "Congratulations!" I was still astonished, but Jacob shook my hand and said that we had to celebrate. We went out for a fancy dinner. I had a juicy steak, while Jacob had some type of fish that looked very tasty. When the waitress came over and asked if we wanted some desert, I ordered ice cream. It was the perfect way to end the day. I'm still full! Now I can go to bed dreaming of all the fancy dinners I'll have in the future.
3	I have big news today. My accountant came by the store today to meet with Jacob and me. He said we've sold enough pants to become millionaires! At first, I was shocked. I shook his hand and said he was getting a raise. Then, after he left, we decided we had to have a party. I invited all my friends in town. Jacob invited some of his friends too. I was a little sad my brothers were still in New York and couldn't come. The party was a blast. We had lots of delicous food. There was a band that played music all night. Lots of people showed up to hang out and dance. They all congratulated me on my amazing accomplishmint. After the party, I was exhausted, but I had to write this all down in my journal. Tomorrow I'll have to sell more pants to make up for all the money I spent on the party.
2	Im a millionaire. I never thought I'd have so much money! Right away I told my brothers about it. They are going to come out to San Francisco next month to celebrate with me. We will hang out and I will show the my store. I can't wait to see them I miss them.
1	Today I am a millionare I am so happy I ate my favorite cake to celebrate.
0	The trousers

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Item 24

Scoring Rubric

Points	Description
1	The student correctly selects both drop-down menu options.
0	The student does not correctly select both drop-down menu options.

Exemplar Response

The correct response is shown below.

Celery is a delicious vegetable that is a great source of fiber. Celery is inexpensive to buy at the store and can even be grown in a garden. It is easy to prepare and enjoy celery. [For example ▾], you can cut up sticks of celery and pack them in a bag as part of a lunch or snack. Celery can also be eaten with cheese or peanut butter for a tasty treat that is high in protein. [For these reasons ▾], celery is my favorite snack, and I encourage you to try it.

In the first drop-down menu, the correct response is “For example,” because it transitions into a sentence that gives support that celery is easy to prepare. In the second drop-down menu, the correct response is “For these reasons,” because it provides a summation transition leading into a conclusion.

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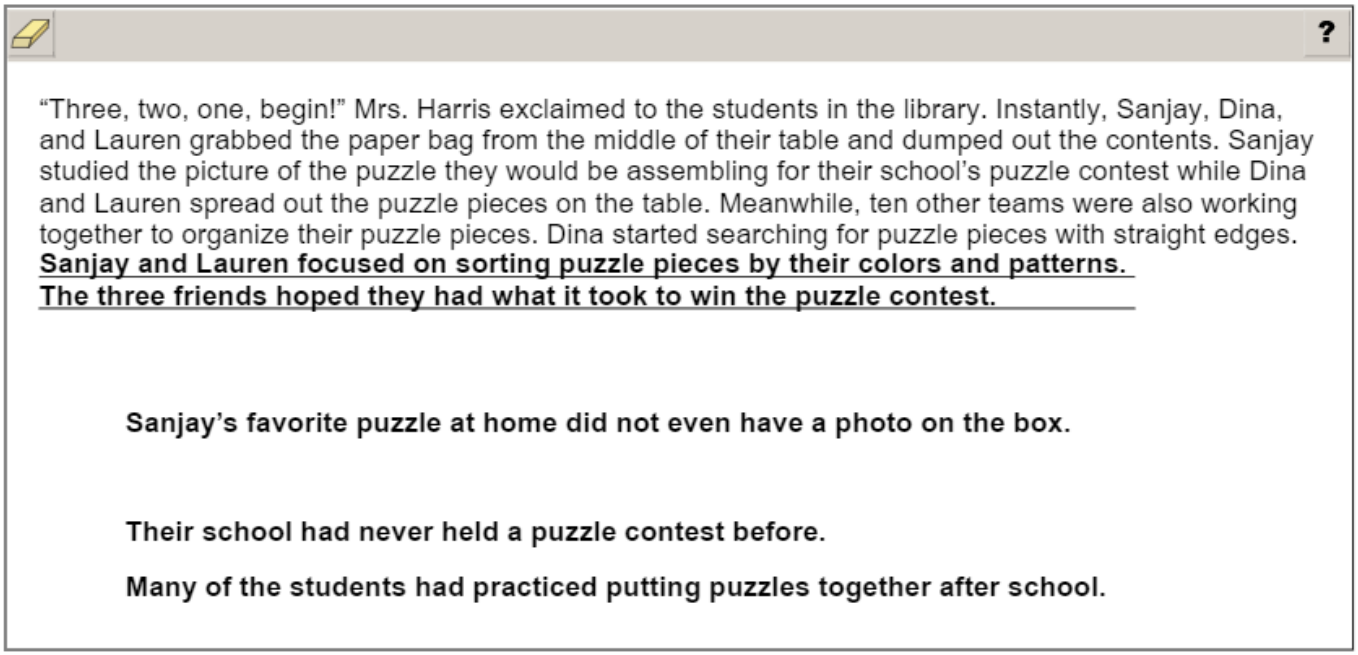
Item 25

Scoring Rubric

Points	Description
2	The student correctly fills in both blanks.
1	The student correctly fills in one blank.
0	The student does not correctly fill in either blank.

Exemplar Response

The correct response is shown below.


"Three, two, one, begin!" Mrs. Harris exclaimed to the students in the library. Instantly, Sanjay, Dina, and Lauren grabbed the paper bag from the middle of their table and dumped out the contents. Sanjay studied the picture of the puzzle they would be assembling for their school's puzzle contest while Dina and Lauren spread out the puzzle pieces on the table. Meanwhile, ten other teams were also working together to organize their puzzle pieces. Dina started searching for puzzle pieces with straight edges.
Sanjay and Lauren focused on sorting puzzle pieces by their colors and patterns.
The three friends hoped they had what it took to win the puzzle contest.

Sanjay's favorite puzzle at home did not even have a photo on the box.

Their school had never held a puzzle contest before.

Many of the students had practiced putting puzzles together after school.

The response on the first blank ("Sanjay and Lauren focused on sorting puzzle pieces by their colors and patterns.") is correct because it follows from and supports the content of the preceding two sentences regarding organizing the puzzle pieces. The response on the second blank ("The three friends hoped they had what it took to win the puzzle contest.") is correct because it supports the content of the paragraph (e.g., team, puzzle contest) with a concluding statement.

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Item 33

Scoring Rubric

Points	Description
1	The student correctly selects both drop-down menu options.
0	The student does not correctly select both drop-down menu options.

Exemplar Response

The correct response is shown below.

There are a few types of animals that work well for a class pet. Some classrooms have pets that live in aquariums like [fish, frogs, geckos, and snakes]. Pets such as [hamsters, rabbits, and hedgehogs] require a cage. No matter what kind of pet your classroom may have, it is important to learn to care properly for this pet.

The correct response in the first drop-down menu is “fish, frogs, geckos, and snakes.” The correct response in the second drop-down menu is “hamsters, rabbits, and hedgehogs.” Each response is demonstrating the skill of using commas to separate items in a series. The first response requires a comma between “fish” and “frogs.” The second response requires a comma between “hamsters” and “rabbits” but not after “hedgehogs.”

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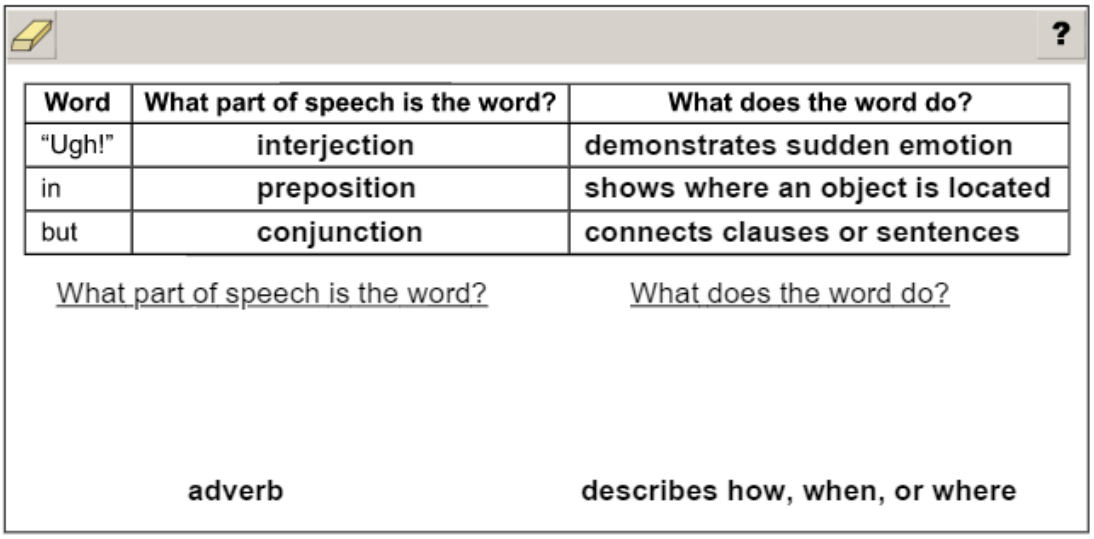
Item 34

Scoring Rubric

Points	Description
2	The student correctly fills in all three rows.
1	The student correctly fills in two rows, the middle column, or the last column.
0	The student correctly fills in one row or does not correctly fill in any row.

Exemplar Response

The correct response is shown below.



Word	What part of speech is the word?	What does the word do?
"Ugh!"	interjection	demonstrates sudden emotion
in	preposition	shows where an object is located
but	conjunction	connects clauses or sentences

What part of speech is the word? What does the word do?

adverb describes how, when, or where

The correct response in the first row is "interjection" followed by "demonstrates sudden emotion" in the right column. In the first sentence of the stimulus paragraph, the mail delivery person is expressing sudden surprise, which is supported by the use of "exclaimed" and "suddenly" in the following sentence. The correct response in the second row is "preposition" followed by "shows where an object is located" in the right column. The preposition "in" shows the location of the mail ("a mailbox") in the second sentence. The correct response in the third row is "conjunction" followed by "connects clauses or sentences" in the right column. In the third sentence, the conjunction "but" connects two independent clauses and establishes a contrasting relationship between the two clauses.

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ENGLISH LANGUAGE ARTS (ELA) WRITING RUBRICS

Grade 5 items that are not machine-scored—i.e., constructed-response, extended constructed-response, and extended writing-response items—are manually scored using either a holistic rubric or a two-trait rubric.

Four-Point Holistic Rubric

Genre: Narrative

A holistic rubric evaluates one major trait, which is ideas. On the Georgia Milestones EOG assessment, a holistic rubric is scored from zero to four. Each point value represents the difference in the levels or quality of the student's work. To score an item on a holistic rubric, a scorer need only choose the criteria and associated point value that best represents the student's work. Increasing point values represent a greater understanding of the content and, thus, a higher score.

Seven-Point, Two-Trait Rubric

Genre: Opinion or Informational/Explanatory

A two-trait rubric, on the other hand, evaluates two major traits, which are conventions and ideas. On the Georgia Milestones EOG assessment, a two-trait rubric contains two scales, one for each trait, ranging from zero to three on one scale (conventions) and zero to four on the other (ideas). A score is given for each of the two traits, for a total of seven possible points for the item. To score an item on a two-trait rubric, a scorer must choose the criteria and associated point value for each trait that best represents the student's work. The two scores are added together. Increasing point values represent a greater understanding of the content and, thus, a higher score.

On the following pages are the rubrics that will be used to evaluate writing on the Georgia Milestones Grade 5 English Language Arts (ELA) EOG assessment.

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Four-Point Holistic Rubric

Genre: Narrative

Writing Trait	Points	Criteria
This trait examines the writer's ability to effectively develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences based on a text that has been read.	4	*The student's response is a well-developed narrative that fully develops a real or imagined experience based on text as a stimulus.* • Effectively establishes a situation and introduces a narrator and/or characters • Organizes an event sequence that unfolds naturally • Effectively uses narrative techniques, such as dialogue, description, and pacing, to develop rich, interesting experiences and events or show the responses of characters to situations • Uses a variety of words and phrases consistently to signal the sequence of events • Uses concrete words, phrases, and sensory language consistently to convey experiences or events precisely • Provides a conclusion that follows from the narrated experiences or events • Integrates ideas and details from source material effectively • Has very few or no errors in usage and/or conventions that interfere with meaning*
	3	*The student's response is a complete narrative that develops a real or imagined experience based on text as a stimulus.* • Establishes a situation and introduces one or more characters • Organizes events in a clear, logical order • Uses narrative techniques, such as dialogue and description, to develop experiences and events or show the responses of characters to situations • Uses words and/or phrases to indicate sequence • Uses words, phrases, and details to convey experiences and events • Provides an appropriate conclusion • Integrates some ideas and/or details from source material • Has a few minor errors in usage and/or conventions that interfere with meaning*

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Four-Point Holistic Rubric

Genre: Narrative
(continued)

Writing Trait	Points	Criteria
This trait examines the writer's ability to effectively develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences based on a text that has been read.	2	*The student's response is an incomplete or oversimplified narrative based on text as a stimulus.* • Introduces a vague situation and at least one character • Organizes events in a sequence but with some gaps or ambiguity • Attempts to use a narrative technique, such as dialogue or description, to develop experiences and events or show the responses of characters to situations • Uses occasional signal words to indicate sequence • Uses some words or phrases inconsistently to convey experiences and events • Provides a weak or ambiguous conclusion • Attempts to integrate ideas or details from source material • Has frequent errors in usage and conventions that sometimes interfere with meaning*
	1	*The student's response provides evidence of an attempt to write a narrative based on text as a stimulus.* • Response is a summary of the story • Provides a weak or minimal introduction of a situation or a character • May be too brief to demonstrate a complete sequence of events • Shows little or no attempt to use dialogue or description to develop experiences and events or show the responses of characters to situations • Uses words that are inappropriate, overly simple, or unclear • Provides few, if any, words that convey experiences or events • Provides a minimal or no conclusion • May use few, if any, ideas or details from source material • Has frequent major errors in usage and conventions that interfere with meaning*
	0	*The student will receive a condition code for various reasons:* • Blank • Copied • Too Limited to Score/Illegible/Incomprehensible • Non-English/Foreign Language • Off Topic/Off Task/Offensive

*Students are responsible for language conventions learned in their current grade as well as in prior grades. Refer to the language skills for each grade to determine the grade-level expectations for grammar, syntax, capitalization, punctuation, and spelling. Also refer to the "Language Progressive Skills, by Grade" chart in the Appendix for those standards that need continued attention beyond the grade in which they were introduced.

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Seven-Point, Two-Trait Rubric

Trait 1 for Informational/Explanatory Genre

Writing Trait	Points	Criteria
Idea Development, Organization, and Coherence *This trait examines the writer's ability to effectively establish a controlling idea, support the idea with evidence from the text(s) read, and elaborate on the idea with examples, illustrations, facts, and other details. The writer must integrate the information from the text(s) into his/her own words and arrange the ideas and supporting evidence (from the text[s] read) in order to create cohesion for an informative/explanatory essay.*	4	*The student's response is a well-developed informative/explanatory text that examines a topic in depth and conveys ideas and information clearly based on text as a stimulus.* • Effectively introduces a topic • Effectively develops the topic with multiple facts, definitions, concrete details, quotations, or other information and examples related to the topic • Groups related ideas together logically to give some organization to the writing • Effectively uses linking words and phrases to connect ideas within and across categories of information • Uses precise language and domain-specific vocabulary to explain the topic • Provides a strong concluding statement or section related to the information or explanation presented
	3	*The student's response is a complete informative/explanatory text that examines a topic and presents information based on text as a stimulus.* • Introduces a topic • Develops the topic with some facts, definitions, and details • Groups some related ideas together to give partial organization to the writing • Uses some linking words to connect ideas within and across categories of information, but relationships may not always be clear • Uses some precise language and domain-specific vocabulary to explain the topic • Provides a concluding statement or section
	2	*The student's response is an incomplete or oversimplified informative/explanatory text that cursorily examines a topic based on text as a stimulus.* • Attempts to introduce a topic • Attempts to develop a topic with too few details • Attempts to group some related ideas together but organization is not clear • Uses few linking words to connect ideas, but not all ideas are well connected to the topic • Uses limited language and vocabulary that do not clearly explain the topic • Provides a weak concluding statement or section
	1	*The student's response is a weak attempt to write an informative/explanatory text that examines a topic based on text as a stimulus.* • May not introduce a topic or topic is unclear • May not develop a topic • May be too brief to group any related ideas together • May not use any linking words to connect ideas • Uses vague, ambiguous, or repetitive language • Provides a minimal or no concluding statement or section
	0	*The student will receive a condition code for various reasons:* • Blank • Copied • Too Limited to Score/Illegible/Incomprehensible • Non-English/Foreign Language • Off Topic/Off Task/Offensive

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Seven-Point, Two-Trait Rubric

Trait 2 for Informational/Explanatory Genre

Writing Trait	Points	Criteria
Language Usage and Conventions *This trait examines the writer's ability to demonstrate control of sentence formation, usage, and mechanics as embodied in the grade-level expectations of the language standards.*	3	*The student's response demonstrates full command of language usage and conventions.* • Has clear and complete sentence structure, with appropriate range and variety • Shows command of language and its conventions when writing • Any errors in usage and conventions do not interfere with meaning*
	2	*The student's response demonstrates partial command of language usage and conventions.* • Has complete sentences, with some variety • Shows some knowledge of language and its conventions when writing • Has minor errors in usage and conventions with no significant effect on meaning*
	1	*The student's response demonstrates weak command of language usage and conventions.* • Has fragments, run-ons, and/or other sentence structure errors • Shows little knowledge of language and its conventions when writing • Has frequent errors in usage and conventions that interfere with meaning*
	0	*The student will receive a condition code for various reasons:* • Blank • Copied • Too Limited to Score/Illegible/Incomprehensible • Non-English/Foreign Language • Off Topic/Off Task/Offensive

*Students are responsible for language conventions learned in their current grade as well as in prior grades. Refer to the language skills for each grade to determine the grade-level expectations for grammar, syntax, capitalization, punctuation, and spelling. Also refer to the "Language Progressive Skills, by Grade" chart in the Appendix for those standards that need continued attention beyond the grade in which they were introduced.

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Seven-Point, Two-Trait Rubric

Trait 1 for Opinion Genre

Writing Trait	Points	Criteria
Idea Development, Organization, and Coherence *This trait examines the writer's ability to effectively establish a point of view and to support the opinion with reasons from the text(s) read. The writer must form an opinion from the text(s) in his/her own words and organize reasons for the opinion (from text that they have read) in order to create cohesion for an opinion essay.*	4	*The student's response is a well-developed opinion piece that effectively examines a topic and supports a point of view, with reasons, clearly based on text as a stimulus.* • Effectively introduces a topic and clearly states an opinion • Creates an effective organizational structure that logically groups the ideas and reasons to support the writer's purpose • Effectively develops the reasons that are supported by facts and details • Uses words, phrases, and clauses effectively to link opinion and reasons • Provides a strong concluding statement or section related to the opinion presented
	3	*The student's response is a complete opinion piece that examines a topic and supports a point of view based on text.* • Introduces a topic and states an opinion • Provides some organizational structure to group ideas and reasons • Develops the topic and supports the opinion with facts and details • Uses some words, phrases, and clauses to link opinion and reasons • Provides a concluding statement or section related to the opinion presented
	2	*The student's response is an incomplete or oversimplified opinion piece that examines a topic and partially supports a point of view based on text.* • Attempts to introduce a topic and state an opinion • Attempts to provide an organizational structure to group reasons, but structure is inconsistent • Attempts to develop the topic and support the opinion with facts and details • Uses few words, phrases, or clauses to link opinion and reasons; connections are not always clear • Provides a weak concluding statement or section that may not be related to the opinion
	1	*The student's response is a weak attempt to write an opinion piece that examines a topic and does not support a text-based point of view.* • May not introduce a topic or state an opinion • May not have any organizational structure evident • May not develop the topic or support the opinion • May not use words or phrases to link opinion and reasons • Provides a minimal or no concluding statement or section
	0	*The student will receive a condition code for various reasons:* • Blank • Copied • Too Limited to Score/Illegible/Incomprehensible • Non-English/Foreign Language • Off Topic/Off Task/Offensive

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Seven-Point, Two-Trait Rubric

Trait 2 for Opinion Genre

Writing Trait	Points	Criteria
Language Usage and Conventions *This trait examines the writer's ability to demonstrate control of sentence formation, usage, and mechanics as embodied in the grade-level expectations of the language standards.*	3	*The student's response demonstrates full command of language usage and conventions.* • Has clear and complete sentence structure, with appropriate range and variety • Shows command of language and its conventions when writing • Any errors in usage and conventions do not interfere with meaning*
	2	*The student's response demonstrates partial command of language usage and conventions.* • Has complete sentences, with some variety • Shows some knowledge of language and its conventions when writing • Has minor errors in usage and conventions with no significant effect on meaning*
	1	*The student's response demonstrates weak command of language usage and conventions.* • Has fragments, run-ons, and/or other sentence structure errors • Shows little knowledge of language and its conventions when writing • Has frequent errors in usage and conventions that interfere with meaning*
	0	*The student will receive a condition code for various reasons:* • Blank • Copied • Too Limited to Score/Illegible/Incomprehensible • Non-English/Foreign Language • Off Topic/Off Task/Offensive

*Students are responsible for language conventions learned in their current grade as well as in prior grades. Refer to the language skills for each grade to determine the grade-level expectations for grammar, syntax, capitalization, punctuation, and spelling. Also refer to the "Language Progressive Skills, by Grade" chart in the Appendix for those standards that need continued attention beyond the grade in which they were introduced.

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ACTIVITY

The following activity develops skills in Unit 1: Reading Literary Text.

Standards: ELAGSE5RL1, ELAGSE5RL2, ELAGSE5RL3, ELAGSE5W3

Story Time!

Try this activity after reading a story, book, or play with family or friends:

- Choose a character you just read about.
- Make a list of clues the author gave about your character.
- Write your ideas down on paper or on a board.
  You can also use a chart like this one:

Character: _____

Type of Clue	Sentence or Clue from the Story	My Opinion about the Character
Says		
Does		
Worries about		
Looks like		
What others say		

- Share your ideas or charts with your family or friends.

Game: Who Am I?

- Another fun thing to do is to not let anyone know which character you chose.
- After you have completed your notes or chart, play a guessing game.
- Pretend to act like your character, and have your family or friends guess who you are.

Put On a Play

- Write a story idea or plot with family or friends.
- Act out your story as if you were the character you chose. How would your character speak and act in a new situation?

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MATHEMATICS

DESCRIPTION OF TEST FORMAT AND ORGANIZATION

The Grade 5 Mathematics EOG assessment consists of a total of 55 items.

You will answer a variety of item types on the test. Some of the items are selected-response (multiple-choice), which means you choose the correct answer from four choices. Some items are technology-enhanced items, which means you will be asked to create a response.

The test will be given in two sections.

- You may have up to 65 minutes per section to complete Sections 1 and 2.
- The test will take about 60 to 130 minutes.

CONTENT

The Grade 5 Mathematics EOG assessment will measure the Grade 5 standards that are described at www.georgiastandards.org.

The content of the assessment covers standards that are reported under these domains:

- Operations and Algebraic Thinking
- Number and Operations in Base 10
- Number and Operations—Fractions
- Measurement and Data
- Geometry

ITEM TYPES

The Mathematics portion of the Grade 5 EOG assessment consists of selected-response (multiple-choice) and technology-enhanced items.

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MATHEMATICS DEPTH OF KNOWLEDGE EXAMPLE ITEMS

Example items that represent applicable DOK levels present in the Math assessment are provided for you on the following pages. The items and explanations of what is expected of you to answer them will help you prepare for the test.

All example and sample items contained in this guide are the property of the Georgia Department of Education.

Example Item 1

Selected-Response

DOK Level 1: This is a DOK level 1 item because it asks students to use what they know about place value and determining how much greater the same digit is in the tens place versus the ones place.

Mathematics Grade 5 Content Domain: Number and Operations in Base Ten

Standard: MGSE5.NBT.1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.

A number is shown.

2<u>6</u>6

How many times greater is the value of the underlined digit 6 than the value of the digit 6 that is not underlined?

A. 6
B. 10
C. 60
D. 100

Correct Answer: B

Explanation of Correct Answer: The correct answer is choice (B) 10. The underlined digit 6 is in the tens place and the digit 6 that is not underlined is in the ones place. The value of the same digit in the tens place is always ten times the value of that digit in the ones place. Choice (A) is incorrect because it shows a lack of understanding of place value. Choice (C) is incorrect because it shows the value of the underlined digit 6, but this does not compare the values of the digits. Choice (D) is incorrect because it shows what the answer would be if the digit 6 that is underlined were in the hundreds place rather than the tens place.

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Example Item 2

Coordinate-Graph Technology-Enhanced

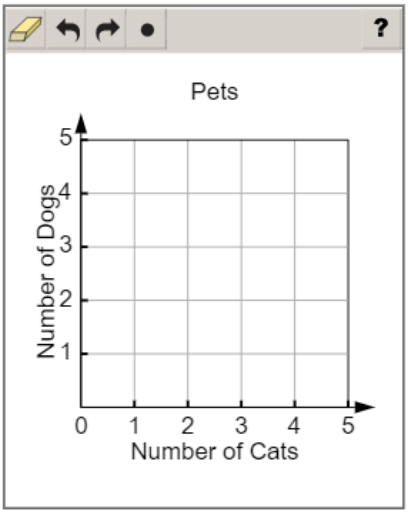
DOK Level 2: This is a DOK level 2 item because it requires students to solve for the coordinates of a point and to plot the point on a coordinate grid to represent its meaning in context.

Mathematics Grade 5 Content Domain: Geometry

Standard: MGSE5.G.2. Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Morgan has a total of 5 cats and dogs as pets. The number of cats Morgan has is 1 more than the number of dogs she has.

Plot a point on the coordinate grid to represent the number of cats and the number of dogs that Morgan has as pets.



Use a mouse, touchpad, or touchscreen to plot a point on the coordinate grid. At most 1 point can be plotted.

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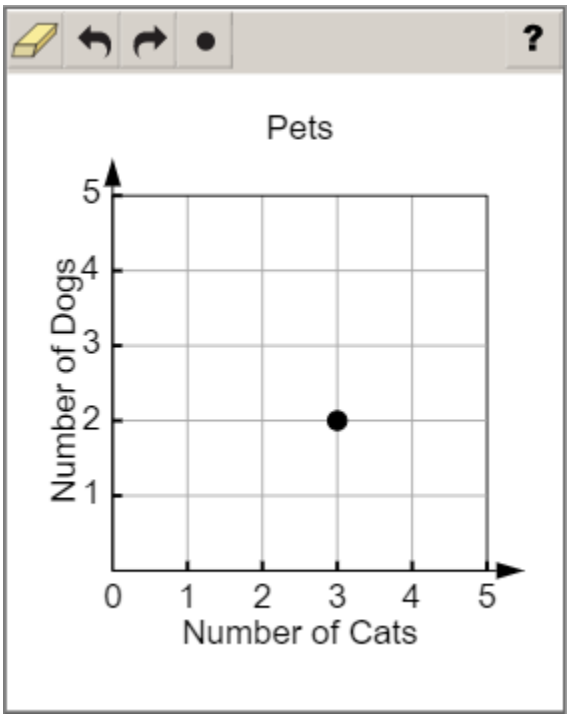
Example Item 2. *Continued*.

Scoring Rubric

Points	Description
1	The student correctly plots the point.
0	The student does not correctly plot the point.

Exemplar Response

The correct response is shown below.



This is the correct response because the number of cats and the number of dogs Morgan has must sum to 5 and the number of cats must be more 1 more than the number of dogs. The only values that make both of these conditions true are 3 cats and 2 dogs. To plot the point, consider that the *x*-axis represents the number of cats Morgan has as pets, which is 3, and the *y*-axis represents the number of dogs Morgan has as pets, which is 2. Therefore, the point must be plotted 3 units right of the *y*-axis and 2 units above the *x*-axis.

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Example Item 3

Drag-and-Drop Technology-Enhanced

DOK Level 3: This is a DOK level 3 item because it requires students to use multiple concepts, multiplying fractions and comparing fractions, to find a solution.

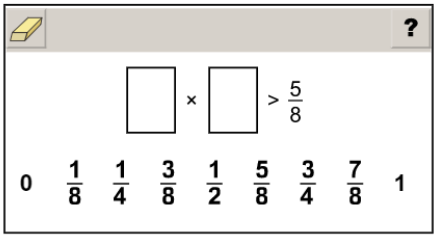
Mathematics Grade 5 Content Domain: Number and Operations – Fractions

Standard: MGSE5.NF.5 Interpret multiplication as scaling (resizing), by:

a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. *Example: 4 × 10 is twice as large as 2 × 10*.

b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $\frac{a}{b} = \frac{(n \times a)}{(n \times b)}$ to the effect of multiplying $\frac{a}{b}$ by 1.

Move values into the boxes in order to make the inequality true.



Use a mouse, touchpad, or touchscreen to move the values into the boxes. Each value may be used 1 time.

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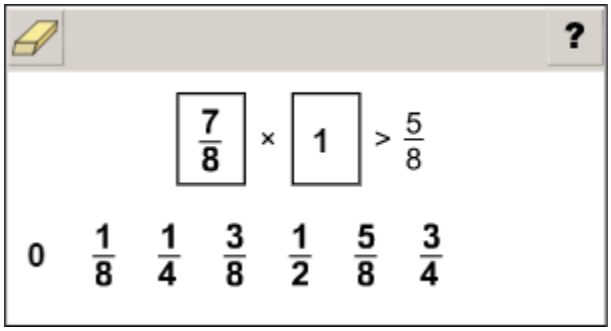
Example Item 3. *Continued*.

Scoring Rubric

Points	Description
1	The student correctly moves two values that make the inequality true.
0	The student does not correctly move two values that make the inequality true.

Exemplar Response

One correct response is shown below.



This is a correct response because $\frac{7}{8} \times 1 = \frac{7}{8}$, which is greater than $\frac{5}{8}$. Any combination that has a product greater than $\frac{5}{8}$, such as $\frac{3}{4} \times 1$ or $\frac{3}{4} \times \frac{7}{8}$, is a correct response.

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MATHEMATICS CONTENT DESCRIPTION AND ADDITIONAL SAMPLE ITEMS

In this section, you will find information about what to study to prepare for the Grade 5 Mathematics EOG assessment. This includes main ideas and important vocabulary words. This section also contains practice questions with an explanation of the correct answers and activities that you can do on your own or with your classmates or family to prepare for the test.

The organization of Mathematics units in this guide is based on Frameworks developed by the Curriculum and Instructional Division of the Georgia Department of Education. These Frameworks can be accessed at https://www.georgiastandards.org/Georgia-Standards/Pages/Math-K-5.aspx.

All example and sample items contained in this guide are the property of the Georgia Department of Education.

CONTENT DESCRIPTION

- Develop an understanding of addition and subtraction of fractions and of the multiplication and division of fractions in limited cases.
- Divide with two-digit divisors, integrate decimals into the place value system, and develop an understanding of operations with decimals to the hundredths.
- Develop an understanding of volume, and be able to convert like measurement units within a given system.
- Graph points on a coordinate plane, and extend your understanding of classifications of two-dimensional figures.
- Write and interpret numerical expressions and analyze patterns and relationships.

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Unit 1: Order of Operations and Whole Numbers

In this unit, you will understand the place value system. You will be able to perform operations in the correct order by using the distributive, commutative, and associative properties.

KEY TERMS

Numerical expression: A set of numbers and operations, including addition, subtraction, multiplication, and division. The expression may also contain parentheses, brackets, or braces. (OA.1) Find the value of an expression by completing the operations for each number in the expression. (OA.2)

Order of operations: The correct order to evaluate a numerical expression. Operations in parentheses (), brackets [], or braces {} are completed first, and then division and multiplication of digits are completed from left to right. Finally, subtraction and addition can be completed from left to right. (OA.1)

Multiplier: The number that is being multiplied by. For example, in $2 \times 3 = 6$, the multiplier is 2.

Multiplicand: The number that is getting multiplied. For example, in $2 \times 3 = 6$, the multiplicand is 3.

Product: The answer of a multiplication problem. For example, in $2 \times 3 = 6$, the product is 6.

Dividend: The number that is divided. For example, in $20 \div 4 = 5$, the dividend is 20.

Divisor: The number that is divided by. For example, in $20 \div 4 = 5$, the divisor is 4.

Quotient: The answer to a division problem. For example, in $20 \div 4 = 5$, the quotient is 5. (NBT.6)

Properties of Operations:

- **Distributive Property:** Multiply a factor that is outside a set of parentheses with each addend within the parentheses to solve.
- **Commutative Property:** Move addends in addition equations or factors in multiplication equations into different pairs to solve.
- **Associative Property:** Group together addends in the addition equations or factors in multiplication equations into different pairs to solve. (NBT.6)

Place value: The numerical value of a digit in a number based on the digit's location related to the decimal point. A digit in the tens place of a number is 10 times the value of the same digit in the ones place. A digit in the tens place is $\frac{1}{10}$ the value of the same digit in the hundreds place.

Exponents: Shows the number of times a number is multiplied by itself. For example, $2^4 = 2 \times 2 \times 2 \times 2$.

Power of 10: A multiple of 10. For example, 10^3 is the same as multiplying by 1,000, since $10 \times 10 \times 10 = 1{,}000$. (NBT.2)

Important Tips

- Look at each multiplication and division equation individually to determine the best strategy to use when solving. The standard algorithm can be used. A model can also be used, including rectangular arrays, area models, lattice methods, partial products, and fair-sharing models.
- Multiplication and division of whole numbers can be solved using multiple strategies. One strategy for multiplication is the standard algorithm. The standard algorithm is a method used to solve a problem that includes a set of specific steps. Other strategies for multiplication and division include using the properties of operations or using models such as rectangular arrays, area models, and fair-sharing.

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Sample Items 1–4

Item 1

Selected-Response

Which expression has a total value of 40?

A. $3 + 2 \times (13 - 5)$
B. $3 + 2 \times 13 - 5$
C. $(3 + 2) \times (13 - 5)$
D. $(3 + 2) \times 13 - 5$

Item 2

Multi-Part Technology-Enhanced

Part A

Which expression represents the calculation "subtract 1 from 7, then divide by 3"?

A. $7 - 1 \div 3$
B. $3 \div (7 - 1)$
C. $(7 - 1) \div 3$
D. $7 - (1 \div 3)$

Part B

Which description is equivalent to $5 + (4 \times 2)$?

A. add 5 and 4, then multiply by 2
B. multiply 4 by 2, then add 5
C. multiply 5 by 2, then add 4
D. add 4 and 2, then multiply by 5

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Item 3

Drop-Down Technology-Enhanced

Two expressions are shown.

"subtract 2 from 8"

"subtract 2 from 8, then divide by 3"

Use the drop-down menus to compare the values of the two expressions.

The value of the expression "subtract 2 from 8" is [ ] times [ ] the value of the expression "subtract 2 from 8, then divide by 3."

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the two blank boxes. When you click the arrow, a drop-down menu will appear, showing you all the possible options for that blank. Each drop-down menu with its options is shown below.

The value of the expression "subtract 2 from 8" is [ ] times [ ] the value of the expression "subtract 2 from 8, then divide by 3."

1/2
1/3
2
3

as great as
less than

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Item 4

Drag-and-Drop Technology-Enhanced

Move a number into each box to make the two statements true.

The value of the underlined digit 5 in 75<u>5</u>,204 is ☐ times the value of the digit 5 that is not underlined.

The value of the underlined digit 4 in <u>4</u>48,023 is ☐ times the value of the digit 4 that is not underlined.

1 10 100 1,000 $\frac{1}{10}$ $\frac{1}{100}$ $\frac{1}{1000}$

Use a mouse, touchpad, or touchscreen to move a number into each box. Each number may be used twice.

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Unit 2: Adding and Subtracting with Decimals

In this unit, you will work with decimals. You will add and subtract decimal numbers, compare decimal numbers, and use place value to determine the numerical value of a number. You will also learn about expanded notation and rounding numbers.

KEY TERMS

Decimal: A number that shows a value that is between whole numbers. It can also be written as a fraction. For example, $\frac{1}{2}$ or 0.5 is a value between the whole numbers 0 and 1. (NBT.7)

Decimal point: This is a marker to indicate the value of each digit in a number. Digits on the left of the decimal point indicate whole units (ones, tens, hundreds, etc.). Digits to the right of the decimal point indicate fractions, or parts, of a unit (tenths, hundredths, thousandths, etc.). (NBT.3)

Place value: The numerical value of a digit in a number based on the digit's location related to the decimal point. A digit in the tenths place of a number is 10 times the value of the same digit in the hundredths place. A digit in the tenths place is $\frac{1}{10}$ the value of the same digit in the ones place. (NBT.1)

- **Tenths place:** This is the first place to the right of the decimal point. A decimal of 0.1 would have a value equivalent to $\frac{1}{10}$.
- **Hundredths place:** This is the second place to the right of the decimal point. A decimal of 0.01 would have a value equivalent to $\frac{1}{100}$.
- **Thousandths place:** This is the third place to the right of the decimal point. A decimal of 0.001 would have a value equivalent to $\frac{1}{1000}$. (NBT.3a)

Expanded notation: Creates an addition expression from a decimal number by writing the value for each place of the number separately. For example, 302.4 can be written as $300 + 2 + \frac{4}{10}$. (NBT.3a)

Compare decimal numbers: Determine the value of two or more decimal numbers and identify the number that has a greater value, if possible.

- **Greater than:** When the decimal number has a greater value than the other number in the comparison, use the symbol $>$.
- **Less than:** When the decimal number has a smaller value than the other number in the comparison, use the symbol $<$.
- **Equal to:** When both numbers in the comparison have the same value, use the symbol **=**. (NBT.3b)

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Rounding: Determine the nearest number to a given decimal number by using a model such as a number line. (NBT.4)

Important Tips

- When comparing decimal numbers, look at the place value of each digit. The location of the digit determines its value.
- When adding or subtracting decimal numbers, estimate the value first. Then a place value chart can be used to solve the equation. Each operation should be completed on digits in the same location.
- Addition and subtraction of decimal numbers require paying close attention to the place value of each digit. Operations must be completed on the digit in the same location, such as adding the tenths place in one number with the tenths place in another number. Models such as area models and place value charts can be used as a visual representation of the problem while solving.

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Sample Items 5–8

Item 5

Selected-Response

Which number shows the decimal form for this expression?

$$8 \times \left(\frac{1}{10}\right) + 3 \times \left(\frac{1}{100}\right) + 9 \times \left(\frac{1}{1000}\right)$$

A. 0.0839
B. 0.839
C. 8.39
D. 83.9

Item 6

Selected-Response

What is 5.816 rounded to the nearest tenth?

A. 5.8
B. 5.82
C. 5.9
D. 6.00

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Item 7

Multi-Part Multi-Select Technology-Enhanced

The mass of a quarter is 5.67 grams, and the mass of a half dollar coin is 11.34 grams.

Part A

Select TWO numbers that, when rounded to the hundredths place, will each make the inequality shown true.

$$5.67 < ____$$

A. 5.609
B. 5.762
C. 5.665
D. 5.098
E. 5.677

Part B

Which number rounded to the nearest tenth is less than 11.34 rounded to the nearest tenth?

A. 11.361
B. 11.283
C. 11.347
D. 11.249

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Item 8

Keypad-Input Technology-Enhanced

One inch is 0.0254 meters long. What is 0.0254 rounded to the nearest hundredth?

Use a mouse, touchpad, or touchscreen to enter a response.

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Unit 3: Multiplying and Dividing with Decimals

In this unit, you will continue to work with decimals. You will multiply and divide with decimals. You will use estimation and work with models like rectangular arrays and area models.

KEY TERMS

Decimal: A number that shows a value that is between whole numbers. It can also be written as a fraction. For example, $\frac{1}{2}$ or 0.5 is a value between the whole numbers 0 and 1. (NBT.7)

Place value: The numerical value of a digit in a number based on the digit's location related to the decimal point. A digit in the tenths place of a number is 10 times the value of the same digit in the hundredths place. A digit in the tenths place is $\frac{1}{10}$ the value of the same digit in the ones place. (NBT.1)

- **Tenths place:** This is the first place to the right of the decimal point. A decimal of 0.1 would have a value equivalent to $\frac{1}{10}$.
- **Hundredths place:** This is the second place to the right of the decimal point. A decimal of 0.01 would have a value equivalent to $\frac{1}{100}$. (NBT.3a)

Multiplier: The number that is being multiplied by. For example, in 2 × 0.01 = 0.02, the multiplier is 2.

Multiplicand: The number that is getting multiplied. For example, in 2 × 0.01 = 0.02, the multiplicand is 0.01.

Product: The answer of a multiplication problem. For example, in 2 × 0.01 = 0.02, the product is 0.02.

Dividend: The number that is divided. For example, in 2 ÷ 0.01 = 200, the dividend is 2.

Divisor: The number that is divided by. For example, in 2 ÷ 0.01 = 200, the divisor is 0.01.

Quotient: The answer to a division problem. For example, in 2 ÷ 0.01 = 200, the quotient is 200. (NBT.6)

Exponents: Shows the number of times a number is multiplied by itself. For example, $2^4 = 2 \times 2 \times 2 \times 2$.

Power of 10: A multiple of 10. For example, 10^3 is the same as multiplying by 1,000, since 10 × 10 × 10 = 1,000. The effect on the number is that it is multiplied 3 times by 10, and the decimal point moves 3 places to the right. When dividing by a power of 10, the decimal point will move to the left. (NBT.2)

Important Tips

- Estimation can be used before computing the product or quotient of an equation. Decimal numbers can be rounded to the nearest whole number to determine a reasonable estimate.
- When multiplying a whole number by a decimal number, the product will have a smaller value than the whole number factor. The equation 2 × 0.01 = 0.02 shows that 2 groups of 1 hundredth are equal to 2 hundredths.
- When dividing a whole number by a decimal number, the quotient will have a greater value than the dividend. The equation 2 ÷ 0.01 = 200 shows that there are 200 hundredths in the number 2.
- Along with strategies based on place value and the properties of operations, models can be used to multiply and divide decimal numbers. Rectangular arrays and area models can be used to represent equations.

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Sample Items 9–11

Item 9

Selected-Response

Hannah multiplies 0.542 by powers of 10.

$$0.542 \times 10^1 = 5.42$$
$$0.542 \times 10^2 = 54.2$$
$$0.542 \times 10^3 = 542$$
$$0.542 \times 10^4 = 5{,}420$$

By what power of 10 would Hannah multiply 0.542 to get a product of 5,420,000?

A. 10^5
B. 10^6
C. 10^7
D. 10^8

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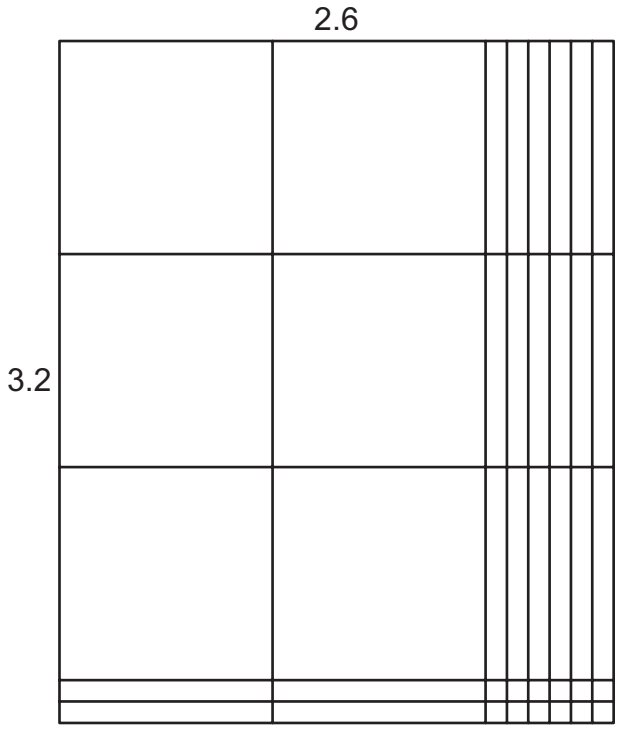
Item 10

Selected-Response

The area model illustrates the product of 2.6 × 3.2.



What is the product?

A. 6.232
B. 7.8
C. 8.32
D. 9.6

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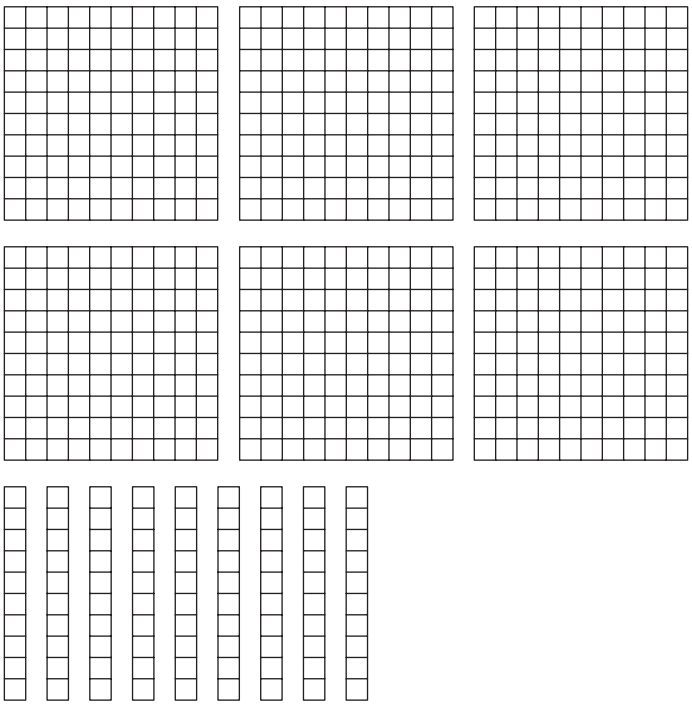
Item 11

Selected-Response

Ted is using a model to find the quotient of 6.9 ÷ 2.3. He starts by modeling the dividend, 6.9, as shown.



He will now separate the model into equal groups to model the division. How many equal groups of 2.3 should he make?

A. 0.3
B. 3
C. 30
D. 300

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Unit 4: Adding, Subtracting, Multiplying, and Dividing Fractions

In this unit, you will work with fractions. You will practice adding, subtracting, multiplying, and dividing fractions. You will work with fractions that have common and uncommon denominators and fractions that are equivalent. You will use fraction models, number lines, and other visual models.

KEY TERMS

Fraction: Represents the division of two numbers. The dividend of the expression becomes the numerator, and the divisor becomes the denominator. (NF.3) The fraction often represents a value between two whole numbers. (NF.2)

Improper fraction: A fraction that is greater than 1. The numerator is greater than the denominator. (NF.1)

Mixed number: Another method for writing an improper fraction, which includes a whole number and a fraction. (NF.1)

Common denominator: When fractions have the same denominator, they can be added or subtracted. (NF.1)

Unlike denominators: Fractions that do not have the same denominator cannot be added or subtracted until the fractions are replaced with equivalent fractions so that they have a common denominator.

Equivalent: Same value. Equivalent fractions have the same value and represent the same point on a number line.

Estimate: A value that is close to the right amount. Estimated fractions are useful in finding a reasonable answer to a problem. For example, if both fractions in an addition problem are greater than $\frac{1}{2}$, then a reasonable sum would be greater than 1. (NF.2)

Benchmark fraction: Common fractions that can be used to estimate fractions. For example, $\frac{1}{2}$ is a commonly used benchmark fraction.

Multiplying fractions: Multiply the numerators of each fraction to find the numerator of the product. Multiply the denominator of each fraction to find the denominator of the product. Whole numbers can be written with a denominator of 1. (NF.4a)

Scaling: Compare the value of one object to the value of another by using a fraction. An example of scaling would be saying, "That rope is $\frac{1}{3}$ as long as this rope." (NF.5)

Unit fraction: This is a fraction with a numerator of 1. (NF.7)

Dividing fractions: Use fraction models, number lines, and other visual models to represent the division of whole numbers and unit fractions. Models can be **partitioned** into **equal parts** based on an equation. (NF.7)

Important Tips

- Fractions in an equation must represent parts of the same whole. When solving an equation, use models that are parts of the same whole by using models that are the same size and shape.
- Multiplication of fractions is used to find the area of a figure with fractional side lengths. The area can also be found by tiling the figure with square units that have fractional side lengths.

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Sample Items 12–15

Item 12

Selected-Response

A teacher has a 60-pound bag of sand. She pours all the sand into 8 buckets. She puts an equal amount of sand in each bucket. What is the total amount of sand in each bucket?

A. $\frac{2}{15}$ pound

B. $6\frac{1}{2}$ pounds

C. $7\frac{1}{2}$ pounds

D. $8\frac{1}{2}$ pounds

Item 13

Selected-Response

What is the difference of these fractions?

$$1\frac{5}{8} - \frac{2}{3}$$

A. $\frac{2}{24}$

B. $\frac{16}{24}$

C. $\frac{23}{24}$

D. $\frac{11}{5}$

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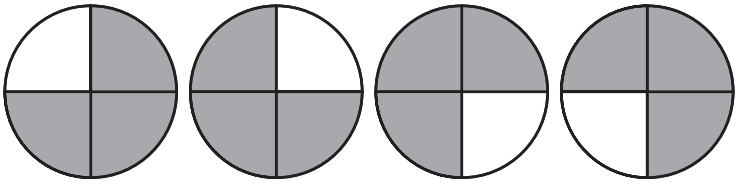
Item 14

Selected-Response

Four students each draw a circle. They each shade $\frac{3}{4}$ of their circles, as shown.



Which equation shows how much of the circles are shaded altogether?

A. $4 \times \frac{1}{4} = \frac{4}{4} = 1$

B. $4 \times \frac{3}{4} = \frac{7}{4} = 1\frac{3}{4}$

C. $4 \times \frac{3}{4} = \frac{3}{16}$

D. $4 \times \frac{3}{4} = \frac{12}{4} = 3$

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Item 15

Drag-and-Drop Technology-Enhanced

Move each expression into the column that BEST describes it.

Less Than 3	Equal to 3	Greater Than 3

3×3 $\quad 3 \times \frac{4}{3}$ $\quad 3 \times \frac{5}{5}$ $\quad 3 \times \frac{4}{9}$ $\quad 3 \times \frac{5}{6}$

Use a mouse, touchpad, or touchscreen to move the expressions into the columns. Each expression may be used once.

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Unit 5: Two-Dimensional Figures

In this unit, you will work with two-dimensional figures. You will learn about plane figures, two-dimensional figures, and their attributes. You will learn to identify geometric shapes.

KEY TERMS

Two-dimensional figure: This is a **plane figure** that has two dimensions, such as a rectangle that has the dimension of length and width. (G.3)

Attributes of two dimensional figures include the following properties:

- **Angles**
  - **Acute:** This is an angle that measures less than 90°.
  - **Obtuse:** This is an angle that measures greater than 90°.
  - **Right:** This is an angle that measures 90°.
- **Parallel lines:** These are two lines that are always an equal distance apart.
- **Perpendicular lines:** These are two lines that intersect at a 90° angle.
- **Number of sides:** This is how many lines are used to create a figure.
- **Length of sides:** This is a measurement of the length of each line used to create a figure.
- **Congruent:** This is when two figures are the same size and shape.
- **Vertex:** This is the point where two lines of a figure meet. (G.3)

Category: This is a large group of two-dimensional figures that share at least one attribute. For example, all shapes with four sides belong to the category of quadrilateral. (G.3)

Subcategory: This is a smaller group of items within a category. All the items in a subcategory share at least one attribute. (G.3)

Geometric shapes: Two-dimensional shapes that include triangles, rectangles, squares, rhombuses, pentagons, hexagons, trapezoids, quadrilaterals, quarter circles, half circles, and circles.

Polygon: This is a closed geometric shape with multiple straight sides.

Regular polygon: This is a geometric shape with multiple sides that all have equal angles and lengths.

Irregular polygon: This is a geometric shape with multiple sides where the side lengths vary. (G.4)

Important Tips

- ✍ A two-dimensional figure can belong in more than one category as well as more than one subcategory.
- ✍ Geometric shapes can be placed in a hierarchy, or a set of categories and subcategories, based on their attributes. For example, in the category of quadrilaterals, there is the subcategory of rectangles. Within the subcategory of rectangles, there is the subcategory of squares.

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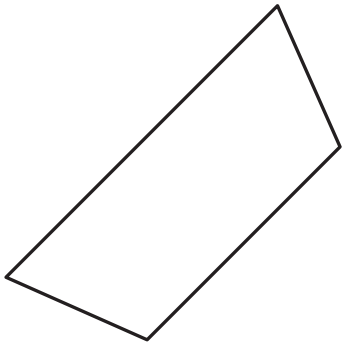
Sample Items 16 and 17

Item 16

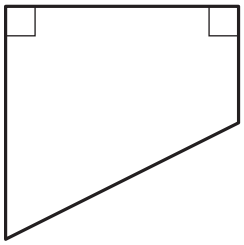
Selected-Response

Which figure has four right angles?

A.

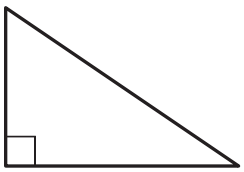


B.



C.

D.



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Item 17

Selected-Response

What attributes do a rhombus and a rectangle always have in common?

A. Both figures always have four right angles.
B. Both figures always have four sides of equal length.
C. Both figures always have two pairs of parallel sides.
D. Both figures always have only one pair of parallel sides.

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Unit 6: Volume and Measurement

In this unit, you will work with different kinds of measurement: customary, metric, and time. You will convert between measurement units. You will use a line plot to record measurements.

KEY TERMS

Conversion: This is changing between units within the same measurement system. (MD.1)

Customary measurements include the following:

- **Liquid volume:** Measured in cups, pints, quarts, and gallons.
- **Length:** Measured in inches, feet, yards, and miles.
- **Mass:** Measured in ounces, pounds, and tons. (MD.1)

Metric measurements include the following:

- **Liquid volume:** Measured in liters and milliliters.
- **Length:** Measured in centimeters, meters, and kilometers.
- **Mass:** Measured in grams and kilograms. (MD.1)

Time: Measured in seconds, minutes, and hours. (MD.1)

Line plot: Used to record measurements for a group of objects. The measurement values are shown, and a picture or mark is placed above the value for each object being measured. A line plot can include fractional measurements.

Solid figure (three-dimensional figure): A figure that has volume. One example of a solid figure is a right rectangular prism. Each face of the right rectangular prism is a rectangle.

Right rectangular prism: A solid figure with six faces. Each face is a rectangle.

Unit cube: A cube with all side lengths equal to 1 unit. The volume of a unit cube is 1 cubic unit. A solid figure can be packed with unit cubes leaving no gaps and without overlapping cubes. The number of unit cubes packed into the solid figure represents the volume of the figure.

Cubic units: The measurement for volume. These may include cubic centimeters, cubic inches, cubic feet, or other length measurements. (MD.4)

Volume can be determined using two formulas:

- $l \times w \times h$ multiplies the length, width, and height of the figure to find the cubic units of volume.
- $B \times h$ finds the area of the base using the width and length, and then multiplies it by the height of the figure to find the cubic units of volume. (MD.5b)

Important Tips

- ✍ To convert a measurement, choose another unit used to measure the same dimension within the customary or metric measurement systems.
- ✍ Comparing the volume of two figures requires using all three dimensions of length, width, and height. A figure may appear to have a greater volume based on its height, but the size of the base will affect the volume as well.
- ✍ Volume is an additive value. This means that a solid figure can be separated into two rectangular prisms. The volume of each rectangular prism can be added together to find the total volume for the solid figure.

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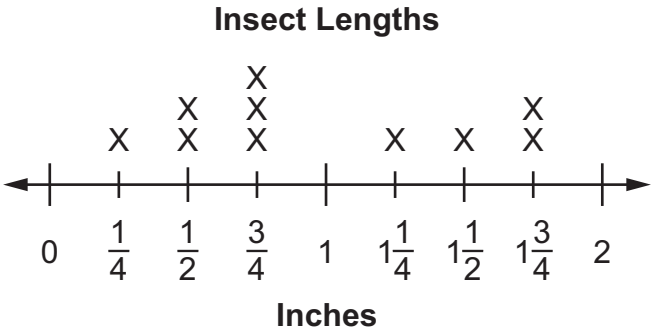
Sample Items 18–22

Item 18

Selected-Response

Tina measures the lengths, in inches, of 10 insects. She records the lengths of the insects on this line plot. She adds the lengths of the 3 longest insects.



What is the total length, in inches, of the 3 longest insects?

A. $2\frac{1}{4}$ in.

B. 3 in.

C. $4\frac{1}{2}$ in.

D. 5 in.

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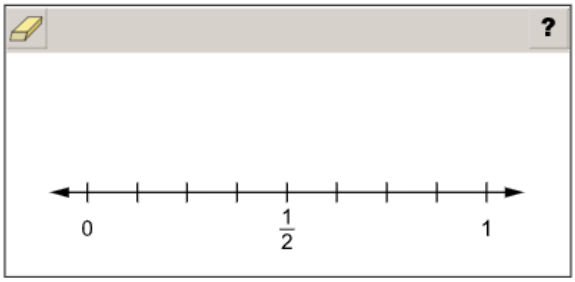
Item 19

Line-Plot Technology-Enhanced

A table of values is shown.

$\frac{5}{8}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{8}$

Complete the line plot to represent the values.



Use a mouse, touchpad, or touchscreen to add Xs to the line plot. At most 3 Xs can be plotted for each value.

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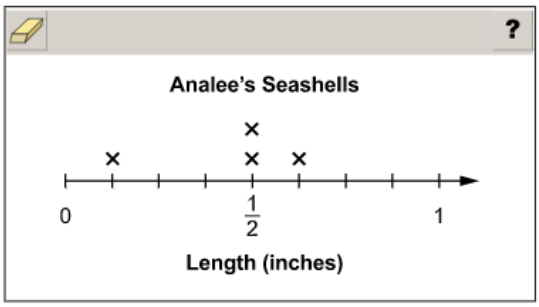
Item 20

Line-Plot Multi-Part Technology-Enhanced

Part A

Part A Analee measured the lengths of six seashells she found at the beach. Each seashell is less than 1 inch in length. The total length of all six seashells is $\frac{26}{8}$ inches. The line plot shows the lengths, in inches, of four of Analee's seashells.

Complete the line plot by adding an X to represent the possible lengths, in inches, of each of Analee's remaining seashells.



Use a mouse, touchpad, or touchscreen to add Xs to the line plot. At most 2 Xs can be plotted for each length.

Go on to the next page to finish item 20.

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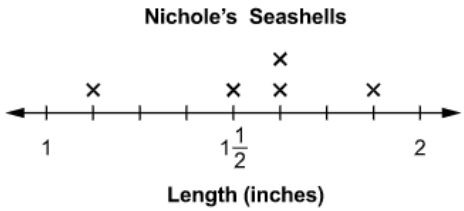
Item 20. ***Continued.***

Part B

Part B Nichole measured the lengths of five seashells she found at the beach. The length, in inches, of each seashell is shown on the line plot.



What is the difference, in inches, between the longest and shortest seashells Nichole measured?

(a) $\frac{1}{2}$

(b) $\frac{3}{4}$

(c) $\frac{7}{8}$

(d) 1

Use a mouse, touchpad, or touchscreen to select a response.

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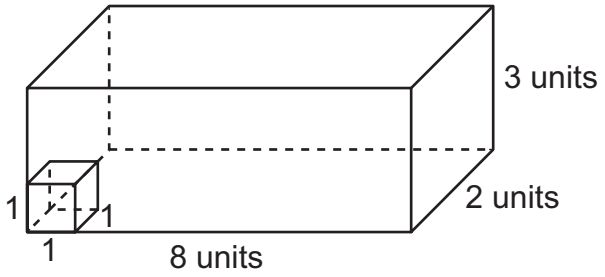
Item 21

Selected-Response

Find the volume of the rectangular prism.
(Volume = length × width × height)



What is the maximum number of unit cubes that will fit inside the rectangular prism?

A. 6
B. 16
C. 24
D. 48

Item 22

Multi-Select Technology-Enhanced

Greg wants to build a shed to hold his gardening tools. The shed must have a volume of at least 500 cubic feet but no more than 600 cubic feet.

Select THREE sets of dimensions that meet Greg's requirements for the volume of a shed.

($V = l \times w \times h$)

A. 6 feet wide, 9 feet long, 10 feet high
B. 7 feet wide, 8 feet long, 9 feet high
C. 10 feet wide, 6 feet long, 8 feet high
D. 9 feet wide, 9 feet long, 8 feet high
E. 8 feet wide, 8 feet long, 8 feet high
F. 9 feet wide, 8 feet long, 6 feet high

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Unit 7: Geometry and the Coordinate Plane

In this unit, you will use geometry. You will become familiar with coordinate planes, ordered pairs, quadrants, and points. You will follow rules to create numerical patterns.

KEY TERMS

Numerical patterns: These are sequences of numbers that are created by following a set of rules, such as "add 5." Using the terms created by a rule, form and graph ordered pairs on a coordinate plane. A line can be generated from the pattern. (OA.3)

Ordered pairs: These are sets of numbers that are used to label the locations of points on the coordinate plane. Ordered pairs are written as (x, y). For example, (1, 2) represents an x-value of 1 and a y-value of 2. (OA.3)

Coordinate plane: Created by intersecting two perpendicular number lines at 0. (G.1)

Origin: The point on a coordinate plane where the number lines connect. The coordinates for the origin are (0, 0). (G.1)

***x*-axis:** The horizontal number line in a coordinate plane. (G.1)

***y*-axis:** The vertical number line in a coordinate plane. (G.1)

First quadrant: The portion of a coordinate plane that has values of 0 and greater for the x-axis and the y-axis. (G.1)

Point: This is a location on the coordinate plane that is labeled by the values of the x-coordinate and the y-coordinate. (G.1)

***x*-coordinate:** The value of a point on the x-axis, moving horizontally from the origin. (G.1)

***y*-coordinate:** The value of a point on the y-axis, moving vertically from the origin. For example, the point (2, 3) is 2 units to the right of the origin and 3 units up from the origin. (G.1)

Line: A line connects multiple points on the coordinate plane. (G.1)

Important Tips

- An ordered pair lists the x-coordinate first and then the y-coordinate. When graphing a point using the ordered pair, move across the x-axis using the x-coordinate and then move up the y-axis using the y-coordinate.
- The coordinate plane can be used to represent real-world situations by graphing points and finding the values of the points as the points relate to the situation.

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Sample Items 23–29

Item 23

Multi-Select Technology-Enhanced

Select THREE true statements about quadrilaterals.

A. All squares are rectangles, so all squares have four right angles.
B. All rhombuses are squares, so all rhombuses have four equal sides.
C. All rectangles are rhombuses, so all rectangles have four equal sides.
D. All squares are parallelograms, so all squares have two pairs of parallel sides.
E. All rectangles are squares, so all rectangles have sides that are perpendicular.
F. All rhombuses are parallelograms, so all rhombuses have opposite angles with the same measure.

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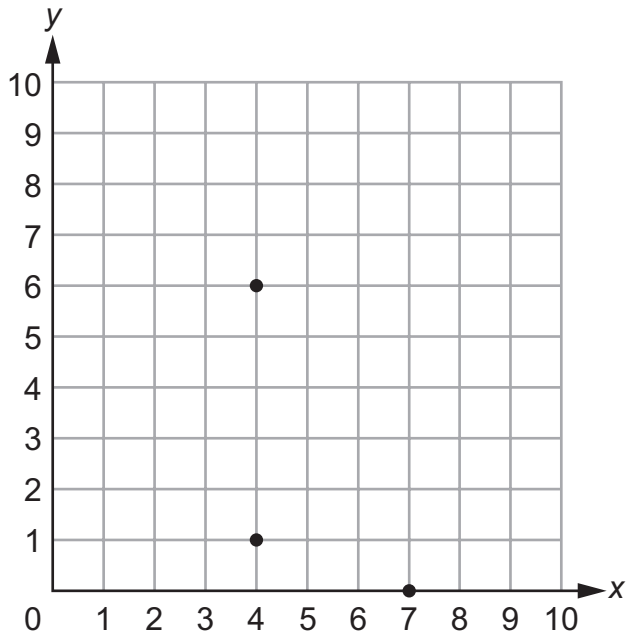
Item 24

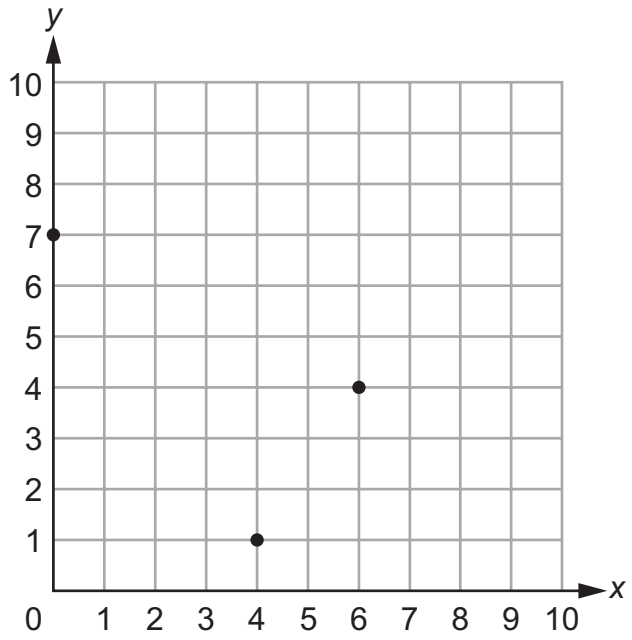
Selected-Response

Which graph shows the points (1, 4), (7, 0), and (4, 6)?

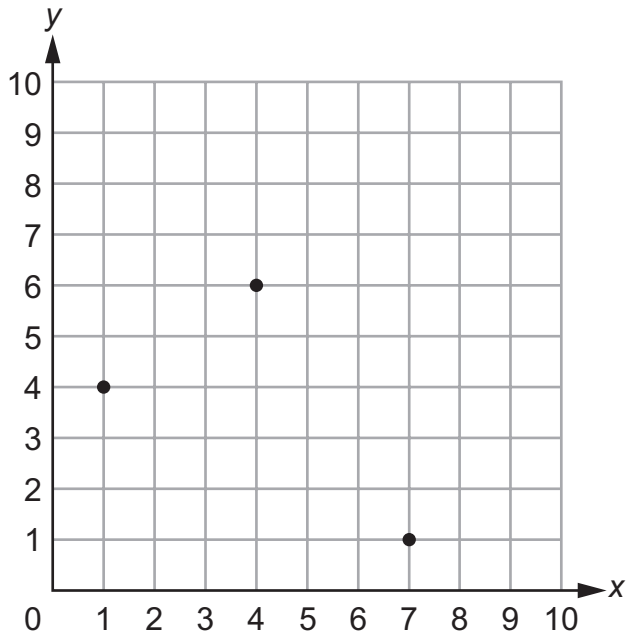
A.



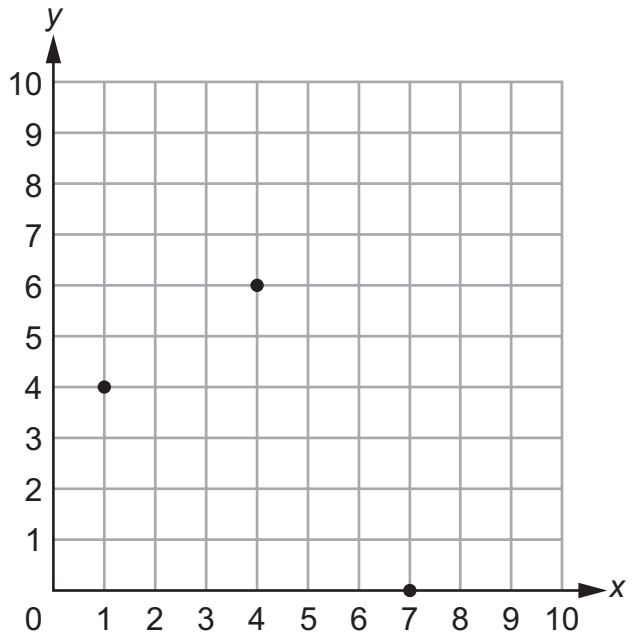
B.



C.



D.



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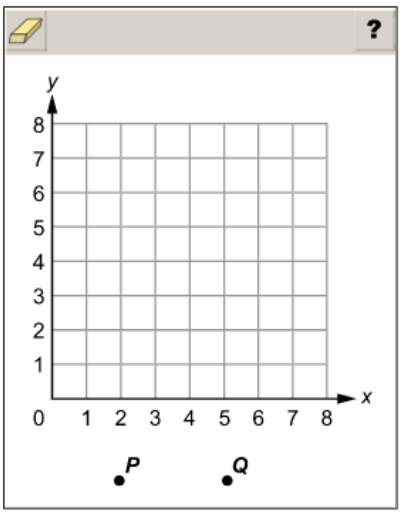
Item 25

Drag-and-Drop Technology-Enhanced

The coordinates of points *P* and *Q* are given.

- ***P*: (3, 4)**
- ***Q*: (5, 0)**

Move each point to the correct location on the coordinate grid.



Use a mouse, touchpad, or touchscreen to move the labeled points onto the coordinate grid. Each labeled point may be used once.

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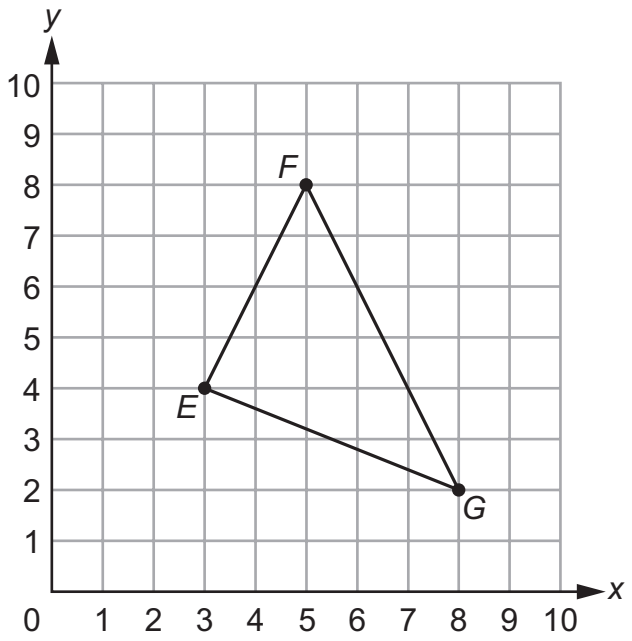
Item 26

Selected-Response

Felipe made a triangle on a coordinate grid.



What are the coordinates for point *G*?

A. (3, 4)
B. (5, 8)
C. (8, 2)
D. (2, 8)

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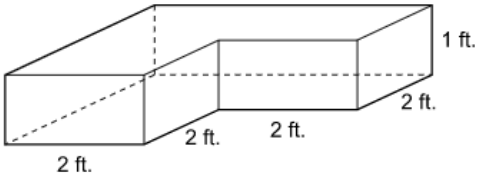
Item 27

Keypad-Input Multi-Part Technology-Enhanced

Part A

Ms. Mailee has a fish tank made up of rectangular prisms as shown.



Part A

What is the volume, in cubic feet, of the fish tank?

(Volume = Length × Width × Height)

Use a mouse, touchpad, or touchscreen to enter a response.

Go on to the next page to finish item 27.

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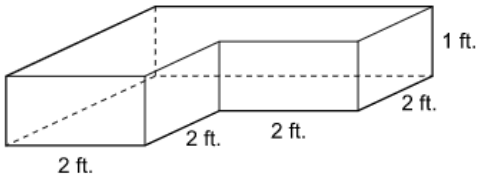
Item 27. *Continued*.

Part B

Ms. Mailee has a fish tank made up of rectangular prisms as shown.



Part B

Ms. Diaz has a taller fish tank with the same base as Ms. Mailee's fish tank. The height of Ms. Diaz's fish tank is 2 feet.

What is the volume, in cubic feet, of Ms. Diaz's fish tank?

(Volume = Length × Width × Height)

Use a mouse, touchpad, or touchscreen to enter a response.

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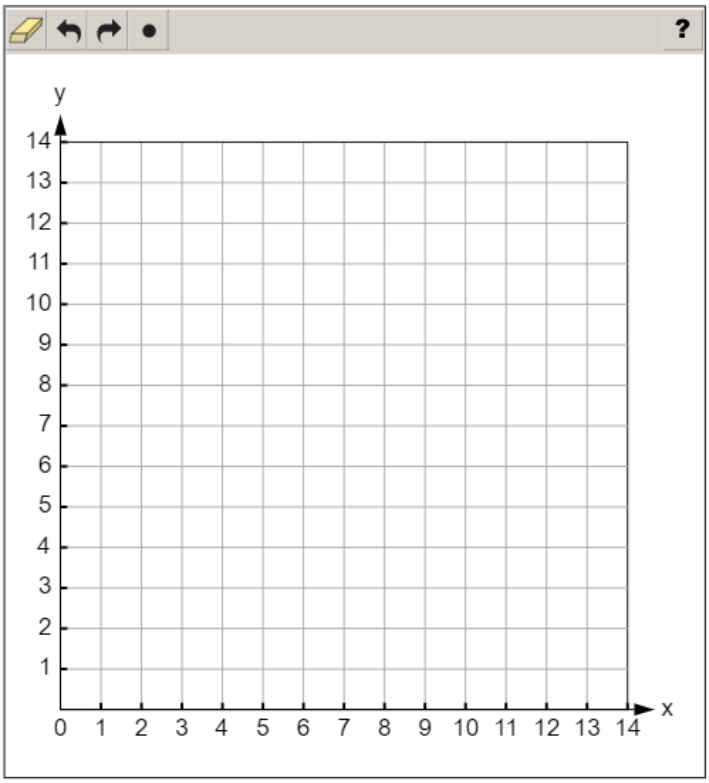
Item 28

Coordinate-Graph Technology-Enhanced

The table shows two patterns. Some values in the table are missing. The corresponding terms in the patterns can be used to form coordinates of points on the coordinate grid.

Plot the TWO points that represent the missing values in the table.

x	*y*
1	13
2	11
3	
4	7
5	5
6	
7	1



Use a mouse, touchpad, or touchscreen to plot points on the coordinate grid. At most 2 points can be plotted.

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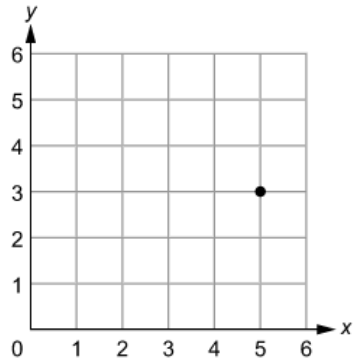
Item 29

Drop-Down Technology-Enhanced

Part A

The point on the coordinate grid shown represents the number of hours, *x*, Felix spent doing chores and the number of hours, *y*, he spent doing homework last week.

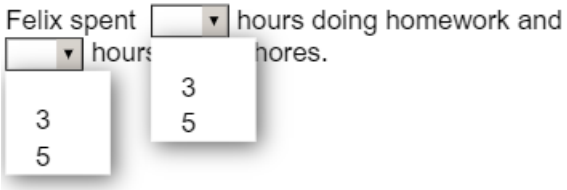


Part A

Use the drop-down menus to correctly interpret the coordinate of the point shown.

Felix spent [ ] hours doing homework and [ ] hours doing chores.

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the two blank boxes. When you click the arrow, a drop-down menu will appear, showing you all the possible options for that blank. Each drop-down menu with its options is shown below.



Go on to the next page to finish item 29.

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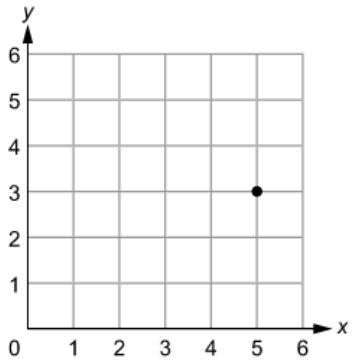
Item 29. *Continued*.

Part B

The point on the coordinate grid shown represents the number of hours, *x*, Felix spent doing chores and the number of hours, *y*, he spent doing homework last week.



Part B

The week before, Felix spent the same total amount of time doing chores and homework. Felix only spent 1 hour doing chores that week.

What are the coordinates of the point for the week before?

(a) (1, 7)

(b) (3, 5)

(c) (5, 3)

(d) (7, 1)

Use a mouse, touchpad, or touchscreen to select a response.

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MATHEMATICS ADDITIONAL SAMPLE ITEM KEYS

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
1	MGSE5.OA.1	1	C	The correct answer is choice (C) (3 + 2) × (13 – 5). The order of operations requires that you solve the operations within the parentheses first, then multiply and divide from left to right, and then add and subtract from left to right. The values inside the two parentheses in (3 + 2) × (13 – 5) are 5 and 8, which are multiplied together for a product of 40. Choice (A) is incorrect because you multiply 2 by the difference within the parentheses, 8, which is 16. Next you add 3, which has a total value of 19. Choice (B) is incorrect because you must first multiply 2 × 13, which is 26. The order of operations requires that you add next, so 26 + 3 = 29. Finally, you subtract 29 – 5, which is 24. Choice (D) is incorrect because you first add 3 and 2, which is 5, and then multiply by 13 for a product of 65. Finally, you subtract, 65 – 5 = 60.
2	MGSE5.OA.2	2	Part A: C Part B: B	Part A: The correct answer is choice (C) (7 – 1) ÷ 1. Choices (A) and (D) are incorrect because they show the division as happening first. Choice (B) is incorrect because it shows the 3 divided by the difference. Part B: The correct answer is choice (B) multiply 4 by 2, then add 5. As the product is inside parentheses, it will happen before the addition. Choice (A) is incorrect because the addition does not happen first. Choice (C) is incorrect because 5 is not multiplied by 2. Choice (D) is incorrect because 4 is multiplied by 2, not added to 2.
3	MGSE5.OA.2	2	N/A	See scoring rubric and exemplar response on page 147.
4	MGSE5.NBT.1	3	N/A	See scoring rubric and exemplar response on page 148.
5	MGSE5.NBT.3	1	B	The correct answer is choice (B) 0.839. This is the decimal form for the given expression. Choice (A) is incorrect because it shows the decimal form for $8 \times \left(\frac{1}{100}\right) + 3 \times \left(\frac{1}{1000}\right) + 9 \times \left(\frac{1}{10000}\right)$. Choice (C) is incorrect because it shows the decimal form for $8 \times (1) + 3 \times \left(\frac{1}{10}\right) + 9 \times \left(\frac{1}{100}\right)$. Choice (D) is incorrect because it shows the decimal form for $8 \times (10) + 3 \times (1) + 9 \times \left(\frac{1}{10}\right)$.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
6	MGSE5.NBT.4	1	A	The correct answer is choice (A) 5.8. When rounding to the nearest tenth, use the digit in the hundredths place. If that digit is less than 5, round down. Since the digit 1 in 5.816 is less than 5, round down to 8 in the tenths place. Choice (B) is incorrect because the response shows 5.816 rounded to the nearest hundredth rather than the nearest tenth. Choice (C) is incorrect because it indicates rounding up to 9 tenths, rather than rounding down to 8 tenths. Choice (D) is incorrect because it indicates rounding to the nearest whole number rather than to the nearest tenth.
7	MGSE5.NBT.4	2	Part A: B/E Part B: D	Part A: The correct answers are choice (B) 5.762 and choice (E) 5.677. Choice (A) is incorrect because it rounds to 5.61 which is less than 5.67. Choice (C) is incorrect because it rounds to 5.67, which is equal to 5.67, not greater than it. Choice (D) is incorrect because it rounds to 5.10, which is less than 5.67. Part B: The correct answer is choice (D) 11.249. When 11.34 is rounded to the nearest tenth, it is 11.3, and when 11.249 is rounded to the nearest tenth, it is 11.2, which is less than 11.3. Choice (A) is incorrect because it rounds to 11.4, which is greater than 11.3. Choices (B) and (C) are incorrect because they round to 11.3, which is equal to 11.3.
8	MGSE5.NBT.4	1	N/A	See scoring rubric and exemplar response on page 149.
9	MGSE5.NBT.2	1	C	The correct answer is choice (C) 10^7. When you multiply by 10, each digit's value becomes 10 times as much. Choice (A) is incorrect because the product would be 54,200. Choice (B) is incorrect because the product would be 542,000. Choice (D) is incorrect because the product would be 54,200,000.
10	MGSE5.NBT.7	1	C	The correct answer is choice (C) 8.32. This response shows that the student multiplied correctly. Choice (A) is incorrect because the response indicates adding 6 + 0.22 + 0.012 instead of 6 + 2.2 + .12. Choice (B) is incorrect because the response indicates rounding 3.2 to 3 before multiplying. Choice (D) is incorrect because the response indicates rounding 2.6 to 3 before multiplying.
11	MGSE5.NBT.7	1	B	The correct answer is choice (B) 3. The student divided correctly and understood that in this case, the quotient is the number of equal groups. Choice (A) is incorrect because the response shows that the decimal portion of the number was not considered. Choices (C) and (D) are incorrect because they indicate the student misunderstood place value when dividing.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
12	MGSE5.NF.3	1	C	The correct answer is choice (C) $7\frac{1}{2}$ pounds. This response indicates that the student wrote the division as a fraction, $\frac{60}{8}$, and evaluated the expression. Choice (A) is incorrect because the response indicates the student reversed the dividend and divisor. Choice (B) is incorrect because the response indicates the student subtracted 8 before dividing. Choice (D) is incorrect because the response indicates the student added 8 before dividing.
13	MGSE5.NF.1	1	C	The correct answer is choice (C) $\frac{23}{24}$. This response shows that the mixed number was made into an improper fraction, $\frac{13}{8}$, and a common denominator, 24, was found for the minuend and subtrahend. Choice (A) is incorrect because the response indicates an error was made when the mixed number was changed to an improper fraction. Choice (B) is incorrect because the response shows $\frac{2}{3}$ multiplied by $\frac{8}{8}$. Choice (D) is incorrect because the response indicates the student did not find a common denominator and just subtracted the numerators and denominators separately.
14	MGSE5.NF.4	1	D	The correct answer is choice (D) $4 \times \frac{3}{4} = \frac{12}{4} = 3$. This response shows that the total of 4 groups of $\frac{3}{4}$ is 3. Choice (A) is incorrect because it finds how much of the circles are not shaded. Choice (B) is incorrect because it shows the numerators added instead of multiplied. Choice (C) is incorrect because it shows the numerator of the first fraction multiplied by the denominator of the second.
15	MGSE5.NF.5	2	N/A	See scoring rubric and exemplar response on page 150.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
16	MGSE5.G.3	1	C	The correct answer is choice (C). This shape is a rectangle. It has four right angles. Choice (A) is incorrect because this quadrilateral is a trapezoid with no right angles. Choice (B) is incorrect because this quadrilateral is a trapezoid with only two right angles. Choice (D) is incorrect because it is a right triangle, which has only one right angle.
17	MGSE5.G.3	1	C	The correct answer is choice (C) Both figures always have two pairs of parallel sides. Choice (A) is incorrect because it does not take into account that rhombuses do not always have four right angles. Choice (B) is incorrect because it does not take into account that rectangles do not always have four sides of equal length. Choice (D) is incorrect because it does not take into account that both figures have two pairs of parallel sides.
18	MGSE5.MD.2	2	D	The correct answer is choice (D) 5 in. The three longest insects are $1\frac{1}{2}$, $1\frac{3}{4}$, and $1\frac{3}{4}$, so add those together to get the total length. Choice (A) is incorrect because it is only the sum of only the insects that are $\frac{3}{4}$ in. Choice (B) is incorrect because there are not just three 1-inch insects. Choice (C) is incorrect because it adds only the top three lengths, not accounting for how many there are in each length.
19	MGSE5.MD.2	2	N/A	See scoring rubric and exemplar response on page 151.
20	MGSE5.MD.2	3	N/A	See scoring rubric and exemplar response beginning on page 152.
21	MGSE5.MD.5	1	D	The correct answer is choice (D) 48. The response shows that the student correctly multiplied the length, width, and height to find the volume, or that the student counted rows and columns of unit cubes. Choices (A), (B), and (C) are incorrect because each is the result of multiplying only two of the dimensions, which results in the area of a side, not the volume of the prism.
22	MGSE5.MD.5b	2	A/B/E	The correct answers are choices (A), (B), and (E). Choice (A) has a volume of 540, choice (B) has a volume of 504, and choice (E) has a volume of 512. Choice (C) is incorrect because the volume is 480, which is less than 500 and too small for Greg's shed. Choice (D) is incorrect because the volume is 648, which is greater than 600 and too big for Greg's shed. Choice (F) is incorrect because the volume is 432, which is less than 500 and too small for Greg's shed.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
23	MGSE5.G.3	3	A/D/F	The correct answer is choices (A), (D), and (F). Choice (A) is correct because squares are a subset of rectangles and all rectangles have four right angles. Choice (D) is correct because squares are a subset of parallelograms and all parallelograms have two pairs of parallel sides. Choice (F) is correct because rhombuses are a subset of parallelograms and all parallelograms have opposite angles that are congruent. Choice (B) is incorrect because squares are not a subset of rhombuses. Choice (C) is incorrect because rectangles are not a subset of rhombuses. Choice (E) is incorrect because rectangles are not a subset of squares.
24	MGSE5.G.2	1	D	The correct answer is choice (D). Choice (A) is incorrect because the response shows a graph with the point (4, 1) rather than (1, 4). Choice (B) is incorrect because the response shows a graph with the points (4, 1), (0, 7), and (6, 4) rather than (1, 4), (7, 0), and (4, 6). Choice (C) is incorrect because the response shows a graph with the point (7, 1) rather than (7, 0).
25	MGSE5.G.1	3	N/A	See scoring rubric and exemplar response on page 154.
26	MGSE5.G.2	1	C	The correct answer is choice (C) (8, 2). To locate coordinates for a point on a coordinate plane, start at (0, 0), move across the *x*-axis, and then move up or down the *y*-axis. To get to point *G*, first move across 8 and then move up 2. Choice (A) is incorrect because its coordinates show the location for point *E*. Choice (B) is incorrect because its coordinates show the location for point *F*. Choice (D) is incorrect because it reverses the *x*- and *y*-coordinates, showing a movement across 2 and then up 8, which would locate a point at a different location than point *G*.
27	MGSE5.MD.5	3	N/A	See scoring rubric and exemplar response beginning on page 155.
28	MGSE5.OA.3	2	N/A	See scoring rubric and exemplar response on page 157.
29	MGSE5.G.2	3	N/A	See scoring rubric and exemplar response on page 158.

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MATHEMATICS EXAMPLE SCORING RUBRICS AND EXEMPLAR RESPONSES

Item 3

Scoring Rubric

Points	Description
1	The student correctly selects both of the drop-down menu options.
0	The student does not correctly select both of the drop-down menu options.

Exemplar Response

The correct response is shown below.

The value of the expression "subtract 2 from 8" is [3] times [as great as] the value of the expression "subtract 2 from 8, then divide by 3."

Both expressions contain the same expression "subtract 2 from 8." Therefore, the expressions can be compared without completely evaluating them. Using the relationship between multiplication and division, the expression "subtract 2 from 8" must have a value that is 3 times as great as the expression "subtract 2 from 8, then divide by 3."

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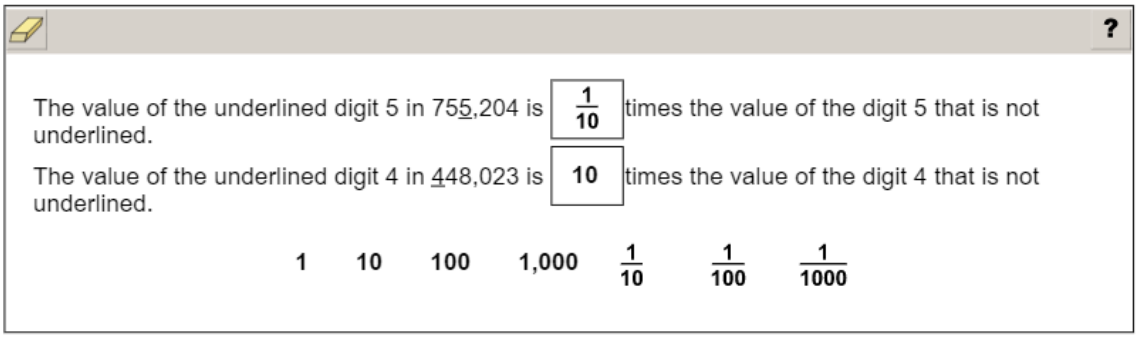
Item 4

Scoring Rubric

Points	Description
2	The student correctly completes both statements.
1	The student correctly completes one of the two statements.
0	The student does not correctly complete either statement.

Exemplar Response

The correct response is shown below.



The underlined digit 5 is in the thousands place and has a value of 5,000. The digit 5 that is not underlined is in the ten-thousands place and has a value of 50,000. Therefore, 5,000 is "$\frac{1}{10}$" the value of 50,000. The underlined digit 4 is in the hundred-thousands place and has a value of 400,000. The digit 4 that is not underlined is in the ten-thousands place and has a value of 40,000. Therefore, 400,000 is "10" times the value of 40,000.

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Item 8

Scoring Rubric

Points	Description
1	The student correctly answers the question.
0	The student does not correctly answer the question.

Exemplar Response

The correct response is shown below.

This is the correct response because 0.0254 is between 0.02 and 0.03, but it is closer to 0.03.

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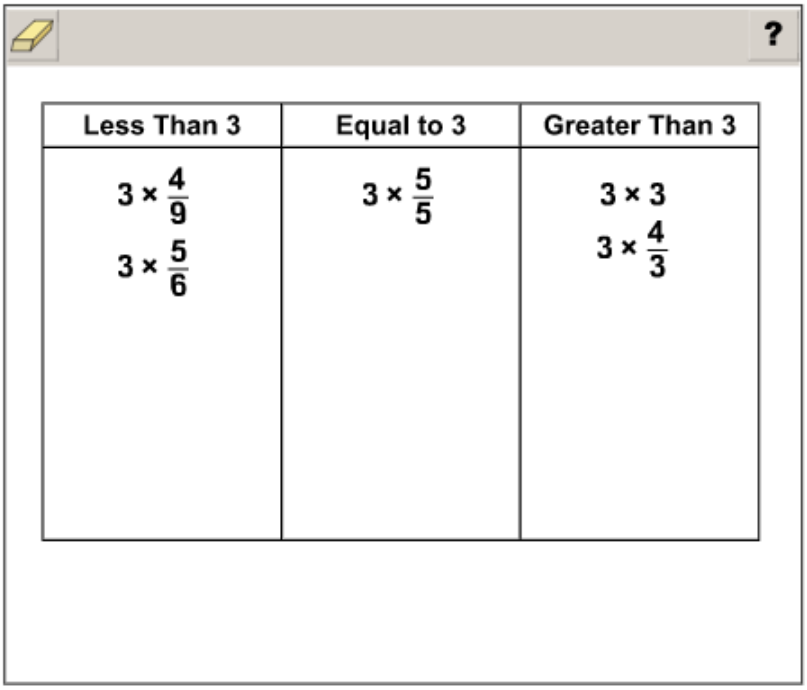
Item 15

Scoring Rubric

Points	Description
2	The student correctly places all five expressions.
1	The student correctly places three or four of the expressions.
0	The student does not correctly place at least three of the expressions.

Exemplar Response

The correct response is shown below.



For the first column, multiplying the number 3 by a fraction less than 1 will have a product less than 3. The fractions $\frac{4}{9}$ and $\frac{5}{6}$ are both less than one, so the products are less than 3. For the second column, multiplying the number 3 by a fraction that is equivalent to 1 will have a product equal to 3. The fraction $\frac{5}{5}$ is equivalent to 1, so the product is equal to 3. For the third column, multiplying the number 3 by a number greater than 1 will have a product greater than 3. The fraction $\frac{4}{3}$ and the whole number 3 are greater than 1, so the products are greater than 3.

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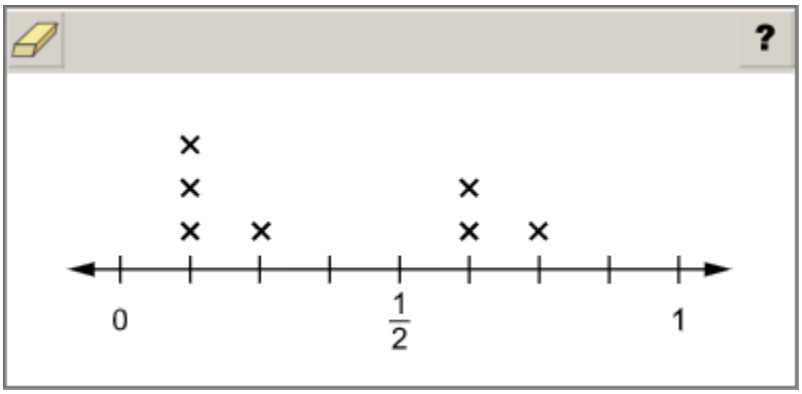
Item 19

Scoring Rubric

Points	Description
1	The student correctly plots all the Xs.
0	The student does not correctly plot all the Xs.

Exemplar Response

TThe correct response is shown below.



This is the correct response because each X in the line plot represents a number listed in the table, including multiple instances of numbers.

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Item 20

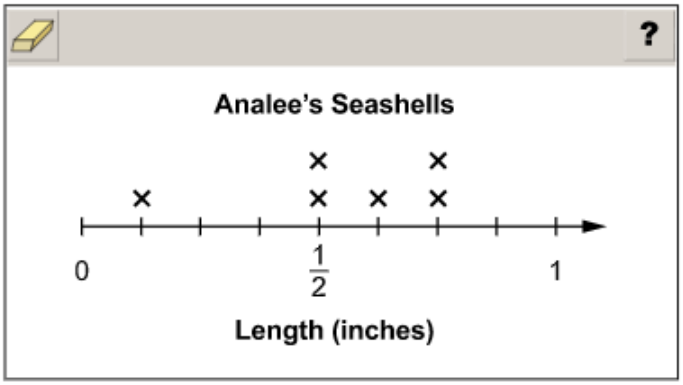
Scoring Rubric

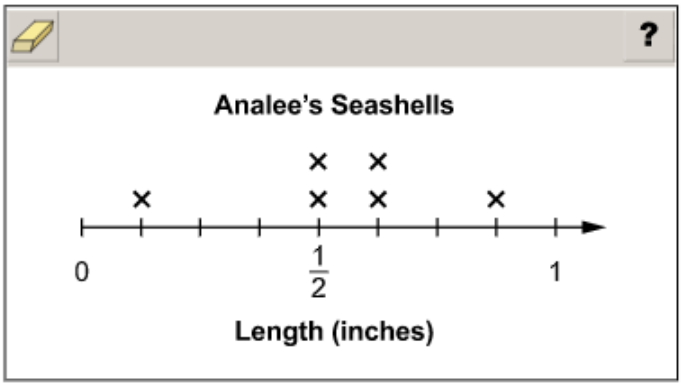
Points	Description
2	The student correctly answers both Part A and Part B.
1	The student correctly answers either Part A OR Part B.
0	The student does not correctly answer either part.

Exemplar Response

Part A

Two possible correct responses are shown below.





The sum of the seashells already recorded on the line plot is $\frac{14}{8}$. The sum of the two remaining seashells will then be $\frac{26}{8} - \frac{14}{8}$, which is $\frac{12}{8}$. Since all of the seashells are less than 1 inch in length, the only 2 possible pairs of lengths that have a sum of $\frac{12}{8}$ would be $\frac{7}{8} + \frac{5}{8}$ and $\frac{6}{8} + \frac{6}{8}$.

Go on to the next page to finish item 20.

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Item 20

Part B

The correct answer is choice (B) $\frac{3}{4}$. Subtracting the smallest seashell $\left(1\frac{1}{8}\right)$ from the largest seashell $\left(1\frac{7}{8}\right)$ is $\frac{6}{8}$, which is equivalent to $\frac{3}{4}$. Choice (A) is incorrect because it represents the difference between $1\frac{1}{4}$ and $1\frac{3}{4}$. Choice (C) is incorrect because it represents the difference between the longest seashell and the starting value of the line plot. Choice (D) is incorrect because it represents the difference between the starting value and the ending value of the line plot.

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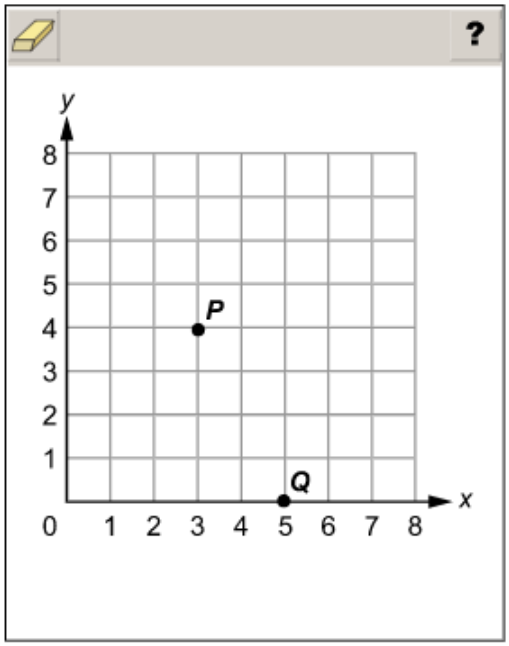
Item 25

Scoring Rubric

Points	Description
2	The student correctly places both points.
1	The student correctly places one of the points.
0	The student does not correctly place either point.

Exemplar Response

The correct response is shown below.



Point *P* has coordinates (3, 4), which means to move 3 units along the *x*-axis and 4 units along the *y*-axis to place the point. Point *Q* has coordinates (5, 0), which means to move 5 units along the *x*-axis and 0 units along the *y*-axis to place the point.

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Item 27

Scoring Rubric

Points	Description
2	The student correctly answers both Part A and Part B.
1	The student correctly answers either Part A OR Part B.
0	The student does not correctly answer either part.

Exemplar Response

Part A

The correct response is shown below.

This is the correct response because the fish tank is composed of two rectangular prisms, one with dimensions 2 feet by 2 feet by 1 foot and the other with dimensions of 2 feet by 4 feet by 1 foot. The volume of a rectangular prism is found by multiplying its length times its width times its height, so the volumes of the prisms are $2 \times 2 \times 1 = 4$ cubic feet and $2 \times 4 \times 1 = 8$ cubic feet. These volumes are added to find the total volume of the fish tank, 12 cubic feet. Another strategy for finding the volume of the fish tank is to find the volume of a rectangular prism with dimensions of 4 feet by 4 feet by 1 foot and then subtract the volume of a rectangular prism with dimensions of 2 feet by 2 feet by 1 foot.

Go on to the next page to finish item 27.

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Item 27

Part B

The correct response is shown below.

This is the correct response because the volume of a rectangular prism is found by multiplying its length times its width times its height. Both fish tanks are composed of rectangular prisms with the same length and width. The height of Ms. Diaz's fish tank is 2 times the height of Ms. Mailee's fish tank, so the volume of Ms. Diaz's fish tank is 2 times the volume of Ms. Mailee's fish tank, or 24 cubic feet. The volume of Ms. Diaz's fish tank can also be found by using the same strategy from Part A and simply replacing the height of 1 foot with a height of 2 feet.

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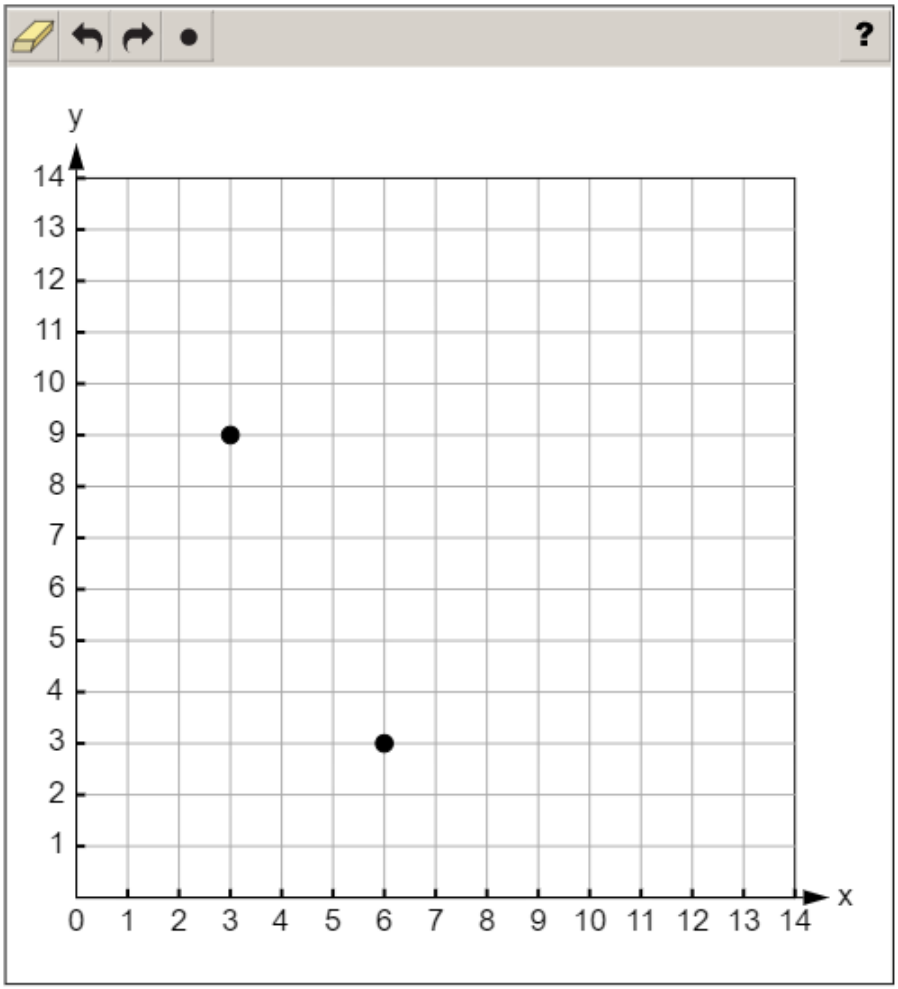
Item 28

Scoring Rubric

Points	Description
2	The student correctly plots both points.
1	The student correctly plots one of the points.
0	The student does not correctly plot either point.

Exemplar Response

The correct response is shown below.



The pattern in the table is to subtract 2 from each *y*-value as the *x*-value increases by 1. The *y*-value corresponding with 3 is 11 – 2 = 9 and is represented by the point (3, 9). This point is plotted on the coordinate grid by moving 3 units along the *x*-axis and 9 units along the *y*-axis to place the point. The *y*-value corresponding with 6 is 5 – 2 = 3 and is represented by the point (6, 3). This point is plotted on the coordinate grid by moving 6 units along the *x*-axis and 3 units along the *y*-axis to place the point.

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Item 29

Scoring Rubric

Points	Description
2	The student correctly answers both Part A and Part B.
1	The student correctly answers either Part A OR Part B.
0	The student does not correctly answer either part.

Exemplar Response

Part A

The correct response is shown below.

Use the drop-down menus to correctly interpret the coordinate of the point shown.

Felix spent [3] hours doing homework and [5] hours doing chores.

This is the correct response because the point is located at (5, 3). The *x*-coordinate represents the number of hours of chores, 5, and the *y*-coordinate represents the number of hours of homework, 3.

Part B

The correct answer is choice (A). The total number of hours Felix spent doing chores and homework is 8 hours. He spent 1 hour doing chores, so the *x*-coordinate is 1. The *y*-coordinate is 7 because 1 + 7 = 8. Choice (B) is incorrect because it represents a reversal of the number of hours Felix spent on each activity based on the coordinate grid. Choice (C) is incorrect because it represents the point shown on the coordinate grid in Part A. Choice (D) is incorrect because it reverses the meaning of each coordinate.

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ACTIVITY

The following activity develops skills in Unit 1: Order of Operations and Whole Numbers.

Standards: MGSE5.OA.1, MGSE5.OA.2, MGSE5.OA.3

Place Value

You can do this activity on your own or with your classmates or family. For this activity, you will need a large quantity of small objects, such as paper clips, pennies, or seeds.

Directions:

- Put all the objects in a bowl, or spread them out on a table or on the ground.
- Estimate the number of objects. Record each person's estimate.
- Separate the objects into groups of tens, hundreds, and thousands (if you have that many). Record the numbers of ones, tens, hundreds, and thousands on a place value chart like the one shown below, and use it to find the total number of objects.

Thousands	Hundreds	Tens	Ones

- Find the difference between each estimate and the actual number of objects. Whose estimate is closest?
- Write and solve addition, subtraction, multiplication, and division problems based on the number of objects.
- Choose three fractions in halves, quarters, thirds, fourths, fifths, sixths, or eighths.
- Find each fraction of the whole group of objects. Represent these quantities in fraction and decimal forms.

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ACTIVITY

The following activity develops skills in Unit 7: Geometry and the Coordinate Plane.

Standards: MGSE5.G.1, MGSE5.G.2, MGSE5.G.3

You can do this activity on your own or with your classmates or family.

Directions: Imagine you are going to put on a play.

- Choose a location to serve as a stage area, and choose at least two large and two small objects to use as furniture or props.
- Use attributes to classify the shape of the stage area and the shape of each object. Try to classify each in as many ways as you can.
- Describe the different ways the stage area and each object could be measured.
- Measure the stage area and objects and explain why you chose the units you used. At least one measurement should involve volume.
- Use a coordinate grid to represent the stage area, and plot points to represent the locations of props and actors. There is only one entrance to the stage. Make the origin on the grid the location of the stage entrance for actors. Then use the grid to write stage directions that tell each actor how to get from the stage entrance to his or her correct place on the stage.
- Write ten sentences of dialogue for the play. Use a stopwatch or online timer to determine how long, to the nearest quarter minute, it takes to say each sentence. Record the time data on a line plot. Use the plot to determine how long it would take to say each sentence if you redistributed the total amount of time needed to say all the sentences equally among the ten sentences.

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SCIENCE

DESCRIPTION OF TEST FORMAT AND ORGANIZATION

The Grade 5 Science EOG assessment has a total of 42 items.

The test will be given in two sections.

- You may have up to 40 minutes per section to complete Sections 1 and 2.
- The total estimated testing time for the Grade 5 Science EOG assessment ranges from approximately 40 to 80 minutes.

CONTENT

The Grade 5 Science EOG assessment will measure the Grade 5 Science standards that are described at www.georgiastandards.org. The Science Georgia Standards of Excellence are designed to provide foundational knowledge and skills for all students to develop proficiency in science. These standards focus on a limited number of core disciplinary ideas and crosscutting concepts which build from kindergarten to high school. The standards are written with the core knowledge to be mastered integrated with the science and engineering practices needed to engage in scientific inquiry and engineering design. Crosscutting concepts are used to make connections across different science disciplines.

The content of the assessment covers standards that are reported under these domains:

- Earth Science
- Physical Science
- Life Science

ITEM TYPES

Operational items in the Science portion of the Grade 5 EOG assessment consist of selected-response (multiple-choice) items and technology-enhanced items.

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SCIENCE DEPTH OF KNOWLEDGE EXAMPLE ITEMS

Example items that represent applicable DOK levels are provided for you on the following pages. The items and explanations of what is expected of you to answer them will help you prepare for the test.

All example and sample items contained in this guide are the property of the Georgia Department of Education.

Example Item 1

Selected-Response

DOK Level 1: This is a DOK level 1 item because the question requires the student to recall information concerning a known relationship between scientific quantities.

Science Grade 5 Content Domain: Physical Science

Standard: S5P2. Obtain, evaluate, and communicate information to investigate electricity.
b. Design a complete, simple electric circuit, and explain all necessary components.

A student wants to design a complete, simple circuit for a class project. The student has more materials available than are needed for the project.

What does a complete, simple circuit require to work?

A. wire and a switch
B. wire and a light bulb
C. wire, a battery, and a switch
D. wire, a battery, and a light bulb

Correct Answer: D

Explanation of Correct Answer: The correct answer is choice (D) wire, a battery, and a light bulb. The necessary components of a simple electric circuit are a source of power, a path for the current, and something to provide power. Choice (A) is incorrect because a switch is not necessary, but a power source is a necessary component. Choice (B) is incorrect because a power source is a necessary component. Choice (C) is incorrect because a switch is not a necessary component.

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Example Item 2

Selected-Response

DOK Level 2: This is a DOK level 2 item because the question requires the student to apply learned information to abstract and real-life situations.

Science Grade 5 Content Domain: Earth and Space Science

Standard: S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.

b. Develop simple interactive models to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes.

Deposition of sediments can change the depth of a lake over time. A student wants to make a model that shows how this process takes place.

Which model would provide data about changes in the depth of a lake caused by deposition?

A. Fill a beaker with water. Slowly allow the water to evaporate from the beaker. Measure the change in the depth of the water.

B. Fill a beaker with water. Slowly drop sand, gravel, and dead plant material into the beaker. Measure the change in the depth of the water.

C. Fill a plastic box with water. Put a hose in the water on one end of the box and turn the water on to a slow flow. Measure the depth of the water when the box is full.

D. Fill a plastic box with sand, gravel, and dead plant material. Put a hose in the middle of the box and turn the water on to a slow flow. Measure the depth of the water when the box is full.

Correct Answer: B

Explanation of Correct Answer: The correct answer is choice (B) Fill a beaker with water. Slowly drop sand, gravel, and dead plant material into the beaker. Measure the change in the depth of the water. Choice (A) is incorrect because there are no sediments being added to the water; the change in water level is due to evaporation. Choice (C) is incorrect because this would demonstrate increased water from runoff, not deposition. Choice (D) is incorrect because this would demonstrate increased rainfall and erosion as the sediments are redistributed by the water flow.

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Example Item 3

Selected-Response

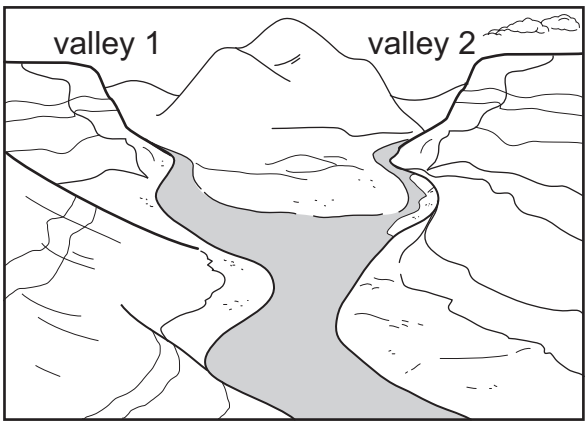
DOK Level 3: This is a DOK level 3 item because the question requires the student to make choices based on a reasoned argument.

Science Grade 5 Content Domain: Earth Science

Standard: S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.

a. Construct an argument supported by scientific evidence to identify surface features (examples could include deltas, sand dunes, mountains, volcanoes) as being caused by constructive and/or destructive processes (examples could include deposition, weathering, erosion, and impact of organisms).

The picture shows two steep valleys and two rivers that join together and become one larger river in a wider valley.



A student claims that both valleys have been formed by the same process over a long period of time.

Which argument BEST explains why the student's claim is correct or incorrect?

A. The student's claim is correct; the evidence in the picture shows that both valleys were formed by the constructive force of deposition because flowing water carries large rocks from far away and drops them along a river, making the banks taller.

B. The student's claim is correct; the evidence in the picture shows that both valleys were formed by the destructive forces of weathering and erosion because flowing water breaks down rock and carries the small pieces downstream.

C. The student's claim is not correct; the evidence in the picture shows that valley 1 was formed by the destructive forces of weathering and erosion because flowing water breaks down rock and carries the small pieces downstream, but valley 2 was formed by the constructive force of deposition because flowing water carries large rocks from far away and drops them along a river, making the banks taller.

D. The student's claim is not correct; the evidence in the picture shows that valley 1 was formed by the constructive force of deposition because flowing water carries large rocks from far away and drops them along a river, making the banks taller, but valley 2 was formed by the destructive forces of weathering and erosion because flowing water breaks down rock and carries the small pieces downstream.

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Example Item 3. *Continued*.

Correct Answer: B

Explanation of Correct Answer: The correct answer is choice (B) The student's claim is correct; the evidence in the picture shows that both valleys were formed by the destructive forces of weathering and erosion because flowing water breaks down rock and carries the small pieces downstream. Choice (A) is incorrect because water depositing rocks in the river did not form the valleys. Choice (C) is incorrect because the student's claim is correct, and the same evidence of weathering and erosion is found in both valleys. Choice (D) is incorrect because the student's claim is correct, and the same evidence of weathering and erosion is found in both valleys.

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SCIENCE CONTENT DESCRIPTION AND ADDITIONAL SAMPLE ITEMS

In this section, you will find information about what to study in order to prepare for the Grade 5 Science EOG assessment. This includes main ideas and important concepts. This section also contains practice questions with an explanation of the correct answers that you can use to prepare for the test.

All example and sample items contained in this guide are the property of the Georgia Department of Education.

CONTENT DESCRIPTION

- Investigate and identify how constructive or destructive processes form surface features on Earth.
- Investigate and explain the differences between physical and chemical changes.
- Investigate different types of electricity, circuits, and the flow of electricity through common materials.
- Investigate and explain the relationship between magnetism and electricity.
- Develop classification models for organisms.
- Compare and contrast inherited characteristics and acquired characteristics.
- Compare and contrast the parts of plant and animal cells.
- Investigate and explain how microorganisms can benefit or harm larger organisms.

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Cells and Microorganisms

In this section, you will study life science. You will explain how magnifiers such as microscopes or hand lenses are used to observe cells and their structures. You will recognize and determine the functions of plant and/or animal cell structures (e.g., cell membrane, cell wall, cytoplasm, nucleus, chloroplasts). You will identify beneficial microorganisms and explain why they are beneficial, and you will identify harmful microorganisms and explain why they are harmful.

KEY CONCEPTS

Very small objects and parts of objects can be seen by **magnifying** them so they appear larger. Magnification can also make it easier to see small details of an object. (S5L3a)

Microscopes and **hand lenses** are used to magnify objects. Some objects are too small to be seen without magnification. (S5L3a)

Cells are the smallest unit of life and make up all living things. Cell structures perform basic life functions for the cell, such as making energy, growing, repairing, and getting rid of waste. Cells can look different and perform different roles in an organism. (S5L3b)

Cells are made up of many different parts. This table shows where you will find some cell **structures**. (S5L3b, c)

	Animal Cell	Plant Cell
Cell Wall	no	yes
Cell Membrane	yes	yes
Cytoplasm	yes	yes
Nucleus	yes	yes
Chloroplast	no	yes

Microorganisms are living things that are too small to be seen without magnification. Some microorganisms are **beneficial** to people and the environment. Other microorganisms can be **harmful** and cause disease. (S5L4a, b)

Bacteria are single-celled microorganisms that can live in almost every environment and grow and reproduce on their own. Many types of bacteria are beneficial, like the ones that make cheese or break down chemicals and waste. Many other bacteria are harmful, like the ones that cause illness or spoil food. (S5L4a, b)

Viruses are even smaller than bacteria and cannot reproduce or grow unless they infect another organism. The virus uses the organism's cells to reproduce by making copies of itself, eventually making the host organism sick. (S5L4b)

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Sample Items 1–4

Item 1

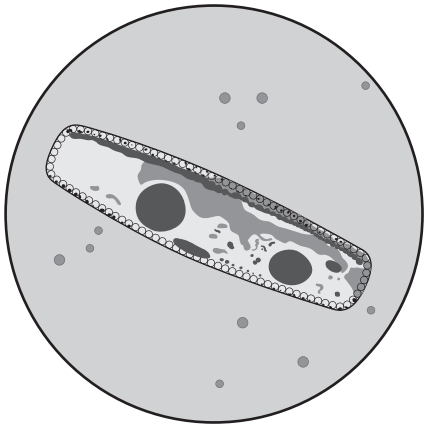
Selected-Response

A student collects a sample of pond water in a jar to observe the microscopic algae that live in the water. The student then places a drop of the pond water on a microscope slide and observes it under a microscope. The drawings show what the student observed in the jar and on the slide.

Pond Water Observations

in jar

- cloudy water
- no visible algae in water



on slide

- sediments floating in water
- algae swimming in water

Which claim is supported by evidence in the drawings?

A. The student observed microscopic algae only on the slide because algae grow larger when placed on a microscope slide.

B. The student observed microscopic algae only on the slide because all of the algae cells were removed from the pond water on the microscope slide.

C. The student observed microscopic algae only on the slide because algae cells are too small to be seen without magnification by a microscope.

D. The student observed microscopic algae only on the slide because the water in the jar was too cloudy to see the algae.

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Item 2

Selected-Response

A student observed a label found on raw chicken meat sold at the grocery store.

> **Warning:**
> Cook thoroughly to kill bacteria.

Which argument should the student use to support a claim that some bacteria are harmful to humans?

A. Some bacteria can harm humans because bacteria reproduce faster when they are cooked at high temperatures.
B. Some bacteria can harm humans because bacteria become toxic when cooked at high temperatures.
C. Some bacteria can harm humans because bacteria make food taste bad when it is not cooked properly.
D. Some bacteria can harm humans because bacteria can cause food poisoning when contaminated food is not cooked properly.

Item 3

Selected-Response

After a person takes an antibiotic to fight a bacterial infection in the body, some doctors recommend taking a pill called a probiotic every day. The list shows some facts about probiotics.

Facts about Probiotics

- **They are made of living microorganisms.**
- **They improve food digestion and absorption of nutrients.**
- **They increase the body's ability to fight infections.**
- **They increase the number and types of normal bacteria in the gut.**

Which argument BEST supports the claim that humans benefit from taking probiotics?

A. Humans benefit from probiotics because probiotics prevent people from getting sick.
B. Humans benefit from probiotics because probiotics are made of living microorganisms.
C. Humans benefit from probiotics because probiotics can be taken every day after having an infection.
D. Humans benefit from probiotics because probiotics balance the number and types of bacteria that live in the gut.

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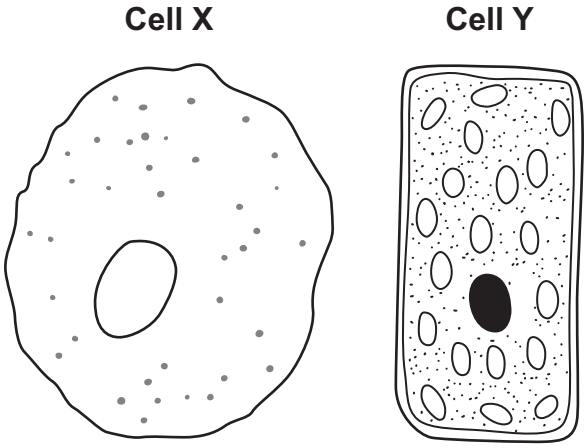
Item 4

Multi-Part Technology-Enhanced

The pictures show the structure of two cells.



Part A

Which sentence explains why the shape and structure of the two cells are different?

A. Cell X is shaped like a circle because it is an animal cell, which means it does not have a cell wall, and cell Y is shaped like a rectangle because it is a plant cell, which means it has a cell wall.

B. Cell X is shaped like a circle because it is a plant cell, which means it does not have a cell wall, and cell Y is shaped like a rectangle because it is an animal cell, which means it has a cell wall.

C. Cell X is shaped like a circle because it is an animal cell, which means it has a cell membrane, and cell Y is shaped like a rectangle because it is a plant cell, which means it does not have a cell membrane.

D. Cell X is shaped like a circle because it is a plant cell, which means it has a cell membrane, and cell Y is shaped like a rectangle because it is an animal cell, which means it does not have a cell membrane.

Part B

Which sentence describes how the differences between a plant cell and an animal cell can be determined by looking at the parts inside the cell?

A. Plant cells have a nucleus, but animal cells do not.

B. Plant cells have chloroplasts, but animal cells do not.

C. Plant cells do not have a nucleus, but animal cells do.

D. Plant cells do not have chloroplasts, but animal cells do.

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Classification

In this life science section, you will learn how plants and animals are sorted into groups (e.g., fish, amphibian, reptile, bird, mammal) and how to classify organisms. You will classify things based on their characteristics by looking for similarities and differences. You will study vertebrates and invertebrates as well as producers, consumers, and decomposers.

KEY CONCEPTS

You **classify** things when you organize them into **groups** based on **characteristics** they share. Scientists classify things so that they can study ways those things are similar or different. A classification system can be used to identify and study species. (S5L1a)

Scientists use similarities, or things that the organisms have in common, to help them classify organisms into different groups. (S5L1a, b)

Sometimes scientists learn more things about a particular organism, and that new information makes them modify or change the way that the organism is classified. (S5L1a, b)

Animals are classified into animals with backbones, known as **vertebrates**, and animals without backbones, known as **invertebrates**. Vertebrates have a backbone, or spine, that runs the length of their body, and they are sorted into five groups: **fish, amphibian, reptile, bird, and mammal**. Bass, tree frogs, alligators, brown thrashers, and deer are examples of vertebrates. (S5L1a)

Animals without backbones are known as **invertebrates**. They include insects, spiders, and crabs. (S5L1a)

Plants are organisms that make their own food. They can be classified by the way in which they transport materials within the organism. They can also be classified by the way in which they reproduce. (S5L1b)

Some plants use **seeds** to reproduce, while others do not. Some plants make their seeds in flowers, while other plants do not. Ferns are classified as plants that do not make seeds. Pine trees are classified as plants that make seeds without using flowers. Apple trees and roses are examples of plants that make seeds by using flowers. (S5L1b)

Important Tip

✍ The ways scientists have classified organisms have changed over the years. In the earliest systems, organisms were either a plant or an animal. Over the years, scientists have learned to base their classification on similar body structures rather than on functions. For example, dolphins and sharks both live in the water, swim, and are gray. However, dolphins are mammals and have lungs, and sharks are fish and have gills. This has led scientists to classify organisms based on similar genetic backgrounds that have resulted in similar body structures. When you work on classifying organisms, keep in mind that you should look for similar traits and that new information may require you to modify your classification system. (S5L1a, b)

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Sample Items 5–7

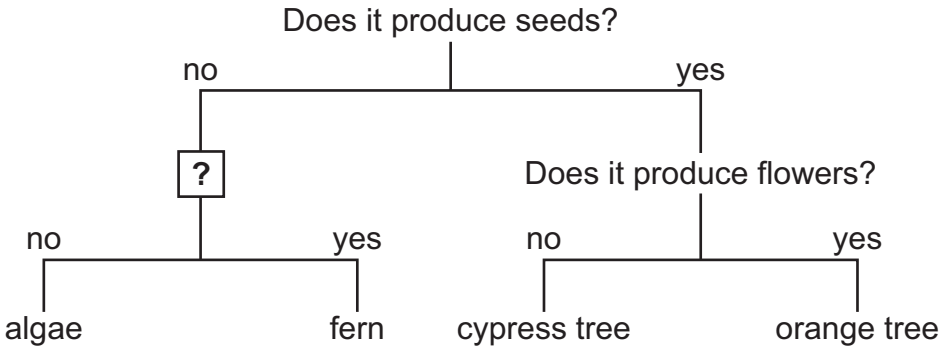
Item 5

Selected-Response

A student makes a model to sort plants using the information in the table.

Plant	Characteristics
algae	• **does not produce seeds** • **has no roots, stems, or leaves**
fern	• **does not produce seeds** • **has roots, stems, and leaves**
cypress tree	• **produces seeds from cones** • **has roots, stems, and leaves**
orange tree	• **produces seeds from flowers** • **has roots, stems, and leaves**

The student's model is not complete.



Which question should the student put in the box with a question mark to correctly complete the model?

A. Does it produce cones?
B. Does it grow into a tree?
C. Does it produce flowers?
D. Does it have roots, stems, or leaves?

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Item 6

Drag-and-Drop Technology-Enhanced

A student uses a table showing characteristics of different animals to create a classification model.

Animal Classification Facts

Animal	Characteristics
eagle	• is a warm-blooded vertebrate • has wings and feathers, lives on land
shark	• is a cold-blooded vertebrate • has gills and fins, lives in water
beetle	• is a cold-blooded invertebrate • has wings and six legs, lives on land
cougar	• is a warm-blooded vertebrate • has hair and four legs, lives on land
snake	• is a cold-blooded vertebrate • has scales and no legs, lives on land

Using the information in the table, move a set of steps for 2a and 2b into the box to BEST complete the classification model.

Classification Model

1a has a backbone.....go to 2

1b does not have a backbone.....Insect

[ ].....go to 3

[ ].....go to 4

3a has feathers.....Bird

3b has hair.....Mammal

4a lives in water.....Fish

4b lives on land.....Reptile

2a has gills
2b has scales

2a is warm blooded
2b is cold blooded

2a has wings
2b does not have wings

2a has six legs
2b does not have six legs

Use a mouse, touchpad, or touchscreen to move the correct set of steps below the model into the box in the model.

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Item 7

Drag-and-Drop Technology-Enhanced

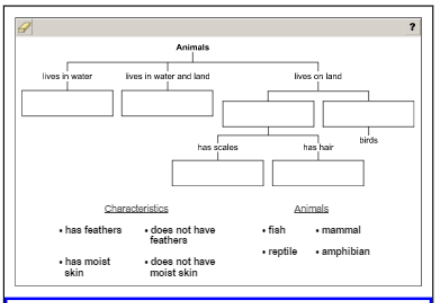
A student is investigating animals and their characteristics. The student uses the information in the table.

Characteristics of Animals

Animal	Characteristics
Amphibian	• lives in and out of water • has moist skin
Bird	• has feathers • lives on land
Fish	• has scales • lives in water
Mammal	• has hair • lives on land
Reptile	• has scales • lives on land

A student makes a model to sort some animals by their characteristics.

Move characteristics and types of animals into boxes to BEST complete the student's model. Not all characteristics need to be used.



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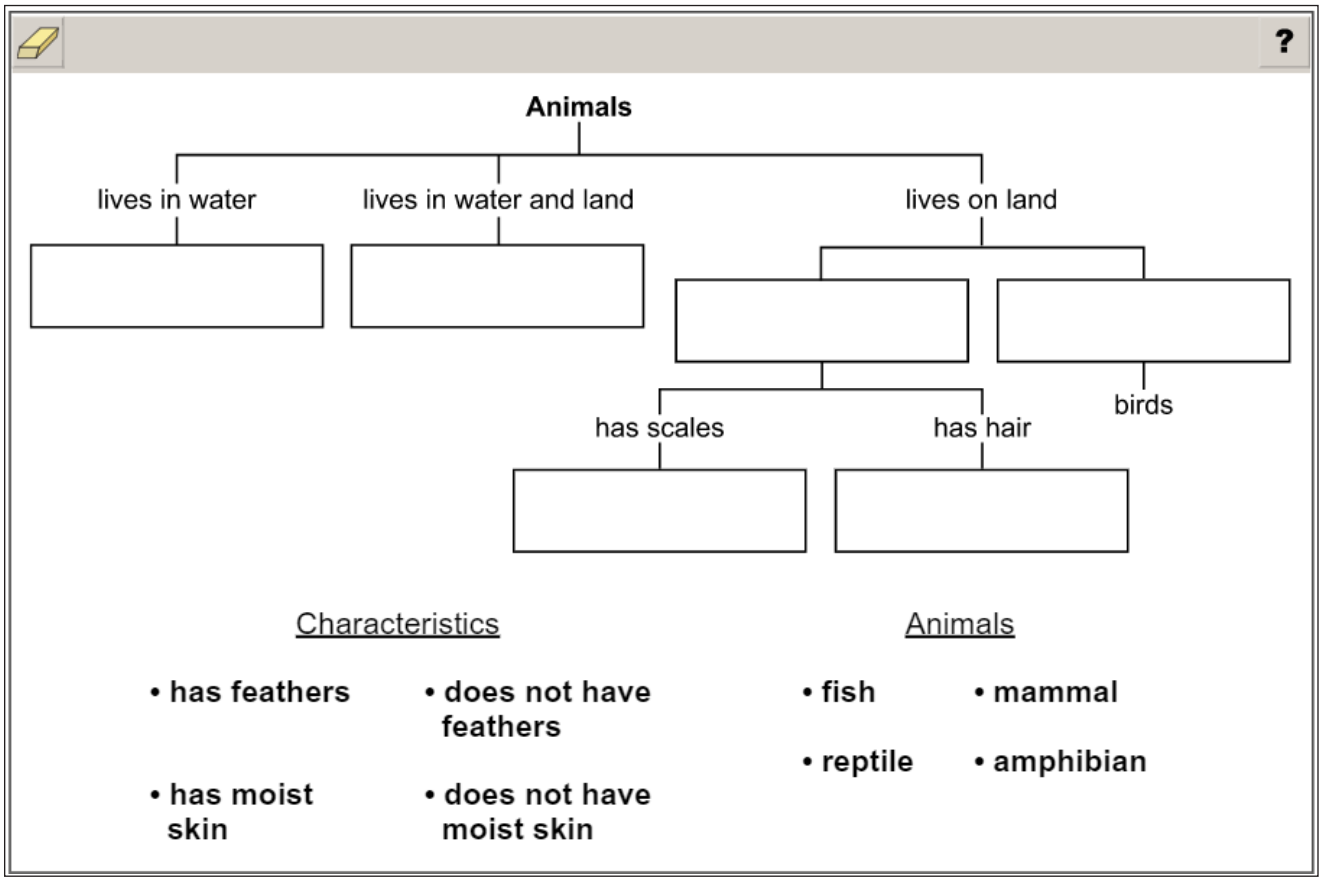
Item 7. *Continued*.



Use a mouse, touchpad, or touchscreen to move the words or phrases below the model into the boxes. Each word or phrase can be used once. Some words or phrases will not be used.

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Acquired and Inherited Characteristics

In this life science section, you will learn about the characteristics of learned behaviors and inherited traits.

KEY CONCEPTS

The physical characteristics that are used to describe an organism can also be called traits. Some traits are unique to individual organisms, and some traits are common because they are shared by many individuals. Being right-handed is a common physical trait because most people are right-handed.

Physical traits can be divided into two main types: inherited and acquired. **Inherited traits** are passed from parent(s) to offspring. Fur color and beak shape are examples of inherited traits that are passed down from parents to offspring. **Acquired traits** are developed after the organism is born and are not passed to offspring by parents. Having a scar or being a fast runner are examples of acquired traits. (S5L2b)

In addition to physical traits, organisms can also be described by their learned and instinctive behaviors. Organisms interact with their environment, including other organisms, from the time they are born. Some interactions, like babies crying for food or being quiet in the nest when parents are away, are called **instincts** because the organism knows how to behave without being taught. By contrast, **learned behaviors** like where to find food or how to raise offspring are taught to an organism, or discovered through interactions with the environment. Being able to tie shoelaces is an example of a learned behavior. (S5L2a)

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Sample Items 8–11

Item 8

Selected-Response

Two students listed some traits of their favorite football player.

Traits of a Football Player

- **is the youngest of four children**
- **has brown hair and brown eyes**
- **is taller than the other teammates**
- **is good at throwing and catching a football**

Which question would help the student determine which trait on the list is an acquired physical trait of the football player?

A. How tall is the football player?
B. Does the football player have any siblings?
C. Why does the football player have brown eyes and hair?
D. Has the football player always been good at catching a football?

Item 9

Selected-Response

Bottlenose dolphins live off the coast of Georgia. The list shows some characteristics of bottlenose dolphins.

Characteristics of Bottlenose Dolphins

- **have 86 to 100 sharp teeth**
- **are light gray to almost black in color**
- **can be eaten by sharks and killer whales**
- **live in groups of females and groups of males**

Which question can be asked to find out which characteristic of bottlenose dolphins is an instinct?

A. Why do bottlenose dolphins live in groups?
B. Why do sharks and killer whales hunt bottlenose dolphins?
C. How many teeth do bottlenose dolphins have when they are born?
D. How does the color of bottlenose dolphins help them hide from predators?

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Item 10

Selected-Response

The eastern box turtle lives in Georgia. The list shows some characteristics of the eastern box turtle.

Characteristics of an Eastern Box Turtle

- **can live 50 years or more**
- **will hide in its shell when frightened**
- **has a dark shell with many yellow or orange spots**
- **eats mushrooms, berries, fruits, worms, and insects**

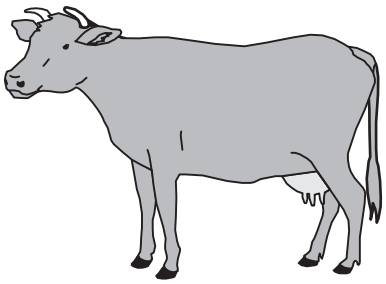
Which question can be asked to find out which characteristic is a learned behavior?

A. Do all eastern box turtles like the same food?
B. Do eastern box turtles in other states live for 50 years?
C. Do eastern box turtles in other states have the same color of spots?
D. Do all eastern box turtles hide in their shells when they are frightened?

Item 11

Selected-Response

The picture shows a cow.



Which question can be asked to learn about the inherited physical traits of the cow?

A. How old is the cow?
B. Has the cow been fed today?
C. Is the cow tame enough to pet?
D. Why does the cow have brown fur?

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Electricity/Magnetism

In this section on physical science, you will learn to carry out investigations to become familiar with the characteristics of magnetic forces and static electricity. You will understand that an object that has been electrically charged pulls on uncharged objects and may either push or pull other charged objects without touching the uncharged or charged objects. You will gain an understanding of the relationship between magnetism and electricity. You will also learn about the conditions necessary for electricity to flow through an electric circuit.

KEY CONCEPTS

Electricity is the effect of the apparent flow of electrons through a conductor. People also refer to electricity when they talk about using electrical energy to power their homes, cars, and other things. (S5P2c)

Electric current is the flow of an electric charge through a conductor. When electric currents move through a conductor, they result in heat and magnetic fields. Lightning, the discharge of static electricity, and the movement of electricity in power lines are examples of electric currents. (S5P2a, c)

Static electricity is the buildup of an electrical charge in or on the surface of an object. When two objects, like a balloon and a piece of cloth, are rubbed together, some of the electrons from one object stick to the other object. This causes the buildup of a charge on one of the objects. When a second object is brought near the first object, the buildup of the electrical charge can jump across to that second object. When the electrical charge jumps from one object to another, it is said to have discharged. This is the spark you see. (S5P2a)

Electric force is the force of attraction between two electrically charged objects or a charged object and a neutral object. When you use a balloon to pick up pieces of paper, the electric force between the balloon and pieces of paper is great enough to pick up the pieces of paper. Objects cling to each other when there is enough electric force. (S5P2a)

To make an **electric circuit**, you need at least a **power source** and a path for the electric current to flow through. You can add objects, such as light bulbs, along the path. You can also add a **switch** to start and stop the flow of an electric current through the circuit. (S5P2b)

Conductors are any type of object through which an electric current can flow. Metal wire is the most common conductor. Conductors are used in electric circuits. **Insulators** are any type of object through which an electric current cannot flow. Glass, plastic, and rubber are very common insulating materials. Insulators are used to protect people from electric currents. (S5P2c)

Magnetism is produced when **magnetic fields** are generated. Magnetism is a property of certain types of materials that allows them to attract or repel other objects that have this property. Magnetism is generated by the presence of magnetic fields or by the presence of an electric current. (S5P3a, b)

An **electromagnet** is created when an electric current flows through a wire. In general, the wire in an electromagnet is wrapped around a core made of a magnetic metal, such as iron or steel. A magnetic field is created around the wire, turning the core into a temporary magnet. When the electric current is turned off, the magnetic field quickly fades. You can make an electromagnet using a circuit with a battery, switch, and wire wrapped around a nail. (S5P3a)

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Important Tip

✍ Electricity and magnetism are connected to each other. Electricity can produce magnetism. When an electric current flows through a wire, the current creates a very small magnetic field. The field is so small it can barely be measured. If you take a wire and create a bunch of loops around the wire, the current will generate a bigger magnetic field. If you wrap the wire around a magnetic metal core, the magnetic field generated from the wire will create a much stronger magnetic field. Magnetism can also create electricity. If you take the loops of wire and move a magnet by the wire, the magnetic field of the magnet will push the electrons in the wire around, creating an electric current. If you were to pass the magnet by the wire loops many times very, very quickly, you would create a stronger electric current. (S5P3a)

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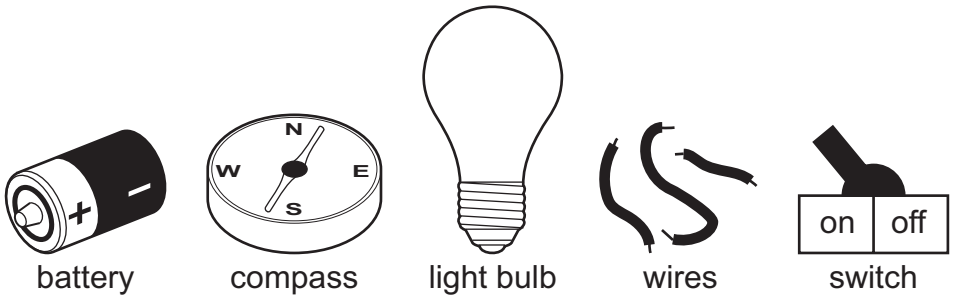
Sample Items 12–17

Item 12

Selected-Response

A student is investigating circuits. The student has the materials shown.

Materials Available



The student uses only three of the materials available to build a complete circuit that conducts electricity.

Go on to the next page to finish item 12.

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Item 12. *Continued*.

Which table shows the materials used by the student and correctly explains why each material is needed to make the circuit work?

A.

Material Used	Why It Is Necessary
battery	to provide energy to the circuit
wire	to connect parts of the circuit
switch	to conduct electricity in the circuit

B.

Material Used	Why It Is Necessary
battery	to provide energy to the circuit
light bulb	to show that the circuit conducts electricity
wire	to connect parts of the circuit and conduct electricity

C.

Material Used	Why It Is Necessary
compass	to show that the circuit conducts electricity
light bulb	to provide energy to the circuit
wire	to connect parts of the circuit and conduct electricity

D.

Material Used	Why It Is Necessary
compass	to provide energy to the circuit
wire	to connect parts of the circuit
switch	to show that the circuit conducts electricity

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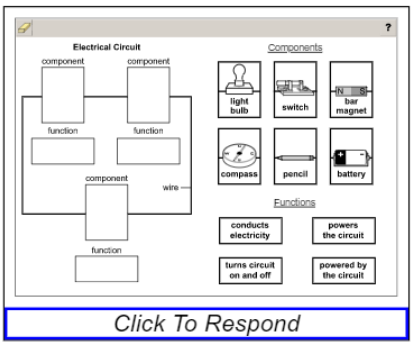
Item 13

Drag-and-Drop Technology-Enhanced

The diagram shows a circuit with missing components.

Move a component into each “component” box in the diagram to complete the electrical circuit. Then, move the matching function into the box below each component.



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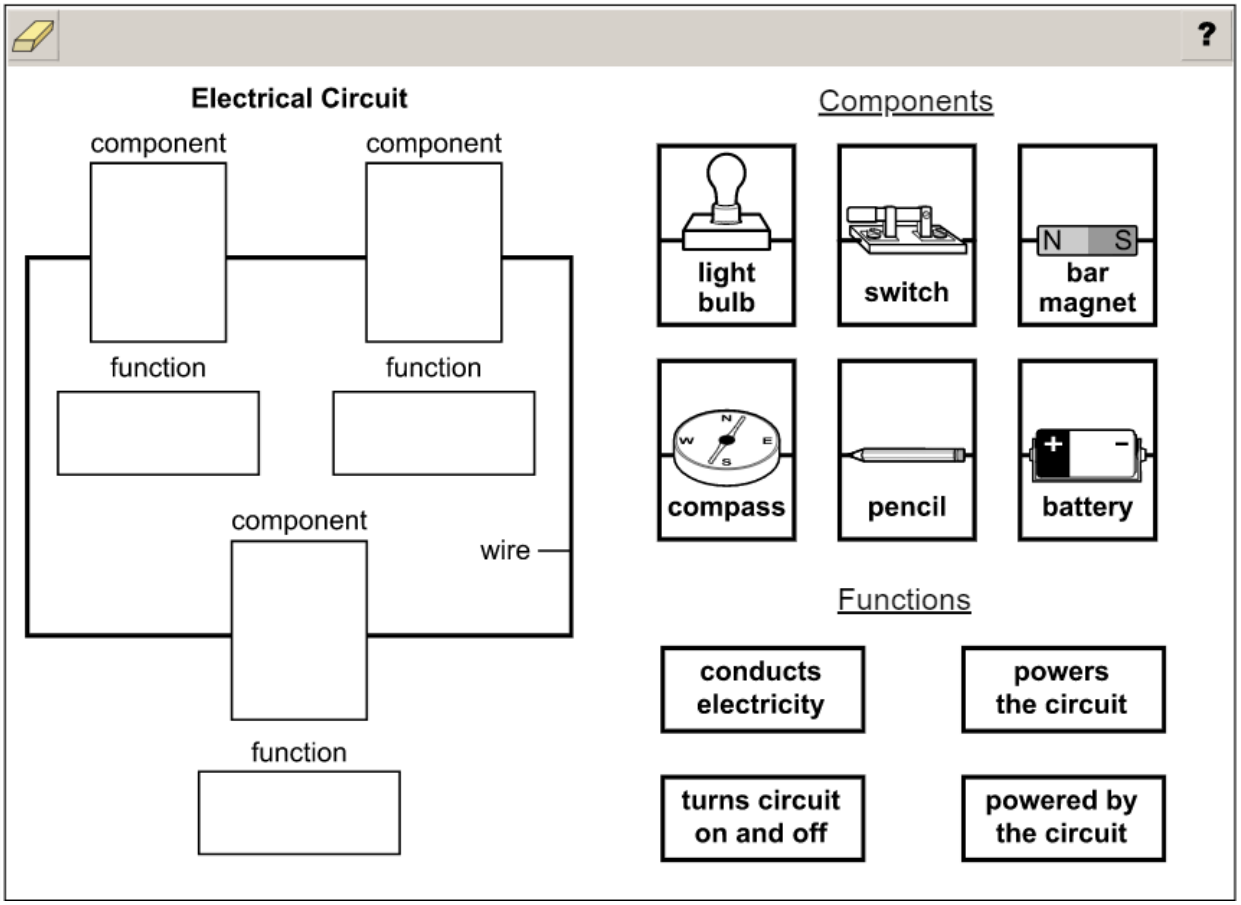
Item 13. ***Continued.***



Use a mouse, touchpad, or touchscreen to move the components and functions next to the circuit diagram into the boxes in the diagram. Each component or function can be used once. Some components and functions will not be used.

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Item 14

Selected-Response

A student is investigating whether certain materials are conductors or insulators. The student puts each material to be tested into a circuit to see whether a light bulb will light. The observations from the investigation are shown in the table.

Observations from Material Testing

Material	Does the Light Bulb Light?
glass	no
plastic	no
rubber	no
steel	yes

Which Investigation Results table correctly explains the observations from the student's investigation?

Go on to the next page to finish item 14.

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Item 14. ***Continued*.**

A.

Investigation Results

Does the Bulb Light?	Is Electricity Flowing?	Conductor or Insulator?
yes	yes	conductor
no	no	insulator

B.

Investigation Results

Does the Bulb Light?	Is Electricity Flowing?	Conductor or Insulator?
yes	no	conductor
no	yes	insulator

C.

Investigation Results

Does the Bulb Light?	Is Electricity Flowing?	Conductor or Insulator?
yes	yes	insulator
no	no	conductor

D.

Investigation Results

Does the Bulb Light?	Is Electricity Flowing?	Conductor or Insulator?
yes	no	insulator
no	yes	conductor

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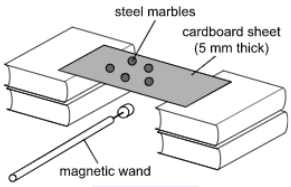
Item 15

Drop-Down Technology-Enhanced

A student creates the setup and procedure shown below to investigate the interaction between a magnetic wand and steel marbles through a piece of cardboard that is 5 millimeters (mm) thick. A magnetic wand is a wooden stick with a small magnet attached to the end.



Enlarge

The student has additional materials available to use during the investigation.

- cardboard sheet (10 mm thick)
- iron sheet (5 mm thick)

The student uses the following step to get started.

step 1: Slowly move the magnetic wand to different locations under the cardboard to see whether the marbles move with the wand.

Use the drop-down menus to describe which procedure would BEST demonstrate whether different materials affect the magnetic field of a magnetic wand and to predict the result the student should expect.

step 2: Replace the 5 mm thick cardboard sheet with the [ ] and repeat step 1. The marbles [ ] follow the magnetic wand because the magnetic field [ ].

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the three blank boxes. When you click the arrow, a drop-down menu will appear showing you all the possible options for that blank. Each drop-down menu with its options is shown on the next page.

Go on to the next page to finish item 15.

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Item 15. ***Continued.***

step 2: Replace the 5 mm thick cardboard sheet with the [ ] and repeat step 1. The [ ] netic wand because the [ ].

- 5 mm thick iron sheet
- 10 mm thick cardboard sheet

step 2: Replace the 5 mm thick cardboard sheet with the [ ] and repeat step 1. The marbles [ ] follow the magnetic wand because the magnetic [ ].

- will
- will not

step 2: Replace the 5 mm thick cardboard sheet with the [ ] and repeat step 1. The marbles [ ] follow the magnetic wand because the magnetic field [ ].

- will pass through all materials
- will be blocked by magnetic materials

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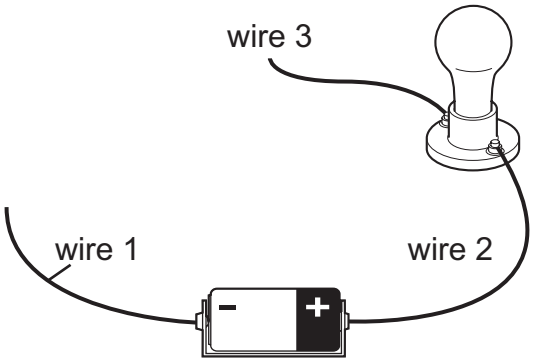
Item 16

Selected-Response

A student wants to test some materials to find out whether they conduct electricity or insulate electricity. The student uses the following steps to get started.

step 1: Attach wire 1 to the negative end of a battery.
step 2: Attach wire 2 to the positive end of the battery.
step 3: Attach the open end of wire 2 to a light bulb.
step 4: Attach wire 3 to the light bulb.
step 5: ?
step 6: ?

The diagram shows the result of steps 1 through 4.



The student has a variety of materials to test. Which steps would BEST complete the procedure and which conclusion should the student make?

A. **step 5:** Connect a test material to the open ends of wire 1 and wire 3.
step 6: Make observations, and repeat step 5 with a different test material.
conclusion: If the bulb lights up, the material is a conductor. If the bulb does not light up, the material is an insulator.

B. **step 5:** Connect a test material to the open ends of wire 1 and wire 3.
step 6: Make observations, and repeat step 5 with a different test material.
conclusion: If the bulb lights up, the material is an insulator. If the bulb does not light up, the material is a conductor.

C. **step 5:** Connect the open ends of wire 1 and wire 3 to each other to complete the circuit.
step 6: Touch a test material to the completed circuit, and record observations.
conclusion: If the bulb lights up, the material is an insulator. If the bulb does not light up, the material is a conductor.

D. **step 5:** Connect the open ends of wire 1 and wire 3 to each other to complete the circuit.
step 6: Touch a test material to the completed circuit, and record observations.
conclusion: If the bulb lights up, the material is a conductor. If the bulb does not light up, the material is an insulator.

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Item 17

Multi-Select Technology-Enhanced

A student is comparing two types of magnets. The student asks five questions and then finds the answers to the questions by experimenting with the magnets. The results are shown in the table.

Student Results

Question	Magnet 1	Magnet 2
Can it be turned on and off?	yes	no
Does it require an energy source?	yes	no
Can its strength be changed?	yes	no
Does it attract iron and steel objects?	yes	yes
Can it lift 50 paper clips?	no	yes

Based on the evidence, which TWO arguments correctly match a magnet to its best use?

A. Magnet 1 should be used to pick up many small magnetic objects at once because the temporary magnet can pick up as many objects as the permanent magnet can.

B. Magnet 1 should be used to pick up magnetic objects in one location and drop them off in another location because temporary magnets can be turned on and off.

C. Magnet 1 can be used in all the ways magnet 2 is used because temporary magnets can be made stronger or weaker and permanent magnets cannot.

D. Magnet 2 should be used to pick up magnetic objects in places where there is no power supply because permanent magnets do not run out of energy.

E. Magnet 2 should be used to pick up large magnetic objects because permanent magnets are stronger than temporary magnets.

F. Magnet 2 can be used in all the ways magnet 1 is used because permanent and temporary magnets can both pick up the same magnetic objects.

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Item 18

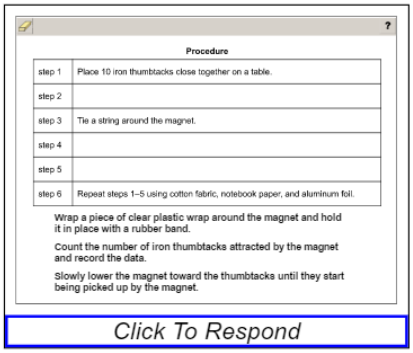
Drag-and-Drop Multi-Part Technology-Enhanced

Part A

A student is investigating whether the magnetic field of magnets is affected by different materials.

Part A

Move a statement into each blank space in the table to show the CORRECT order of steps for the investigation.



Procedure

step 1	Place 10 iron thumbtacks close together on a table.
step 2	
step 3	Tie a string around the magnet.
step 4	
step 5	
step 6	Repeat steps 1–5 using cotton fabric, notebook paper, and aluminum foil.

Wrap a piece of clear plastic wrap around the magnet and hold it in place with a rubber band.

Count the number of iron thumbtacks attracted by the magnet and record the data.

Slowly lower the magnet toward the thumbtacks until they start being picked up by the magnet.

Click To Respond

Due to the size of the response area, this item has a “Click To Respond” button on the screen. Clicking this button will bring up the response area at full size.

Go on to the next page to finish item 18.

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Item 18. ***Continued.***

Procedure

step 1	Place 10 iron thumbtacks close together on a table.
step 2	
step 3	Tie a string around the magnet.
step 4	
step 5	
step 6	Repeat steps 1–5 using cotton fabric, notebook paper, and aluminum foil.

Wrap a piece of clear plastic wrap around the magnet and hold it in place with a rubber band.

Count the number of iron thumbtacks attracted by the magnet and record the data.

Slowly lower the magnet toward the thumbtacks until they start being picked up by the magnet.

Use a mouse, touchpad, or touchscreen to move the steps below the table into the boxes in the table. Each step can be used once. After the response is entered and the OK button is clicked, Part B will appear on the screen.

Go on to the next page to finish item 18.

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Item 18. *Continued*.

Part B

A student is investigating whether the magnetic field of magnets is affected by different materials.

Part B

Move the comparison word(s) into the table to compare the amount of thumbtacks that were MOST LIKELY picked up with the magnet wrapped in those materials to the amount of thumbtacks picked up when the magnet was wrapped in plastic wrap. Words might be used more than once or not used at all.

Expected Results

Material	Amount of Thumbtacks Picked Up Compared to Plastic Wrap
cotton fabric	
notebook paper	
aluminum foil	

more **fewer** **no change**

Use a mouse, touchpad, or touchscreen to move the result word(s) below the table into the boxes in the table. Each result can be used more than once. Some results may not be used.

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Chemical and Physical Change

In this physical science section, you will explain the difference between chemical and physical changes. You will conduct basic experiments and determine whether matter has changed physically by separating mixtures or chemically by observing changes in the properties of substances before, during, and after a chemical reaction.

KEY CONCEPTS

Physical properties are any properties that are measurable and can be seen. Physical properties can be determined without changing the chemical properties of an object. Color, hardness, area, length, strength, and temperature are some examples of physical properties. (S5P1a)

Chemical properties are any properties that can be measured only by chemically changing an object. Paper starts to burn at around 450°F. At this temperature, the paper combines with oxygen in the air and new substances are formed. (S5P1c)

A **physical change** happens when matter has a change in its physical properties but not its chemical properties. For example, salt can be dissolved in water, but, if the water evaporates, the salt is still there. (S5P1a)

A **chemical change** happens when matter breaks down into two or more substances or when more than one substance is combined to form a new substance. Hydrogen peroxide forming bubbles on its own is an example of matter breaking down into two substances. Vinegar and baking soda turning into bubbling foam is an example of two substances combining to create other substances. (S5P1c)

A **chemical reaction** is a process where one or more substances change chemically to one or more different substances. When iron is combined with air, the iron is slowly converted into rust. (S5P1c)

A **mixture** is something that contains two or more substances that are not combined chemically. Salted popcorn is an example of a mixture. (S5P1a)

Something is a mixture if you can physically **separate** the mixture into the substances that made up the mixture. You can tell that salt water is a mixture because you can evaporate the water and all that will be left is salt. (S5P1a)

States of matter are the different forms in which matter can be found. Water is a **liquid**, the state of matter that has a definite volume but no fixed shape. When water is ice, it is a **solid**. Solids have a definite shape and volume. Their shape and volume cannot be easily changed. When water is steam, or water vapor, it is a **gas**. Gases have no definite shape and take the shape of their container. (S5P1b)

Matter is anything that has mass and is in one of the states of matter. (S5P1a)

Important Tip

✍ Determining if a physical or chemical change has occurred can be hard to figure out. Two good questions to ask are the following: Does the matter still look the same? Could you change the matter back to what it was before the change? A physical change is something that can be reversed. You can tear a piece of paper, but you still have a piece of paper because only the dimensions of the paper change. A chemical change is something that cannot easily be reversed and usually means there is a different form of matter. If you took the torn piece of paper and burned it, you would have some ash. Is that ash the same as the paper, and could you change the ash back to paper? The answer is no. (S5P1a, c)

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Sample Items 19–24

Item 19

Selected-Response

A student is investigating chemical changes by using different materials.

Which investigation would provide evidence of a chemical change and why?

A. Melting a solid with fire would provide evidence of a chemical change because the solid would change shape.
B. Cutting cardboard into many smaller pieces would provide evidence of a chemical change because the pieces cannot be put back together.
C. Placing a solid into hot water and stirring while the solid dissolves would provide evidence of a chemical change because the dissolved material is lost.
D. Combining two liquids that give off heat and gas would provide evidence of a chemical change because the particles react to make a new material with different properties.

Item 20

Selected-Response

Which investigation would provide evidence of a chemical change?

A. Spray perfume into the air, and when the air and perfume mix, observe the change in odor that happens as they mix.
B. Put an antacid tablet in water, and when the antacid and water mix, observe the bubbles that form as a new substance is created.
C. Heat water in a pan on a stove, and observe the steam that forms as the state of matter of the water changes.
D. Blow air through a wand filled with soap solution, and observe the bubbles that form as the air becomes trapped.

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Item 21

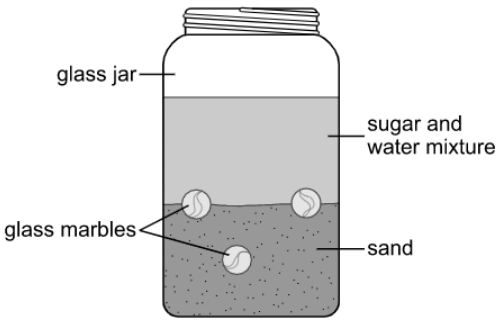
Drop-Down Technology-Enhanced

A teacher gives a student the materials listed in the box.

- glass marbles
- sand
- sugar
- water

The student creates a mixture by placing all the materials in a glass jar and stirring. The student then leaves the glass jar on a desktop for one hour. After one hour, the jar and contents look like the picture.

Student's Mixture



The teacher asks the student to carry out a procedure to separate all the materials in the mixture.

Use the drop-down menus to BEST complete the steps in the procedure to separate the parts of the mixture back into the original materials.

Procedure

step 1. Separate the glass marbles from the mixture by removing them with a fork.

step 2. Separate the [ ] from the mixture by [ ].

step 3. Separate the [ ] from the mixture by [ ].

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the four blank boxes. When you click the arrow, a drop-down menu will appear showing you all the possible options for that blank. Each drop-down menu with its options is shown on the next page.

Go on to the next page to finish item 21.

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Item 21. ***Continued.***

step 2. Separate the [ ] from the mixture by [ ].

sand
sugar

step 3. Separate the [ ] from the mixture by [ ].

step 2. Separate the [ ] from the mixture by [ ].

using a magnet to lift it out
setting the jar in sunlight and letting the water evaporate
pouring the mixture through filter paper into a different container

step 3. Separate the [ ] from the mixture by [ ].

sand
sugar

step 3. Separate the [ ] from the mixture by [ ].

using a magnet to lift it out
setting the jar in sunlight and letting the water evaporate
pouring the mixture through filter paper into a different container

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Item 22

Drop-Down Technology-Enhanced

A student fills a tray with water and places the tray in the freezer. Three hours later, the student removes the tray from the freezer and makes observations.

Student Observations

- The water is solid.
- The water does not flow.
- The water keeps its shape in any container.
- The color of the water has changed to white.

The student claims that changing the temperature of water causes a physical change that turns water into ice.

Use the drop-down menus to construct the argument that BEST supports the student's claim about a physical change.

Ice forms because heat is [ ], causing the particles that make up the ice to move [ ]. This [ ].

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the three blank boxes. When you click the arrow, a drop-down menu will appear showing you all the possible options for that blank. Each drop-down menu with its options is shown on the next page.

Go on to the next page to finish item 22.

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Item 22. ***Continued.***

Ice forms because heat is [ ], causing the particles that make up the ice to move [ ]. This [ ].

- added
- removed

Ice forms because heat is [ ], causing the particles that make up the ice to move [ ]. This [ ].

- faster
- slower

Ice forms because heat is [ ], causing the particles that make up the ice to move [ ]. This [ ].

- makes the ice change shape
- changes the water from a liquid to a solid
- changes the color of the water from clear to white

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Item 23

Multi-Select Technology-Enhanced

Students are investigating chemical changes that occur in different materials.

Which TWO investigations would provide evidence of a chemical change?

A. Placing a liquid in a freezer until the liquid becomes a solid would provide evidence of a chemical change because the state of matter changes.

B. Using a saw to cut a solid into two different pieces would provide evidence of a chemical change because the pieces cannot be put back together.

C. Using a hot plate to heat a solid until it changes color and releases an odor would provide evidence of a chemical change because the particles cannot be changed back.

D. Placing two different liquids together in a beaker and observing that a solid forms when they mix would provide evidence of a chemical change because a new material is formed.

E. Placing a mixture containing a solid and a liquid on a windowsill and letting the liquid evaporate would provide evidence of a chemical change because the evaporated material is lost.

F. Using a magnet to remove a magnetic solid from a mixture that also contains nonmagnetic solids would provide evidence of a chemical change because the mixture cannot be mixed together again.

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Item 24

Drag-and-Drop Technology-Enhanced

A student wants to investigate chemical changes by using different materials. The student creates the table of different experiments shown.

For each experiment that demonstrates a chemical change, move the evidence that shows that a chemical change has occurred into the second column of the table. Some evidence may be used more than once or not used at all.

?

Chemical Change Experiments

Experiment	Evidence
An antacid tablet is put into water, and bubbles form.	
A solid and a liquid are mixed, and a sour smell is detected.	
A pink liquid is heated, and the substance turns colorless.	
Two different cold liquids are poured into a container, and the container then feels warm to the touch.	

A temperature change happens.

A new substance is produced.

A color change happens.

An odor is given off.

A gas is produced.

Use a mouse, touchpad, or touchscreen to move the evidence sentences below the table into the boxes in the table. The evidence sentences may be used more than once or not at all.

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Earth Science

In this section on earth science, you will identify surface features of Earth caused by constructive and destructive processes. These processes include, but are not limited to, volcanoes, earthquakes, erosion, and weathering. Students should also be able to relate the role of technology and human intervention to the control of constructive and destructive processes.

KEY CONCEPTS

Weathering is a destructive process where Earth materials such as rocks and soil are broken down into smaller parts. Weathering can also break down roads, buildings, and other materials humans make. (S5E1a, b)

Erosion is the movement of materials from one place to another by natural methods. Erosion can be a destructive process, such as when a landslide moves material from the top of a mountain. (S5E1a, b)

Deposition is a constructive process whereby soil and rock that are eroded from one location are deposited as sediment in another location. As the sediment from a river is deposited at the mouth of a river over time, new land is created, which is called a delta. An example is the Mississippi delta. (S5E1a, b)

The surface of Earth, including under the ocean, is made up of **tectonic plates**. These plates form sections of the surface of Earth, and some plates move toward or away from each other. Plates can also slide past each other. (S5E1a)

The area where two or more tectonic plates meet and show movement is called a **fault**. (S5E1a, b)

Trenches can be found where faults are located under the ocean. Much smaller trenches, called valleys and canyons, are also created by erosion. **Glaciers**, sheets of very old ice that are the size of states and that move along Earth's surface, also create valleys as they slowly grind along the surface. (S5E1a, b)

Ridges are formed when tectonic plates collide and both push up. This creates hills and mountains. Ridges and individual mountains can also be formed in areas where magma, molten rock from Earth's core, pushes up between or through tectonic plates. Stone Mountain may be one of these magma-created mountains. (S5E1a, b)

A **volcano** is a break in Earth's crust that lets magma come out from the mantle and onto Earth's surface. Volcanoes can be found in the deep ocean and on Earth's surface. They are the result of a constructive process. Volcanoes show up on Earth's surface where the magma can push through weakness in the crust. (S5E1a, b)

Magma is the molten rock below Earth's crust. When magma breaks the crust, it is called lava. Lava is thrown out by volcanoes. The islands of the state of Hawaii are **landforms** created by volcanoes. (S5E1a, b)

Tectonic plates move very slowly because they are pushing against each other with great force. **Earthquakes** happen when tectonic plates suddenly slide around. The plates shake, and the energy from that creates waves that echo through Earth. (S5E1a, b)

Earthquakes and volcanoes can both happen underwater. When earthquakes happen underwater, they can cause **tsunamis**. This happens when the energy released by an earthquake is transferred to the column of water above it and creates waves that travel away from the area. Tsunamis happen where the ocean meets the shore. The water starts to rise as the waves from the earthquake push the water up. Tsunami waves are longer than regular water waves. As a tsunami wave hits the shore, it carries much more water and creates a lot of damage. (S5E1a, b)

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Humans can affect constructive and destructive processes and may do so to protect people or landforms when the processes will result in undesirable results. Beach reclamation to reduce the effects of erosion on beaches can be accomplished by dredging sand from the ocean floor and depositing it back on the beach. **Floods** can be controlled by building dams to hold back floodwaters and to let the excess water move downstream more slowly or by building levees (earthen walls along riverbanks) to prevent rivers from going outside their banks onto surrounding land. Cities can also modify their storm drain systems or direct the drainage flows to retention ponds to slow the runoff of rainwater into streams and rivers to reduce the risk of flooding downstream. (S5E1c)

Seismic waves are vibrations that move through Earth. Scientists have a tool they can use to detect, measure, and record seismic waves. This tool is known as a **seismograph**. As an earthquake or volcanic eruption starts, a seismograph detects the increase in the strength and frequency of seismic waves. Earthquakes can trigger volcanic activity and tsunamis. Scientists can analyze the seismograph data to determine the likelihood of a tsunami forming. (S5E1c)

Important Tips

- Some areas of Earth have more weathering and erosion than other areas. There are many reasons for this. Weathering can break down rocks when water freezes, so areas that are often rainy and cold are more likely to see weathering. Windy areas also experience weathering because the wind wears down the surface of the rock. Erosion is more likely to occur in areas of moving water, such as rivers and streams. Because soil and rock move downhill, higher areas of Earth will always see more erosion than lower areas. (S5E1a, b)

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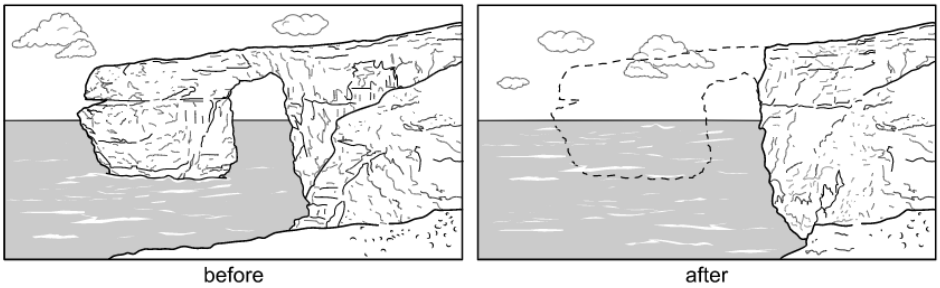
Sample Items 25–30

Item 25

Drop-Down Technology-Enhanced

The picture shows the surface feature named the Azure Window as it looked before and after March 8, 2017.

Azure Window before and after March 8, 2017



Use the drop-down menus to complete the sentence that explains the changes in the Azure Window.

The changes in the Azure Window were caused by the [ ] process of [ ].

Use a mouse, touchpad, or touchscreen to click the arrow beside each of the two blank boxes. When you click the arrow, a drop-down menu will appear showing you all the possible options for that blank. Each drop-down menu with its options is shown below.

The changes in the Azure Window were caused by the [ ] process of [ ].

destructive
constructive

erosion
deposition

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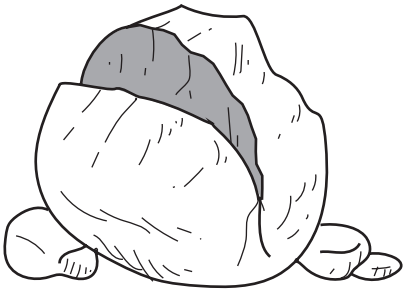
Item 26

Selected-Response

A student observes a large rock at the base of a volcano in a river valley that gets a lot of snow in the winter and floods in the spring. The student claims that the large crack in the rock was caused by a destructive process called weathering.



Which argument BEST describes the student's claim?

A. The student's claim is correct because water fills small cracks in rocks, freezes, and expands, making the cracks larger over time.

B. The student's claim is correct because the rock was carried from the top of the volcano to its base by a glacier, creating many cracks over time.

C. The student's claim is not correct because the rock was picked up by moving water and rolled against other rocks, smoothing its surface and causing cracks in a short period of time.

D. The student's claim is not correct because large cracks in rocks are caused when lava from a volcano covers the rock so its temperature rises and falls in a short period of time, causing it to break.

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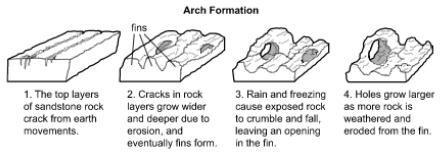
Item 27

Drop-Down Technology-Enhanced

A student wants to model how arches form in a desert. The student finds a diagram on a website.



Enlarge

The student designs a procedure to model the formation of an arch.

Procedure

step 1: Mix sand, clay, and water in a shoebox and let it harden into a block.
step 2: Drop the block on the ground to form cracks in the surface.
step 3: Use a watering can to sprinkle 15 liters of water over the block every day until fins form from the cracks.
step 4: ?
step 5: ?

Use the drop-down menus to select the actions that should be used in steps 4 and 5 to BEST model the formation of a desert arch.

step 4:

[ ].

In the morning, place the block on a table and

[ ].

step 5: Repeat step 4 every day until

[ ].

Due to the size of the graphic on the left side of the screen, the graphic has an “Enlarge” button. Clicking this button will bring up the graphic at full size. After you have studied the graphic, use a mouse, touchpad, or touchscreen to click the arrow beside each of the three blank boxes. When you click the arrow, a drop-down menu will appear showing you all the possible options for that blank. Each drop-down menu with its options is shown on the next page.

Go on to the next page to finish item 27.

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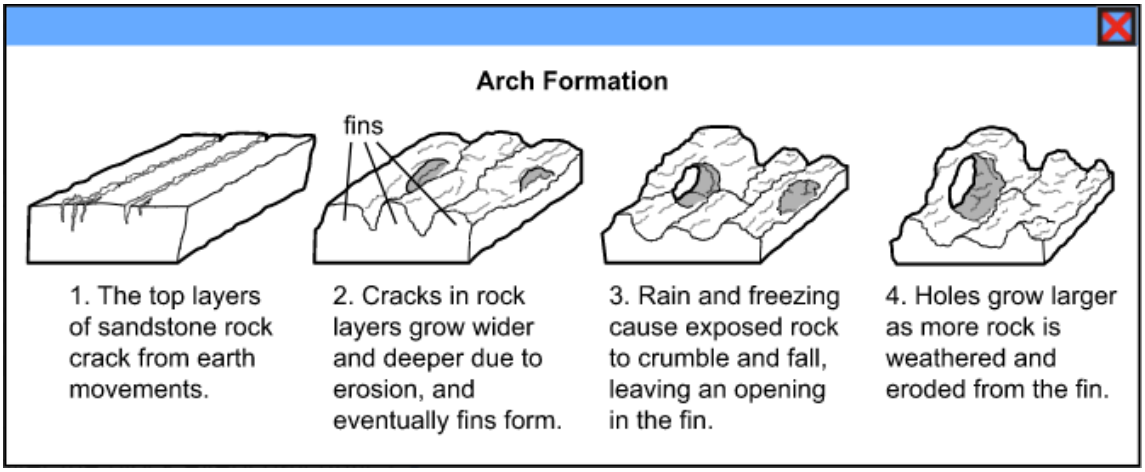
Item 27. ***Continued.***



Click on the red X at the top right to reduce the graphic again.

step 4:

Place the block in an oven on low heat overnight
Sprinkle water over the block and place it in the freezer overnight

step 4:

In the morning, place the block on a table and

use a fan to blow air over the block during the day
let the sun shine on the block to thaw and dry the block

step 5: Repeat step 4 every day until

an arch is formed
a hole forms and grows larger, forming an arch

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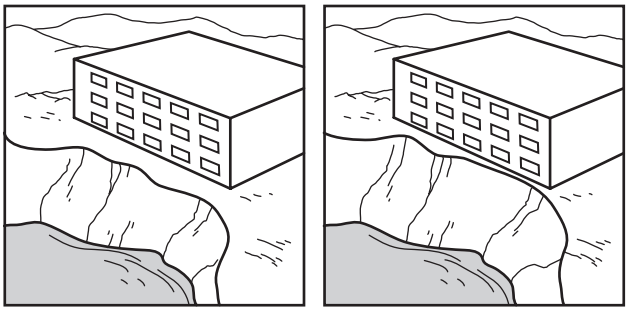
Item 28

Selected-Response

Some people who live in coastal areas along cliffs are using drones to take pictures of their neighborhoods. A drone is a flying vehicle without a pilot on board. The two pictures show changes in the cliff near a building on two days in December.



December 18 December 28

Which question can be studied by using a drone to observe recent changes in Earth's surface along coastal areas?

A. How fast are the cliffs eroding?
B. How many people live near cliffs?
C. How old are rock layers at the bottom of the cliff?
D. How can people stop the erosion of cliffs near the coast?

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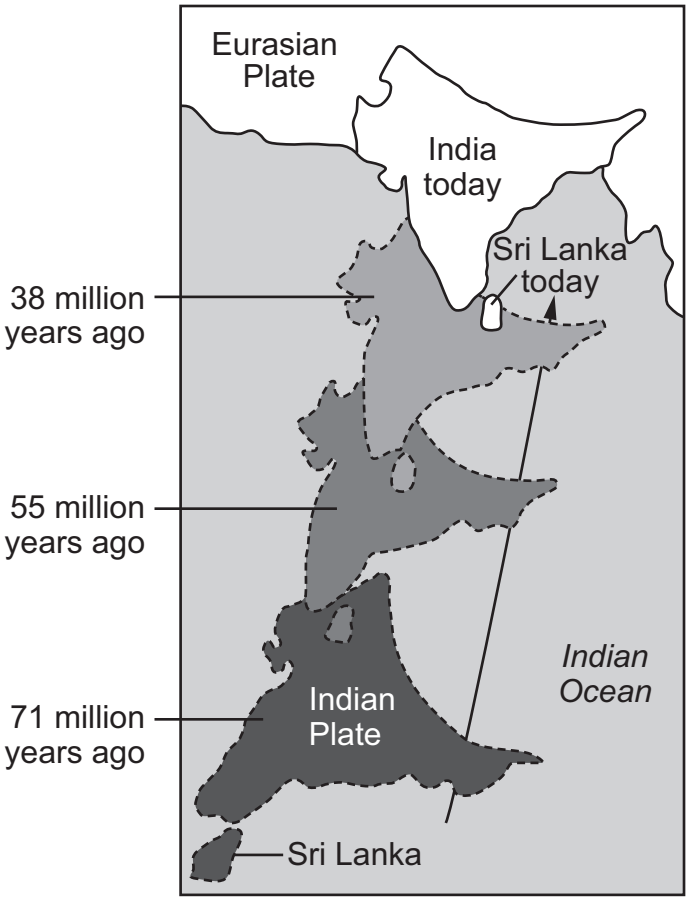
Item 29

Multi-Part Technology-Enhanced

A student is studying the formation of the Himalayas. The student finds a picture and learns that the mountain range formed when the Indian Plate collided with the Eurasian Plate. The student uses the picture to design a model that will show classmates how the Himalayas formed.



Go on to the next page to finish item 29.

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Item 29. *Continued*.

Part A

Based on the picture, which steps would produce the BEST model of how the Himalayas formed over time?

A. **step 1:** Label one cardboard box as the Eurasian Plate.
step 2: Label another cardboard box as the Indian Plate.
step 3: Slowly push both plates toward each other.
step 4: Observe and record how the sizes of both plates change when the edges push against each other.

B. **step 1:** Label one cardboard box as the Eurasian Plate.
step 2: Label another cardboard box as the Indian Plate.
step 3: Slowly push the Indian Plate toward the Eurasian Plate.
step 4: Observe and record how the size of the Indian Plate changes when it touches the edge of the Eurasian Plate.

C. **step 1:** Use light-colored clay to make the shape of the Eurasian Plate.
step 2: Use dark-colored clay to make the shape of the Indian Plate.
step 3: Slowly push the dark-colored plate toward the light-colored plate.
step 4: Observe and record how the shapes of both plates change when the edges push against each other.

D. **step 1:** Use light-colored clay to make the shape of the Eurasian Plate.
step 2: Use dark-colored clay to make the shape of the Indian Plate.
step 3: Slowly push the light-colored plate toward the dark-colored plate.
step 4: Observe and record how the shape of the Eurasian Plate changes when it touches the edge of the Indian Plate.

Part B

Which data could the student collect using the BEST model from part A?

A. the changing distance between the two plates
B. the time it takes for the two plates to collide
C. the mass of the materials used to make the two plates
D. the changing height of the edge where the two plates collide

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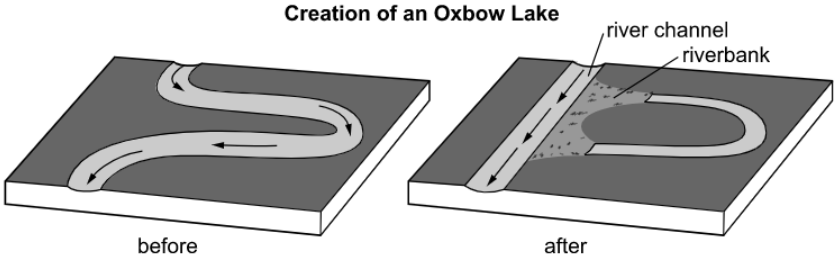
Item 30

Drag-and-Drop Multi-Part Technology-Enhanced

Part A

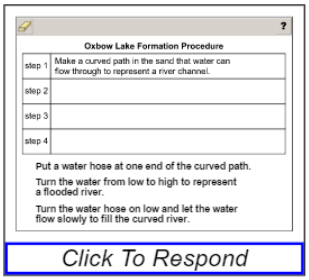
An oxbow lake is a lake that is usually located near a river. An oxbow lake is often shaped like the letter C. An oxbow lake forms when a curve of a river gets cut off from the main river channel.

Creation of an Oxbow Lake



Part A

A student decides to make a model of an oxbow lake in some sand in the yard. Move a statement into each blank space in the table to show the CORRECT order of steps to make the model.



Due to the size of the response area, this item has a “Click To Respond” button on the screen. Clicking this button will bring up the response area at full size.

Go on to the next page to finish item 30.

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Item 30. ***Continued.***

Oxbow Lake Formation Procedure

step 1	Make a curved path in the sand that water can flow through to represent a river channel.
step 2	
step 3	
step 4	

Put a water hose at one end of the curved path.

Turn the water from low to high to represent a flooded river.

Turn the water hose on low and let the water flow slowly to fill the curved river.

Use a mouse, touchpad, or touchscreen to move the steps below the table into the boxes in the table. Each step can be used once. After the response is entered and the OK button is clicked, Part B will appear on the screen.

Go on to the next page to finish item 30.

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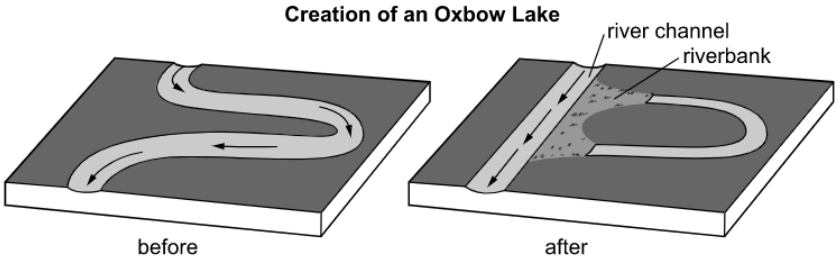
Item 30. *Continued*.

Part B

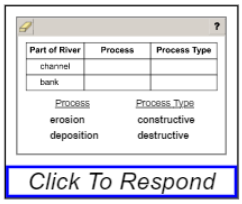
An oxbow lake is a lake that is usually located near a river. An oxbow lake is often shaped like the letter C. An oxbow lake forms when a curve of a river gets cut off from the main river channel.

Creation of an Oxbow Lake

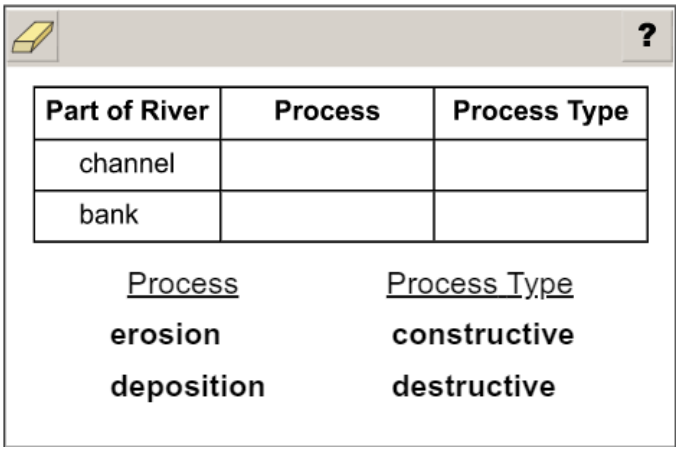


Part B

Move the words into the table that BEST describe the processes that form an oxbow lake. Some words may be used more than once or not used at all.



Due to the size of the response area, this item has a “Click To Respond” button on the screen. Clicking this button will bring up the response area at full size.



Part of River	Process	Process Type
channel		
bank		

Process	Process Type
erosion	constructive
deposition	destructive

Use a mouse, touchpad, or touchscreen to move the words below the table into the boxes in the table. The words may be used more than once or may not be used at all.

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SCIENCE ADDITIONAL SAMPLE ITEM KEYS

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
1	S5L3a	2	C	The correct answer is choice (C) The student observed microscopic algae only on the slide because algae cells are too small to be seen without magnification by a microscope. Choice (A) is incorrect because the algae do not change size. Choice (B) is incorrect because the algae and water are both on the slide. Choice (D) is incorrect because even if the water were clear, the algae would be too small to see in the jar.
2	S5L4b	2	D	The correct answer is choice (D) Some bacteria can harm humans because bacteria can cause food poisoning when contaminated food is not cooked properly. Choice (A) is incorrect because bacteria die when they are cooked. Choice (B) is incorrect because cooking bacteria kills them. Choice (C) is incorrect because bad taste is not harmful.
3	S5L4a	2	D	The correct answer is choice (D) Humans benefit from probiotics because probiotics balance the number and types of bacteria that live in the digestive system. Choice (A) is incorrect because while probiotics reduce the chance of illness, they do not prevent illness. Choice (B) is incorrect because live microorganisms are not always a benefit. Choice (C) is incorrect because taking something every day does not make it a benefit.
4	S5L3c	3	A, B	**Part A:** The correct answer is choice (A) Cell X is shaped like a circle because it is an animal cell, which means it does not have a cell wall, and cell Y is shaped like a rectangle because it is a plant cell, which means it has a cell wall. Choice (B) is incorrect because cell X is an animal cell without a cell wall and cell Y is a plant cell with a cell wall. Choices (C) and (D) are incorrect because both cells have a cell membrane. **Part B:** The correct answer is choice (B) Plant cells have chloroplasts, but animal cells do not. Choices (A) and (C) are incorrect because both cells have a nucleus. Choice (D) is incorrect because plant cells have chloroplasts and animal cells do not have chloroplasts.
5	S5L1b	2	D	The correct answer is choice (D) Does it have roots, stems, or leaves? Choice (A) is incorrect because neither algae nor ferns produce seeds. Choice (B) is incorrect because neither algae nor ferns grow into trees. Choice (C) is incorrect because neither algae nor ferns produce flowers.
6	S5L1a	3	N/A	See scoring rubric and exemplar response on page 222.
7	S5L1a	3	N/A	See scoring rubric and exemplar response on page 223.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
8	S5L2b	2	D	The correct answer is choice (D) Has the football player always been good at catching a football? Choice (A) is incorrect because body height is an inherited trait. Choice (B) is incorrect because having siblings is not a physical trait of an individual. Choice (C) is incorrect because this is an inherited trait from parents, not an acquired trait.
9	S5L2a	2	A	The correct answer is choice (A) Why do bottlenose dolphins live in groups? Choice (B) is incorrect because this is an instinct of sharks and killer whales, not dolphins. Choices (C) and (D) are incorrect because physical characteristics are not instincts.
10	S5L2a	2	A	The correct answer is choice (A) Do all eastern box turtles like the same food? Choice (B) is incorrect because length of lifespan is not a learned behavior. Choice (C) is incorrect because physical characteristics are not learned behaviors. Choice (D) is incorrect because this is an instinctive behavior.
11	S5L2b	2	D	The correct answer is choice (D) Why does the cow have brown fur? Choice (A) is incorrect because age is not an inherited physical trait. Choice (B) is incorrect because feeding is not a physical trait. Choice (C) is incorrect because behavior is not an inherited physical trait.
12	S5P2b	2	B	The correct answer is choice (B). Choice (A) is incorrect because the wire also conducts the electricity, and a light bulb, not a switch, is needed. Choice (C) is incorrect because a compass will not be used in the circuit and a light bulb does not provide energy. Choice (D) is incorrect because a compass will not be used in the circuit and a switch opens and closes a circuit.
13	S5P2b	3	N/A	See scoring rubric and exemplar response on page 224.
14	S5P2c	1	A	The correct answer is choice (A) the table showing “yes” for “Does the bulb light?” and “Is electricity flowing?” and the material is a conductor, and “no” for “Does the bulb light?” and “Is electricity flowing?” and the material is an insulator. The other options are incorrect because electricity must flow for the bulb to light and must not flow for the bulb to not light, and flowing electricity means the material is a conductor.
15	S5P3b	2	N/A	See scoring rubric and exemplar response on page 225.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
16	S5P2c	3	A	The correct answer is choice (A) **step 5:** Connect a test material to the open ends of wire 1 and wire 3. **step 6:** Make observations and repeat step 5 with a different test material. **conclusion:** If the bulb lights up, the material is a conductor. If the bulb does not light up, the material is an insulator. Choice (B) is incorrect because the student has reversed the definition of insulator and conductor. Choice (C) is incorrect because the circuit is already complete without the test material; this is not an effective way to test each material. Also, the student has reversed the definition of insulator and conductor. Choice (D) is incorrect because the circuit is already complete without the test material; this is not an effective way to test each material.
17	S5P3a	3	B, D	The correct answers are choice (B) Magnet 1 should be used to pick up magnetic objects in one location and drop them off in another location because temporary magnets can be turned on and off, and choice (D) Magnet 2 should be used to pick up magnetic objects in places where there is no power supply because permanent magnets do not run out of energy. Choice (A) is incorrect because magnet 1 is the temporary magnet and the permanent magnet can pick up more small magnetic objects. Choice (C) is incorrect because magnet 1 cannot pick up 50 paper clips like magnet 2 can, so magnet 1 cannot be used in all the same ways. Choice (E) is incorrect because permanent magnets are not always stronger than temporary magnets. Choice (F) is incorrect because magnet 2 cannot be turned on and off or made stronger like magnet 1 can, so magnet 2 cannot be used in all the same ways.
18	S5P3b	3	N/A	See scoring rubric and exemplar response beginning on page 226.
19	S5P1c	2	D	The correct answer is choice (D) Combining two liquids that give off heat and gas would provide evidence of a chemical change because the particles react to make a new material with different properties. Choice (A) is incorrect because the solid would retain its properties despite melting, so this is only a physical change. Choice (B) is incorrect because the cardboard retains its properties, so this is only a physical change. Choice (C) is incorrect because the solid can be regained by evaporation of the water so this is only a physical change.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
20	S5P1c	2	B	The correct answer is choice (B) Put an antacid tablet in water, and when the antacid and water mix, observe the bubbles that form as a new substance is created. Choice (A) is incorrect because no chemical reaction takes place, and state of matter is a physical change. Choice (C) is incorrect because no chemical reaction takes place. Choice (D) is incorrect because no chemical reaction takes place.
21	S5P1a	3	N/A	See scoring rubric and exemplar response on page 228.
22	S5P1b	2	N/A	See scoring rubric and exemplar response on page 229.
23	S5P1c	3	C, D	The correct answers are choice (C) Using a hot plate to heat a solid until it changes color and releases an odor would provide evidence of a chemical change because the particles cannot be changed back and choice (D) Placing two different liquids together in a beaker and observing that a solid forms when they mix would provide evidence of a chemical change because a new material is formed. Choices (A) and (E) are incorrect because a change in the state of matter is a physical change. Choices (B) and (F) are incorrect because no chemical reaction takes place.
24	S5P1c	3	N/A	See scoring rubric and exemplar response on page 230.
25	S5E1b	1	N/A	See scoring rubric and exemplar response on page 231.
26	S5E1a	2	A	The correct answer is choice (A) The student's claim is correct because water fills small cracks in rocks, freezes, and expands, making the cracks larger over time. Choice (B) is incorrect because movement of rock to another location is erosion not weathering. Choice (C) is incorrect because erosion in a river tends to smooth the surface of rocks not crack them as shown. Choice (D) is incorrect because the heating and cooling of rocks by lava is not an example of weathering.
27	S5E1b	3	N/A	See scoring rubric and exemplar response on page 232.
28	S5E1c	2	A	The correct answer is choice (A) How fast are the cliffs eroding? Choice (B) is incorrect because drones cannot see into the houses to count people. Choice (C) is incorrect because knowing the age of the rocks does not address the recent change in Earth's surface. Choice (D) is incorrect because drones can be used to document erosion but not to prevent it.

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Item	Standard/ Element	DOK Level	Correct Answer	Explanation
29	S5E1b	3	C, D	**Part A:** The correct answer is choice (C) **step 1:** Use light-colored clay to make the shape of the Eurasian Plate. **step 2:** Use dark-colored clay to make the shape of the Indian Plate. **step 3:** Slowly push the dark-colored plate toward the light-colored plate. **step 4:** Observe and record how the shapes of both plates change when the edges push against each other. Choices (A) and (B) are incorrect because cardboard boxes are not going to change size when they are pushed together. Choice (D) is incorrect because the Indian Plate should move toward the Eurasian Plate. **Part B:** The correct answer is choice (D) the changing height of the edge where the two plates collide. Choice (A) is incorrect because measuring the distance between the two plates does not help the student understand how the Himalayas formed. Choice (B) is incorrect because the time it took to form the Himalayas is not being demonstrated by this model. Choice (C) is incorrect because the mass of the materials does not help the student to understand how the Himalayas formed.
30	S5E1b	3	N/A	See scoring rubric and exemplar response beginning on page 234.

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SCIENCE EXAMPLE SCORING RUBRICS AND EXEMPLAR RESPONSES

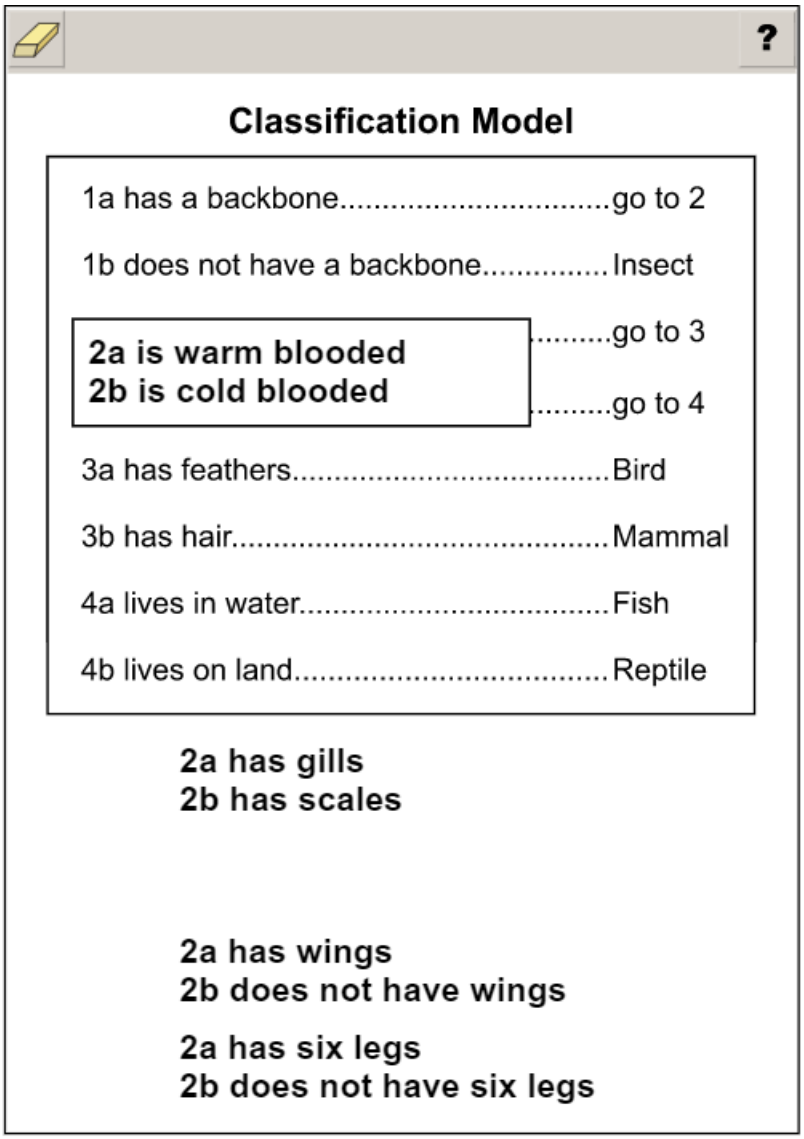
Item 6

Scoring Rubric

Points	Description
1	The student correctly fills in the box.
0	The student does not correctly fill in the box.

Exemplar Response

The correct response is shown below.



This is the correct choice because the animals at step 3 are warm blooded and the animals in step 4 are cold blooded.

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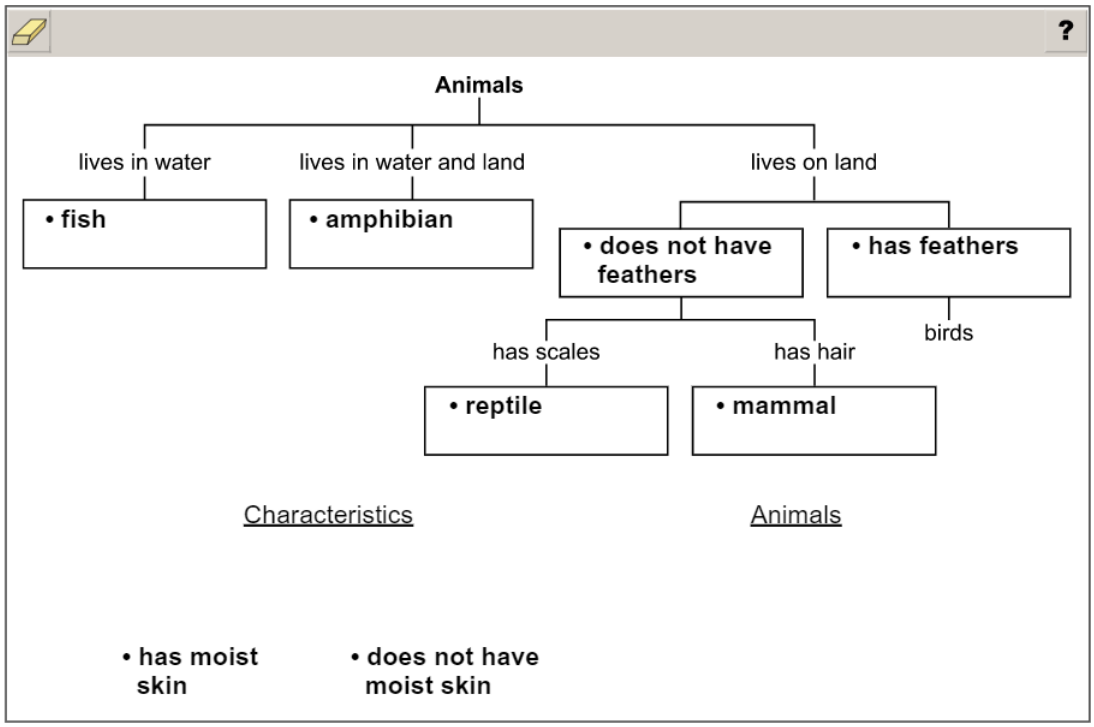
Item 7

Scoring Rubric

Points	Description
2	The student correctly fills in all six boxes.
1	The student correctly fills in any three boxes, OR correctly fills in “does not have feathers” AND either “mammal” or “reptile.”
0	The student gives a response that does not meet the criteria to receive 1 or 2 points.

Exemplar Response

The correct response is shown below.



Because the purpose of the chart is to explain how animals are sorted into groups, the bottom row of each branch should be an animal name, and this is confirmed by the rightmost branch ending in “birds.”

The student can place the animal names in the boxes based on their characteristics and then decide which set of sorting characteristics is the most important to fill in after the “lives on land” branch. “Has moist skin” applies to amphibians, which live on both water and land, so the sorting characteristics “has moist skin” and “does not have moist skin” do not fit into this branch. Therefore, the sorting characteristics must be “has feathers” and “does not have feathers.” “Has feathers” helps sort birds from the other types of land animals, and “does not have feathers” applies to the other types of animals that live on land.

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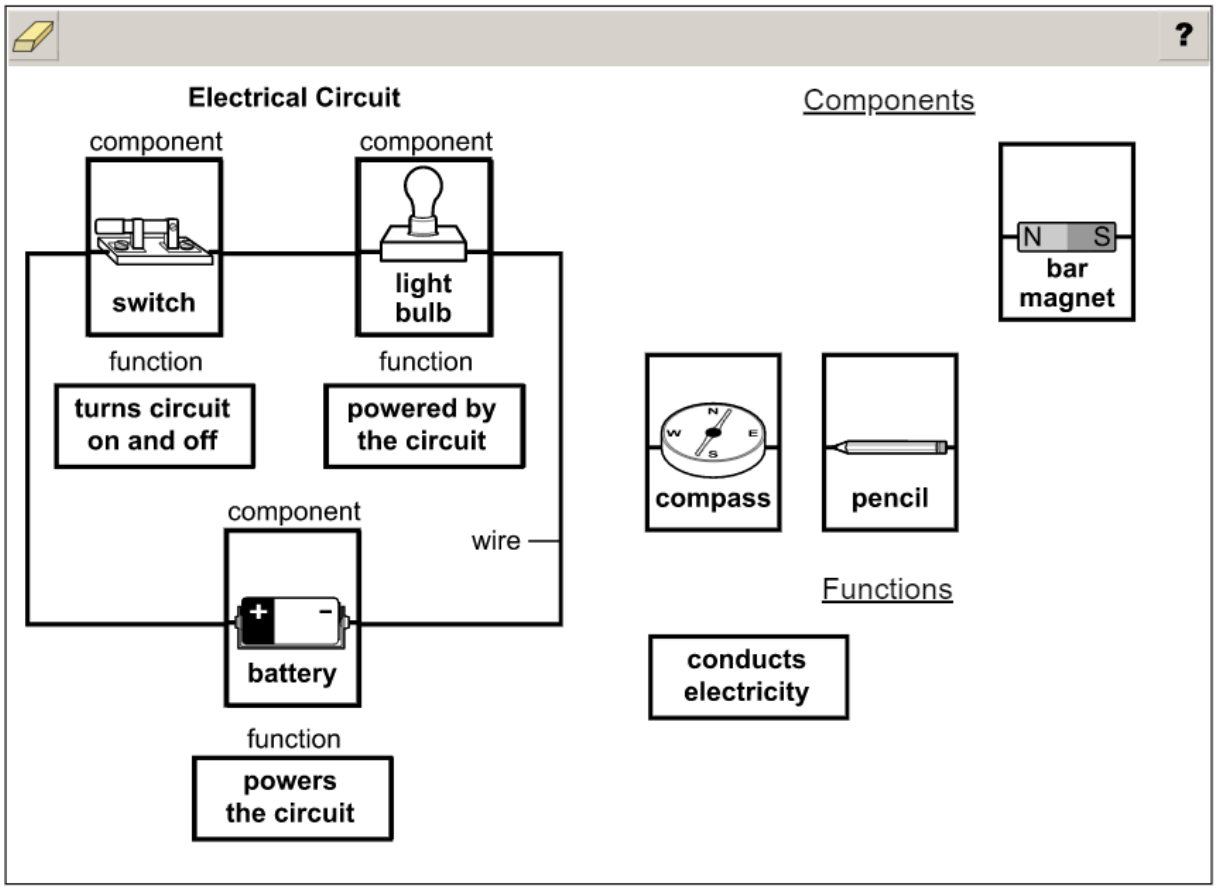
Item 13

Scoring Rubric

Points	Description
2	The student correct fills in all three components in any order, with the correct function also filled in with each component.
1	The student fills in all three correct components in any order, but with one or more errors in associated functions, OR the student correctly fills in two components in any order and with their correct function filled in.
0	The student gives a response that does not meet the criteria to receive 1 or 2 points.

Exemplar Response

A correct response is shown below.



The correct components are shown. They can be placed in any order, but to achieve full credit for the item, each must be accompanied by the correct function. These are correct because a battery, light bulb, and switch will make a complete circuit. The function of the battery is powering the circuit, the function of the light bulb is that it is powered by the circuit, and the function of the switch is turning the circuit on and off. The other components shown will not make a functioning circuit.

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Item 15

Scoring Rubric

Points	Description
1	The student correctly selects all three drop-down menu options.
0	The student does not correctly select all three drop-down menu options.

Exemplar Response

The correct response is shown below.

step 2: Replace the 5 mm thick cardboard sheet with the [5 mm thick iron sheet ▾] and repeat step 1. The marbles [will not ▾] follow the magnetic wand because the magnetic field [will be blocked by magnetic materials ▾].

The option “5 mm thick iron sheet” is the correct response for the first drop-down menu because iron is a different material, not a different thickness of the same material. “Will not” is the correct response for the second drop-down menu, and “will be blocked by magnetic materials” is the correct response for the third drop-down menu. The magnetic field of the magnetic wand will not penetrate an iron sheet because the iron is a magnetic material, so the marbles will no longer follow the magnetic wand.

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Item 18

Scoring Rubric

Points	Description
2	The student correctly answers both Part A and Part B.
1	The student correctly answers either Part A OR Part B.
0	The student does not correctly answer either part.

Exemplar Response

Part A

The correct response is shown below.

Procedure

step 1	Place 10 iron thumbtacks close together on a table.
step 2	**Wrap a piece of clear plastic wrap around the magnet and hold it in place with a rubber band.**
step 3	Tie a string around the magnet.
step 4	**Slowly lower the magnet toward the thumbtacks until they start being picked up by the magnet.**
step 5	**Count the number of iron thumbtacks attracted by the magnet and record the data.**
step 6	Repeat steps 1–5 using cotton fabric, notebook paper, and aluminum foil.

This is the correct response because any other order will not successfully complete the experiment. Any other order in Part A will receive 0 points.

Go on to the next page to finish item 18.

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Item 18

Part B

Expected Results

Material	Amount of Thumbtacks Picked Up Compared to Plastic Wrap
cotton fabric	no change
notebook paper	no change
aluminum foil	no change

more fewer no change

This is the correct response because these materials will not affect the function of the magnet that they are wrapped around, because they do not block a magnetic field. Any other selection in Part B will receive 0 points.

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Item 21

Scoring Rubric

Points	Description
2	The student correctly selects both drop-down menu options for both steps 2 and 3.
1	The student correctly selects both drop-down menu options for step 2 OR step 3.
0	The student does not correctly select both drop-down menu options for either step.

Exemplar Response

The correct response is shown below.

Procedure

step 1. Separate the glass marbles from the mixture by removing them with a fork.

step 2. Separate the [sand ▾] from the mixture by [pouring the mixture through filter paper into a different container ▾].

step 3. Separate the [sugar ▾] from the mixture by [setting the jar in sunlight and letting the water evaporate ▾].

For step 2, “sand” is the correct response for the first drop-down menu and “pouring the mixture into a different container through filter paper” is the correct response for the second drop-down menu. These are the correct responses because filter paper will trap the sand while the sugar and water mixture will pass through the filter paper, so the sand will be separated.

For step 3, “sugar” is the correct response for the third drop-down menu and “setting the container in sunlight and letting the water evaporate” is the correct response for the fourth drop-down menu. These are the correct responses because the sugar will be left behind when the water evaporates.

The two steps must be done in the correct order, sand first and then sugar, because letting water evaporate from the mixture in step 2 will leave the sugar mixed with the sand, and separating the sugar from the sand would have to be done by mixing the sugar/sand mixture with water again and doing the steps in the correct order.

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Item 22

Scoring Rubric

Points	Description
1	The student correctly selects all three drop-down menu options.
0	The student does not correctly select all three drop-down menu options.

Exemplar Response

The correct response is shown below.

Ice forms because heat is [removed ▾], causing the particles that make up the ice to move [slower ▾]. This [changes the water from a liquid to a solid ▾].

"Removed" is the correct response for the first drop-down menu because removing heat causes ice to form. "Slower" is the correct response for the second drop-down menu because when heat is removed from a substance, the small particles that make up the substance move more slowly. "Changes the water from a liquid to a solid" is the correct response for the third drop-down menu because the change of state of water from liquid to solid is the important characteristic of the formation of water ice.

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Item 24

Scoring Rubric

Points	Description
2	The student correctly fills in all boxes.
1	The student correctly fills in two or three boxes.
0	The student does not correctly fill in at least two boxes.

Exemplar Response

The correct response is shown below.

Chemical Change Experiments

Experiment	Evidence
An antacid tablet is put into water, and bubbles form.	**A gas is produced.**
A solid and a liquid are mixed, and a sour smell is detected.	**An odor is given off.**
A pink liquid is heated, and the substance turns colorless.	**A color change happens.**
Two different cold liquids are poured into a container, and the container then feels warm to the touch.	**A temperature change happens.**

A temperature change happens.

A new substance is produced.

A color change happens.

An odor is given off.

A gas is produced.

In addition, the option “A new substance is produced.” could be used as evidence in place of any other box where the experiment is a chemical change.

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Item 25

Scoring Rubric

Points	Description
1	The student correctly selects both drop-down menu options.
0	The student does not correctly select both drop-down menu options.

Exemplar Response

The correct response is shown below.

The changes in the Azure Window were caused by the [destructive ▾] process of [erosion ▾].

"Destructive" Is the correct response for the first drop-down menu because part of the formation was removed. "Erosion" is the correct response for the second drop-down menu because erosion is a destructive process.

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Item 27

Scoring Rubric

Points	Description
1	The student correctly selects all three drop-down menu options.
0	The student does not correctly select all three drop-down menu options.

Exemplar Response

The correct response is shown below.

step 4:
Sprinkle water over the block and place it in the freezer overnight ▾.
In the morning, place the block on a table and
let the sun shine on the block to thaw and dry the block ▾.

step 5: Repeat step 4 every day until
a hole forms and grows larger, forming an arch ▾.

"Sprinkle water over the block and place it in the freezer overnight" and "let the sun shine on the block to thaw and dry the block" are the correct responses for the first two drop-down menus because these steps will model frost wedging in nature. "A hole forms and grows larger, forming an arch" is the correct response for the third drop-down menu because it is a better description of the process.

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Item 30

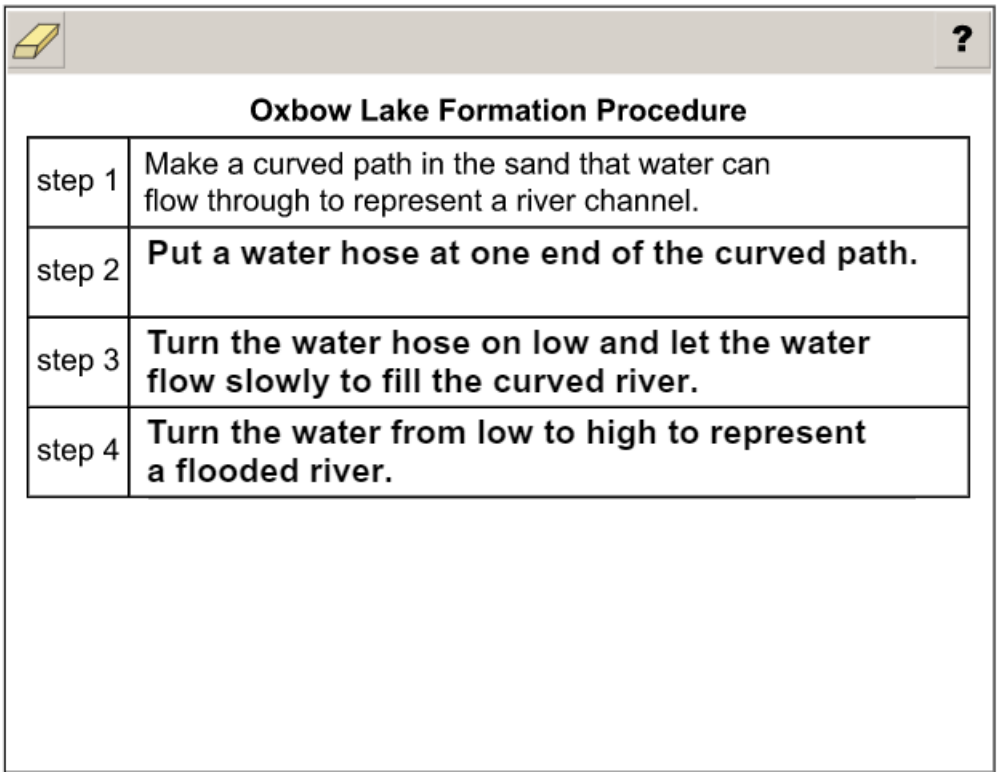
Scoring Rubric

Points	Description
2	The student correctly answers both Part A and Part B.
1	The student correctly answers either Part A OR Part B.
0	The student does not correctly answer either part.

Exemplar Response

Part A

The correct response is shown below.



Oxbow Lake Formation Procedure

step 1	Make a curved path in the sand that water can flow through to represent a river channel.
step 2	**Put a water hose at one end of the curved path.**
step 3	**Turn the water hose on low and let the water flow slowly to fill the curved river.**
step 4	**Turn the water from low to high to represent a flooded river.**

This is the correct response because any other order will not successfully complete the experiment. Any other order in Part A will receive 0 points.

Go on to the next page to finish item 30.

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Item 30

Part B

Part of River	Process	Process Type
channel	erosion	destructive
bank	deposition	constructive

Process	Process Type
erosion	constructive
deposition	destructive

This is the correct response because the channel is formed by erosion, which is a destructive process, and the bank is formed by deposition, which is a constructive process. Any other placement in Part B will receive 0 points.

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APPENDIX: LANGUAGE PROGRESSIVE SKILLS, BY GRADE

The following skills, marked with an asterisk (*) in Language standards 1–3, are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

Standard	Grade(s)							
	3	4	5	6	7	8	9–10	11–12
L.3.1f. Ensure subject-verb and pronoun-antecedent agreement.								
L.3.3a. Choose words and phrases for effect.								
L.4.1f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.								
L.4.1g. Correctly use frequently confused words (e.g., *to/too/two; there/their*).								
L.4.3a. Choose words and phrases to convey ideas precisely.*								
L.4.3b. Choose punctuation for effect.								
L.5.1d. Recognize and correct inappropriate shifts in verb tense.								
L.5.2a. Use punctuation to separate items in a series.†								
L.6.1c. Recognize and correct inappropriate shifts in pronoun number and person.								
L.6.1d. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).								
L.6.1e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.								
L.6.2a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.								
L.6.3a. Vary sentence patterns for meaning, reader/listener interest, and style.‡								
L.6.3b. Maintain consistency in style and tone.								
L.7.1c. Places phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.								
L.7.3a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.								
L.8.1d. Recognize and correct inappropriate shifts in verb voice and mood.								
L.9-10.1a. Use parallel structure.								

* Subsumed by L.7.3a
† Subsumed by L.9-10.1a
‡ Subsumed by L.11-12.3a

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END OF GRADE 5

EOG STUDY/RESOURCE GUIDE
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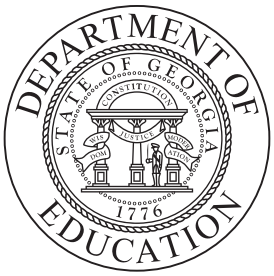
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