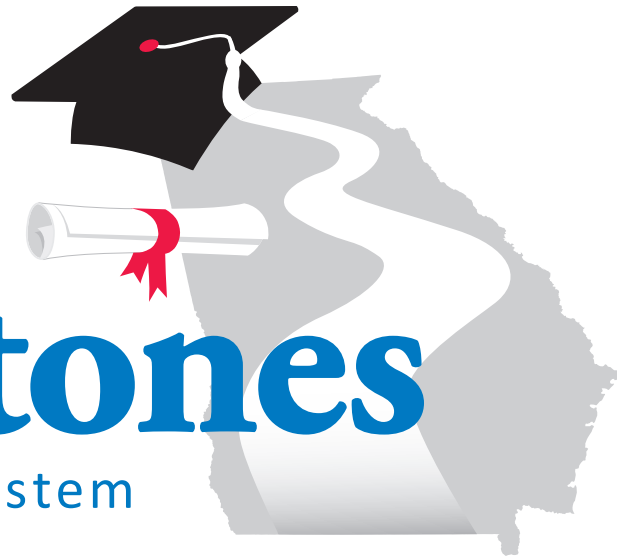


Georgia Milestones

Assessment System



Study/Resource Guide for Students and Parents

Grade 5



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.

Study/Resource Guide

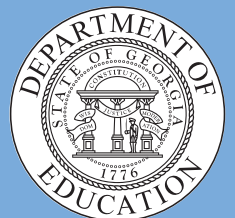


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THE GEORGIA MILESTONES ASSESSMENT SYSTEM



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!

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!

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!

OVERVIEW OF THE END-OF-GRADE ASSESSMENT

What is on the End-of-Grade Assessment?

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

TYPES OF ITEMS

- * **Selected-response items**—also called multiple-choice
 - English Language Arts (ELA), Mathematics, Science, and Social Studies
 - 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.
 - Start by eliminating the answers that you know are wrong.
 - Then look for the answer that is the BEST choice.
- * **Technology-enhanced items**—also called multiple-select or two-part questions
 - English Language Arts (ELA), Mathematics, Science, and Social Studies
 - There is a question, problem, or statement.
 - You may be asked to select more than one right answer.
 - You may be asked to answer the first part of the question. Then, you will answer the second part of the question based on how you answered part one.
 - Read the directions for each question carefully.
 - Start by eliminating the answers you know are wrong.
 - If the question has two parts, answer the first part before you move to the second part.
- * **Constructed-response items**
 - English Language Arts (ELA) and Mathematics only
 - There is a question, problem, or statement but no answer choices.
 - You have to write your answer or work out a problem.
 - Read the question carefully and think about what you are asked to do.
 - In English Language Arts (ELA), 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**
 - English Language Arts (ELA) and Mathematics 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.

*** Extended writing prompt**

- English Language Arts (ELA) only
- There is a question, problem, or statement.
- You may be asked to do more than one thing.
- In English Language Arts (ELA), 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.

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.

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
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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 • Recognize unstated assumptions; make inferences • Interpret facts • Compare or contrast simple concepts/ideas 	<ul style="list-style-type: none"> • Apply • Calculate; solve • Complete • Describe • Explain how; demonstrate • Construct data displays • Construct; draw • Analyze • Extend • Connect • Classify • Arrange • Compare; contrast

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
<ul style="list-style-type: none"> • 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 • Make predictions • 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 	<ul style="list-style-type: none"> • Plan; prepare • Predict • 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
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Design • Connect • Synthesize • Apply concepts • Critique • Analyze • Create • Prove

ENGLISH LANGUAGE ARTS (ELA)

DESCRIPTION OF TEST FORMAT AND ORGANIZATION

The Grade 5 English Language Arts (ELA) EOG assessment has a total of 60 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 75 minutes to complete each section.

CONTENT

The Grade 5 English Language Arts (ELA) 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 Language

There are two kinds of texts—fiction (including stories and poems) and informational text.

There are two kinds of essays—an opinion essay and an informational or explanatory essay.

Students will also write extended constructed responses that use narrative techniques such as completing a story, writing a new beginning, or adding dialogue. (Item 5 on page 29 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 (multiple-select or two-part questions), constructed-response, extended constructed-response, and extended writing-response items.

* Beginning with the Spring 2017 administration, the extended writing-response will appear in Section 1. Prior to Spring 2017, the extended writing-response appears in Section 3.

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.

Read the article “Making Hockey Safer” 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. Men 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 a response to eye injuries over the years. Men 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 a player without a helmet shoot the puck? Not exactly. Another rule allows a player to continue skating if his helmet falls off. But, once the player leaves the ice, he cannot return without a helmet. 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.

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 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 a response to eye injuries over the years.
- D. Another rule allows a player to continue skating if his helmet falls off.

Correct Answer: C

Explanation of Correct Answer: The correct answer is choice (C) The rule applies to new players and is a 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.

Scoring Rubric

Points	Description
2	<p>The exemplar shows a full-credit response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives sufficient evidence of the ability to summarize a text and analyze its details • Includes specific examples/details that make clear reference to the text • Adequately explains key details and provides an explanation of their development with clearly relevant information based on the text
1	<p>The exemplar shows a 1-point response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to summarize a text and analyze its details • Includes vague/limited examples/details that make reference to the text • Explains the key details or gives an explanation of their development with vague/limited information based on the text
0	<p>The exemplar shows a response that would earn no credit. It achieves the following:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to summarize a text and analyze its details

Exemplar Response

Points Awarded	Sample Response
2	<p>The National Hockey League has improved player safety and continues to improve safety where possible. When the league began, players were not required to wear helmets. That changed in 1979 when new players were required to wear helmets. Now, new players must wear helmets that have protective visors. Eye injuries caused a need for this rule change. People in the league continue to discuss how much protection to use.</p>
1	<p>The National Hockey League added a rule making players wear helmets with shields to protect their eyes. A shield is a clear covering to protect their eyes and make it safe to play hockey.</p>
0	<p>Players didn't have to wear helmets to play hockey until recently.</p>

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: Informational/Opinion

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

In this section, you will read about the debate over wind energy. What are the benefits and dangers of using this technology? In your own words, write an opinion essay supporting either side of the debate. Argue for or against the further development of wind energy.

Before you begin planning and writing, read the two passages:

1. The Wind Energy Trap
2. Winning with Wind

As you read the passages, think about what details from the passages you might use in your opinion essay.

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 less. 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.

Winning with Wind

It's 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.

Now that you have read “The Wind Energy Trap” and “Winning with Wind,” create a plan for and write your opinion essay.

WRITING TASK

Think about both sides of the discussion as presented in the passages, and then write an **opinion essay** supporting either side of the debate about the use of wind energy. Explain your opinion, and give reasons to support it.

Be sure to use information from BOTH passages. **Write your answer on the lines provided.**

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.

The following are examples of a seven-point response. See the seven-point, two-trait rubric for a text-based opinion response on pages 73 and 74 to see why these examples would earn the maximum number of points.

Examples of a Seven-Point Response:

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 with 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.

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 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.

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 (ELA) test are used to identify main ideas and details, cite evidence, make inferences, determine themes, and understand vocabulary.

Key Ideas and Details

- Ideas and details tell you what the story or poem is about.
- Use these ideas and details when writing or speaking about the story or poem.
- Look for central ideas or themes as you read. Ask yourself—what is this about?
- Think about the characters, setting, and events in the story.
- Summarize the important details and ideas after you read.

Structure of the Text

- Make sure you understand the words and phrases as you read.
- Think about how specific words can help you understand the meaning or tone.
- Look at the structure of stories. Pay attention to how the parts of the text (e.g., a section, chapter, scene, or stanza) work with each other and the story or poem as a whole.
- Think about the point of view or purpose of a text.

Understanding What You Read

- Think about the story and visualize, or make a mental picture, as you read.
- Think about the message or what the writer is trying to say.

KEY TERMS

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

Character: A person or thing that plays a part in the events of a story. (RL3)

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

Plot: The events in the beginning, middle, and end of the story. (RL3)

Vocabulary: The meanings of words and phrases, and how they are used in the story. (RL4)

Inference: To infer means to come to a reasonable conclusion based on evidence found in the text. (RL1)

By contrast, an **explicit** idea or message is stated by the writer. 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, if a story is about a student who gets made fun of and has no one to play with until another student decides to befriend him or her, the theme may be bullying. (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)




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. **Similes** make a comparison using a linking word such as *like*, *as*, or *than*. (Her shirt was as green as the grass.) 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)

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)

Genre: A **genre** is a category of composition. Each genre has a particular style, form, and content. (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.

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.

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

Based on the information in paragraphs 6 and 7, choose the sentence that BEST describes Dr. 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.

Item 2**Selected-Response**

How do these sentences support a main idea of the story?

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.

- A. They teach that even the rich can become poor.
- B. They teach how to be resourceful when times are tough.
- C. They show that the Doctor's priority is to care for his animals.
- D. They show why the Doctor now regrets the decisions he made.

Item 3**Technology-Enhanced**

This question has two parts. First, answer part A. Then, answer part B.

Part A

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

- A. proud
- B. annoyed
- C. confident
- D. disappointed

Part B

Which sentence from the passage 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.

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 Sarah witnesses. Include details that support her viewpoint.

A large rectangular box containing 20 horizontal lines for writing.

A large rectangular box with a black border, containing 25 horizontal lines for writing. The lines are evenly spaced and extend across the width of the box.

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.

Key Ideas and Details

- Read closely to know exactly what the text says.
- Look for details that tell what the text is about.
- Use those details when writing or speaking about the text.
- Look for the central ideas in the text.
- Summarize the important details and ideas in the text.
- Think about how ideas develop and work together in the text.

Structure

- Make sure you understand the words in the text.
- Use a dictionary, thesaurus, or glossary to help you with words that are new.
- Look at how the parts of the text work with each other.
- Think about the author's point of view or purpose in the text.

Understanding the Text

- Think about the story and visualize, or make a mental picture, as you read.
- Think about the text and its message.
- Look for details or evidence in the text.

KEY TERMS

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

Controlling ideas: What the text is mainly about. These are also called the central or main ideas. (RI2)

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

Evidence: Something that proves or demonstrates the truth of something else. Informational texts may contain facts and reasons to help prove a point. (RI8)

Structure: The way a text is organized—how information and ideas are built upon each other. (RI5)

Relationships: Ways in which two or more things or people are connected. When reading for information, it is important to examine the way individuals, events, ideas, and concepts interact. (RI3)

Summary: A summary is an overview of a text that captures the main points but does not give all of the details. (RI2)




Author’s purpose: The author has a specific reason or purpose for writing the text. Often the author’s purpose is not directly stated in the text, and readers have to figure out the reason for the text. (RI3)

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, then it is a fact. If not, it’s an opinion. (RI2)

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)

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)

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. Determine where the text leaves matters uncertain.
-  Locate support for important ideas and concepts within the text to answer *what* you know and *how* you know it.

Sample Items 6–9

Read the article and answer questions 6 through 9.

Are You Ready for a Pet?

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.

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.

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.

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.

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.

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.

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.

Item 6

Selected-Response

Which sentence **BEST** states a main idea of the article?

- A. People should be aware of their needs and limits before adding a pet to their families.
- B. Busy families should consider cats or other animals that do not need much care.
- C. Animal shelters provide the best variety of animals to choose from.
- D. Pets are a big responsibility but also a great joy.

Item 7

Selected-Response

Which word **BEST** expresses the meaning of *various* in the sentence?

Owners will also need to pay for various expenses.

- A. large
- B. many
- C. required
- D. unplanned

Item 8

Constructed-Response

How does the author support the idea that there are many things to consider before buying a pet?

Be sure to include details from the text that clearly show how the author develops this idea. Write your answer on the lines provided.

A large rectangular box containing 20 horizontal lines for writing an answer.

Unit 3: Writing Opinion Texts

CONTENT DESCRIPTION

The opinion passages in the English Language Arts test help you develop opinions and support a point of view on a topic. In your writing, use evidence, examples, quotations, and reasons to develop and support your opinion.

Purpose

- An opinion piece takes a stand or agrees or disagrees with a point of view.
- Some common opinion words are “agree” or “disagree” or “for” or “against.”
- When you state your opinion, you need to support it with reasons, examples, and evidence.

Editing Your Writing

- Check your writing for good organization.
- Make sure your writing fits the task, purpose, and audience.
- Strengthen your writing by planning, revising, editing, rewriting, or trying a new approach.
- Use technology, including the Internet, to do research.

Scoring Rubrics

- Scoring rubrics can be found beginning on page 68. You may find it helpful to read and discuss these with a parent or another adult.
- The rubrics show you what is needed to produce a strong piece of writing.
- Rubrics are important to understand. They tell you what to add to your writing.
- Writing on the EOG assessment will be scored using these rubrics.

KEY TERMS

Point of view: The opinion or perspective of the author on a specific topic. (W1c)

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. (W1a)

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)






Textual evidence: You need to support your opinions with evidence. Textual evidence includes facts, opinions of experts, quotations, statistics, and definitions. (W1b)

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)

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 clarify ideas. (W5)

Organization: In writing, the organization of text helps us to convey complex ideas and information more clearly. Writers use transitions to organize information. Also, an entire piece of writing has an organizational structure to it. Writers structure their texts depending on their purpose or audience. For example, if you were writing an opinion text in which you wanted to show the negative effects of something, you might choose cause and effect as an organizational structure. Questions about organization may ask you to select a sentence that helps or hurts the organization of a passage. (W1a)

Important Tips

-  Cite strong evidence from a text to support analysis of an author’s point of view and purpose.
-  Organize your writing by using chronological order, cause and effect, compare and contrast, or asking and answering questions.
-  Make sure your writing has a concluding statement that supports the information or explanation presented.
-  Strengthen your writing by planning, revising, editing, rewriting, or trying a new approach.
-  Use the rubric before, during, and after writing to make sure you are meeting the criteria.

Sample Items 10–13

[**NOTE:** The structure of the practice items for this unit and for Unit 4 is as it appears on the Georgia Milestones End-of-Grade assessment: 1) multiple-choice questions (three on the actual test); 2) a constructed-response item; and 3) an extended writing prompt. Additionally, the instructions for the extended writing prompt are in a format that is similar to the one on the End-of-Grade assessment. There is no extended writing prompt for Unit 4.]

In this section, you will read two passages and answer questions 10 through 13.

WRITING TASK

You will read about the controversy over new school lunch guidelines. What are the benefits and drawbacks of these guidelines? You will write an **opinion essay** in your own words about the new guidelines.

Think about both sides of the discussion as presented in the passages, and then write an **opinion essay** supporting either side of the debate about the new school lunch plan. Explain your opinion, and give reasons to support it.

Be sure to use information from BOTH passages. **Write your answer on the lines provided.**

Before you begin planning and writing, you will read two passages and answer three questions about what you have read. As you read the passages, think about what details from the passages you might use in your argumentative essay. These are the titles of the passages you will read:

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

As you read the passages, think about what details from the passages you might use in your opinion essay.

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. Kids 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 new guidelines is the portion sizes. Kids 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 kids or kids 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? My kids 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

Bravo for Making Kids Healthier

Dear Editor,

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

At the start of my career, kids ate in the classroom. Their parents packed them fairly healthy lunches. Often they 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, young people seemed to get less energetic. I noticed more kids 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. Kids received regular servings of pizza, burgers, and mashed potatoes from a box. Many kids loved it, but it didn't seem right to me. Our kids deserved better. They deserved healthy foods to nourish their brains and bodies.

Now, kids 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 smart phones. 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

Item 10

Selected-Response

Which sentence would be **BEST** to add to the last paragraph of “So-Called ‘Healthier’ School Lunches” as the concluding sentence?

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.

- A. It is not too late to take control of our children’s health.
- B. Some canned fruits are loaded with sugar and preservatives.
- C. We cannot leave it up to our children to make the right food choices.
- D. If we buy fruits and vegetables when they are in season, we can also save money.

Item 11

Selected-Response

Which sentence should be added to the beginning of this paragraph from “Bravo for Making Kids Healthier” to **BEST** support the writer’s opinion?

There are so many distractions like the Internet, video games, and smart phones. 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.

- A. Unhealthy foods add to the challenges kids face in school today.
- B. Sugary snacks and lack of exercise make it harder for kids to sit still.
- C. It is not fair to expect kids to focus on schoolwork without giving them snacks.
- D. Smart phones and other distractions are the reason why kids do not pay attention.

Item 12

Constructed-Response

Explain how the author of “So-Called ‘Healthier’ School Lunches” supports the idea that the new school lunch guidelines are not working.

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

A large rectangular box containing 20 horizontal lines for writing the response.

Item 13

Extended Writing-Response

Now that you have read “So-Called ‘Healthier’ School Lunches” and “Bravo for Making Kids Healthier” and answered some questions about what you have read, create a plan for and write your opinion essay.

WRITING TASK

You will read about the controversy over new school lunch guidelines. What are the benefits and drawbacks of these guidelines? You will write an **opinion essay** in your own words about the new guidelines.

Think about both sides of the discussion as presented in the passages, and then write an **opinion essay** supporting either side of the debate about the new school lunch plan. Explain your opinion, and give reasons to support it.

Be sure to use information from BOTH passages. **Write your answer on the lines provided.**

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.

Unit 4: Writing Informational/Explanatory Texts

CONTENT DESCRIPTION

The informational/explanatory passages in the English Language Arts test help develop your writing. Informational writing expresses ideas, summarizes research, and uses information from more than one source.

Text Types and Purposes

- Write informational/explanatory texts to state ideas and information clearly and accurately.
- Use the best details, organize them, and explain them when necessary.

Production and Distribution of Writing

- Produce writing with organization and style that fits the task, purpose, and audience.
- Develop and strengthen writing by planning, revising, editing, rewriting, or trying a new approach.
- Use technology, including the Internet, to produce and share writing.

Audience, Purpose, and Voice

- As you write, remember who your audience will be.
- Make sure your writing is appropriate. Watch your tone, style, and voice.
- Remember, you are writing for a purpose—think about *what* you are writing and *why*.

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

- Scoring rubrics can be found beginning on page 68. You may find it helpful to read and discuss these with a parent or another adult.
- The rubrics show you what is needed to produce a strong piece of writing.
- Rubrics are important to understand. They tell you what to add to your writing.
- Writing on the EOG assessment will be scored using these rubrics.

KEY TERMS

Informational/explanatory texts are pieces of writing that inform or explain something to the reader. (W2D)

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. (W2a)

Transition: A word, phrase, or clause that links one idea to the next. Writing should not jump from one idea to the next without transitions that guide the reader to the next idea. Examples include words such as “in contrast,” “in addition,” “especially,” and “consequently.” (W2c)

Conclusion: The end of a piece of writing is the conclusion. The conclusion should sum up the main purpose of the writing and provide an overall takeaway for the reader. (W2e)

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)

Multimedia: A variety of mediums. Writing does not only include pen and paper or a typed essay. Other ways of enhancing writing can include mediums such as art, presentations, photographs, charts, videos, and more. (W2a)

Organization: In writing, the organization of text helps us to convey complex ideas and information more clearly. Writers use transitions to organize information. Also, an entire piece of writing has an organizational structure to it. Writers structure their texts depending on their purpose or audience. (W4)

Important Tips

- ✍ Begin by organizing your ideas in an outline using the main topics. Then it will be easier to fill in the supporting details.
- ✍ Be sure to develop your topic with concrete details such as facts, definitions, quotations, or other information related to your topic.
- ✍ Organize your writing by using chronological order, cause and effect, compare and contrast, or asking and answering questions.
- ✍ Make sure your writing has a concluding statement that supports the information or explanation presented.
- ✍ Strengthen your writing by planning, revising, editing, rewriting, or trying a new approach.
- ✍ Use the rubric before, during, and after writing to make sure you are meeting the criteria.

Sample Items 14–17

[NOTE: The structure of the practice items for Unit 4 appears as follows on the Georgia Milestones End-of-Grade Assessment with the exception of the extended writing prompt: 1) multiple-choice questions (three on the actual test); 2) a constructed-response item; and 3) an extended writing prompt.]

Read two articles, “Fast Freddy’s Grill” and “Farm Fresh,” and answer questions 14 through 17.

Fast Freddy’s Grill

Welcome to Wilford’s newest fast-food restaurant, Fast Freddy’s Grill. We bring you perfectly grilled burgers every time, in no time. All our meat comes from local ranchers and has no added hormones or antibiotics, so you can feel good about indulging.

We have something for everyone at Fast Freddy’s Grill. Start with a patty made from fresh beef or turkey. Pile it high with your choice of six cheeses and a bevy of vegetables to transform your burger into your own unique creation. Vegetarians can enjoy our veggie burgers made from black beans, quinoa, and our special blend of spices.

Our critics complain that we lack choices in our menu. We may not have the variety of other restaurants, but that’s because we specialize in burgers. We put all our energy into perfecting them and becoming your go-to burger joint. As a result, we give you the best-tasting and quickest burgers in town.

In a hurry? Come to our convenient drive-through window and try our five-minute burger, which includes an all-beef patty, bacon, lettuce, and tomato for \$4.49. Guaranteed to be ready in five minutes or less or it’s free!

Next time you’re in the mood for a juicy grilled burger, give Fast Freddy’s Grill a try.

Farm Fresh

Enjoy a full-service dining experience unlike any other at Farm Fresh Restaurant. We recently opened on 5th Street and are proud to be Wilford's first farm-to-table restaurant. We never use processed foods. Our entire menu is made fresh daily, including our famous grain-free pumpkin loaf.

We get all our ingredients from local farmers. This cuts down on air pollution from trucks driving across the country. Our produce doesn't sit on trucks driving cross-country for days. All our foods come from within a 60-mile radius. Our customers enjoy not only great taste, but also excellent health benefits. All the crops we purchase are organic; no pesticides are used to build our flavorful dishes.

Because we rely on local farmers, our menu changes depending on the produce that is in season. This means that there will always be new and healthy dishes for you to sample. Our winter menu, for example, features a hearty turkey and squash stew that will warm your insides on a cold day!

Bring your family to Farm Fresh today and enjoy guilt-free healthy dining.

Item 14

Selected-Response

If headings were added to “Fast Freddy’s Grill,” which of these would be the **BEST** one to add to this paragraph from the article?

We have something for everyone at Fast Freddy’s Grill. Start with a patty made from fresh beef or turkey. Pile it high with your choice of six cheeses and a bevy of vegetables to transform your burger into your own unique creation. Vegetarians can enjoy our veggie burgers made from black beans, quinoa, and our special blend of spices.

- A. Special Toppings
- B. Vegetarian Options
- C. Customize Your Burger
- D. Burgers for Meat Lovers

Item 15

Selected-Response

Read these sentences from “Farm Fresh.”

(1) Our customers enjoy not only great taste, but also excellent health benefits.
(2) All the crops we purchase are organic, no pesticides are used to build our flavorful dishes.

Which transition should be added to the beginning of sentence 2 to **BEST** connect the ideas in the paragraph?

- A. Besides
- B. However
- C. Similarly
- D. Since

Item 16

Constructed-Response

In “Farm Fresh,” why does the author explain where the restaurant’s ingredients come from?

Use details from BOTH articles to support your answer. Write your answer on the lines provided.

A large rectangular box containing 20 horizontal lines for writing the answer.

Item 17

Constructed-Response

Read this sentence from “Fast Freddy’s Grill.”

Our critics complain that we lack choices in our menu.

Why does this statement apply to Fast Freddy’s Grill but not to Farm Fresh Restaurant? How are the two restaurants different?

Be sure to use details from BOTH articles to support your answer. Write your answer on the lines provided.

Blank writing area with 20 horizontal lines for student response.

Unit 5: Language

CONTENT DESCRIPTION

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

Language

- You need to express yourself clearly in an interesting way.
- Choose your words carefully so your readers understand what you are writing.
- Apply the rules of grammar as you write.

Conventions of Standard English

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

Style

- Vary the words you use. Use a dictionary and thesaurus to help you.
- Your writing should be clear and interesting at the same time.
- Use colorful language and different sentence structures.

KEY TERMS

Grammar: The set of rules for language. (L1e)

Usage: Using the correct word when there is a choice (to, too, two). (L1e)

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

Context clues: The words, facts, or ideas in a text that explain another word. (L4a)

Word parts: The prefixes, suffixes, and root words that give clues to the meaning of words. (L4b)

Verb tense: Variation in a verb to express different periods of time or how long an action lasts. Verb tenses include past, present, future, conditional, and perfect. (L1c)

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)

Punctuation: Writing marks that help to separate and clarify ideas. Examples of punctuation are the period, comma, colon, exclamation mark, and question mark. (L2)

Context: Words and phrases that surround another phrase and help to explain its meaning. Sometimes a word cannot be understood without the context of the words and phrases around it. For example, *he threw it* could mean several things, but when the full sentence is included, *He threw the basketball up high from midcourt and sunk it through the hoop for two points*, the meaning is clear. (L4a)



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)

Idioms: Quirky sayings and expressions specific to a language. If a saying seems unfamiliar or is not understood, it may be an idiom that needs to be researched. (L5b)

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.

Sample Items 18–21**Item 18****Selected-Response**

Which sentence uses commas correctly?

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

Item 19**Selected-Response**

Which of these BEST combines the sentences 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 20

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 check pets' teeth, just like dentists, to make sure they had no dangerous plaque.

Item 21

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 if 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.

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 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	ELAGSE5RL2 Literary	2	C	The correct answer is choice (C) They show that the Doctor's priority is to care for his animals. He sacrifices his personal items to keep his animals. Choices (A) and (B) are incorrect because although the statements are true, they do not support a main idea in the story. Choice (D) is incorrect because he is happy and does not regret his decision.
3	ELACC5RL1	3	B/C	The correct answers are (B) annoyed, and (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 paying 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 disappointment in him. The incorrect options in Part B support incorrect answers in Part A.
4	ELAGSE5RL2 Literary	3	N/A	See scoring rubric and sample response on page 60.
5	ELAGSE5W3b	4	N/A	See scoring rubric beginning on page 69 and sample response on page 61.
6	ELAGSE5RI2 Informational/ Explanatory	2	A	The correct answer is choice (A) People should be aware of their needs and limits before adding a pet to their families. The article focuses on evaluating whether or not you can handle a pet. Choices (B) and (C) are incorrect because they are supporting details. Choice (D) is not correct because it does not include evaluating the family's ability to care for a pet.

Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
7	ELAGSE5RI4 Informational/ Explanatory	2	B	The correct answer is choice (B) many. A list of several expenses follows the sample sentence. Choice (A) is incorrect because not all expenses are large, like collars and leashes. Choice (C) is incorrect because not all expenses are needed (e.g., training is not required). Choice (D) is incorrect because some of these expenses, like vet visits, would be planned.
8	ELAGSE5RI8 Informational/ Explanatory	3	N/A	See scoring rubric and sample response on page 62.
9	ELAGSE5RI3 Informational/ Explanatory	3	N/A	See scoring rubric and sample response on page 63.
10	ELAGSE5W1d	2	A	The correct answer is choice (A) It is not too late to take control of our children’s health. In the passage, the father is regaining control by packing lunches for his children. Choice (B) is incorrect because it is another detail. Choice (C) is incorrect because it shifts the attack onto the children. Choice (D) is incorrect because the purpose of the paragraph is not related to money.
11	ELAGSE5W1a	2	A	The correct answer is choice (A) Unhealthy foods add to the challenges kids face in school today. It is correct because it introduces the main topic of the paragraph. Choices (B), (C), and (D) are incorrect because they are supporting details.
12	ELAGSE5RI2 Informational/ Explanatory	3	N/A	See scoring rubric and sample response on page 64.
13	ELAGSE5W1	4	N/A	See scoring rubric beginning on page 73 and sample response on page 65.
14	ELAGSE5W2a	2	C	The correct answer is choice (C) Customize Your Burger. The focus of the paragraph is making the burger uniquely yours. Choice (A) is incorrect because the toppings are not unique. Choice (B) is incorrect because the vegetarian options are not part of the main idea. Choice (D) is incorrect because that detail is focused on in another paragraph.

Item	Standard/ Element/ Genre	DOK Level	Correct Answer	Explanation
15	ELAGSE5W2c	2	D	The correct answer is choice (D) Since. This transition is used to point out that this is additional information that supports the first sentence. Choice (A) is incorrect because “besides” is used to explain something that is less relevant. Choice (B) is incorrect because “however” is used to contrast something. Choice (C) is incorrect because “similarly” is used to make a point.
16	ELAGSE5RI3 Informational/ Explanatory	3	N/A	See scoring rubric and sample response on page 66.
17	ELAGSE5RI9 Informational/ Explanatory	3	N/A	See scoring rubric and sample response on page 67.
18	ELAGSE5L2c	2	A	The correct answer is choice (A) “Jason, you called last night, didn’t you?” Choices (B) and (D) are incorrect because “yes” and “no” require commas after them. Choice (C) is incorrect because it needs a comma before “Nathaniel.”
19	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.
20	ELAGSE5L1d	2	C	The correct choice 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.
21	ELAGSE5L1a	2	D	The correct choice is choice (D) Iris decided to walk home <u>with</u> her friends after school. “With her friends” is a prepositional phrase. Choice (A) is used as an infinitive. Choice (B) has an adverb underlined, and choice (C) has a subordinating conjunction underlined.

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

Item 4

Scoring Rubric

Points	Description
2	<p>The exemplar shows a full-credit response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives sufficient evidence of the ability to determine the theme and analyze its development over the course of a text • Includes specific examples/details that make clear reference to the text • Adequately explains the theme or gives an explanation of its development with clearly relevant information based on the text
1	<p>The exemplar shows a 1-point response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to determine the theme and analyze its development over the course of a text • Includes vague/limited examples/details that make reference to the text • Explains the theme or gives an explanation of its development with vague/limited information based on the text
0	<p>The exemplar shows a response that would earn no credit. It achieves the following:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to determine the theme or analyze its development over the course of a text

Exemplar Response

Points Awarded	Sample Response
2	<p>In the beginning, the public admires Doctor Dolittle. When he is seen in town, “. . . everyone would say, ‘There goes the Doctor!—He’s a clever man.’” Kids and dogs would follow him around. By the end of the story, though, the public’s attitude toward the Doctor changes. Now they say, “. . . Look at him now—He hasn’t any money and his stockings are full of holes!” However, the kids and animals treated him the same as when he was rich. This reveals the theme that true friends accept you no matter what. Whether you are rich or poor, a real friend treats you the same.</p>
1	<p>The public’s opinion of the Doctor changes from the beginning to the end of the story. This reveals that the theme of the story is real friends accept you no matter what.</p>
0	<p>The people in the story look at Doctor Dolittle as a rich and smart man.</p>

Item 5

To view the four-point rubric for a narrative response, see pages 69 and 70.

Exemplar Response

Points Awarded	Sample Response
4	<p>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.”</p> <p>“I like the animals better anyway,” he said.</p> <p>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.</p> <p>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.</p>
3	<p>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.</p> <p>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.</p> <p>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.</p>
2	<p>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.</p> <p>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 are living in the furniture. “You are ridiculous,” I told him.</p>
1	<p>The animals took over the house. They lived in the furniture. We couldn’t afford to feed them, so Doctor Dolittle sold his piano.</p>
0	<p>Doctor Dolittle and I lived together for many years. Then the animals took over.</p>

Item 8

Scoring Rubric

Points	Description
2	<p>The exemplar shows a full-credit response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives sufficient evidence of the ability to support an idea and determine the reasons and evidence that support a particular point in a text • Includes specific examples/details that make clear reference to the text • Adequately explains an idea or gives an explanation of its development with clearly relevant information based on the text
1	<p>The exemplar shows a 1-point response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to support an idea and determine the reasons and evidence that support a particular point in a text • Includes vague/limited examples/details that make reference to the text • Explains an idea or gives an explanation of its development with vague/limited information based on the text
0	<p>The exemplar shows a response that would earn no credit. It achieves the following:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to support an idea or determine the reasons and evidence that support a particular point in a text

Exemplar Response

Points Awarded	Sample Response
2	<p>The author instructs readers to consider several things before buying a pet. First, they have to be prepared for a long-term commitment. To support this, the author points out that pets will need love, attention, food, and exercise for the rest of their lives. Families must be prepared to make this promise. The author also points out the costs of pet ownership. The author supports this by identifying some of the common costs. These include vet visits, special food, training, and collars and leashes. The author also warns people to think about the amount of time they have to spend on a pet. Some pets need more exercise than others. Puppies need more attention and training than older dogs.</p>
1	<p>The author claims that people need to think about several things before they buy a pet. Pets cost money. People should be able to afford vet visits and supplies.</p>
0	<p>Pets benefit from humans, but humans benefit from pets, too. Pets make you happy. They lower stress.</p>

Item 9

Scoring Rubric

Points	Description
2	<p>The exemplar shows a full-credit response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives sufficient evidence of the ability to determine the author’s purpose and analyze its development over the course of a text • Includes specific examples/details that make clear reference to the text • Adequately explains the author’s purpose or gives an explanation of its development with clearly relevant information based on the text
1	<p>The exemplar shows a 1-point response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to determine the author’s purpose and analyze its development over the course of a text • Includes vague/limited examples/details that make reference to the text • Explains the author’s purpose or gives an explanation of its development with vague/limited information based on the text
0	<p>The exemplar shows a response that would earn no credit. It achieves the following:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to determine the author’s purpose or analyze its development over the course of a text

Exemplar Response

Points Awarded	Sample Response
2	<p>The author discusses animal shelters to encourage people to adopt their pets from shelters. The author points out that many animals there have been abandoned and neglected. This affects the reader and causes him to feel sorry for these animals. This might make them more likely to consider adopting. The author also points out that shelters have pets with a variety of needs and ages. This flexibility might also encourage families to adopt. A busy family, for example, might want a lapdog that doesn’t need as much exercise.</p>
1	<p>The author wants people to adopt pets from animal shelters. These animals deserve a new family and new start.</p>
0	<p>Animal shelters take in pets who come from families that can no longer take care of them.</p>

Item 12

Scoring Rubric

Points	Description
2	<p>The exemplar shows a full-credit response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives sufficient evidence of the ability to determine the main idea and analyze its development over the course of a text • Includes specific examples/details that make clear reference to the text • Adequately explains the main idea or gives an explanation of its development with clearly relevant information based on the text
1	<p>The exemplar shows a 1-point response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to determine the main idea and analyze its development over the course of a text • Includes vague/limited examples/details that make reference to the text • Explains the main idea or gives an explanation of its development with vague/limited information based on the text
0	<p>The exemplar shows a response that would earn no credit. It achieves the following:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to determine the main idea or analyze its development over the course of a text

Exemplar Response

Points Awarded	Sample Response
2	<p>The author supports the idea that new school lunch guidelines aren't working by providing examples from his children's school. For example, he shares that his kids are still eating processed foods like pizza and chicken nuggets. He also describes the unfairness of the guidelines. He says, "Kids 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 kids or kids who are not as active." This supports the idea that the guidelines aren't working, because they don't take into account individuals. They focus on age-based groups. Finally, he concludes the letter by admitting that the guidelines are so bad, he is sending lunches with his kids. This proves just how upsetting the new school lunches are.</p>
1	<p>The author supports the failure of the new school lunch guidelines. He explains the lunches that he has seen his child eat. He sends lunch with her so she won't have to eat what the schools provide.</p>
0	<p>The author of the letter does not support the new school lunch guidelines.</p>

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 73 and 74 to see why this example would earn the maximum number of points.

Example of a Seven-Point Response:

Although schools are taking steps in the right direction, the new school lunch guidelines are not working. For them to work, the guidelines 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 only have canned vegetables, which do not provide them with the nutrition they need.

In addition, the guidelines are not fair. Palmer Ross writes, “Kids 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 kids or kids who are not as active.” This reveals a need for more common sense. Maybe the guidelines should reflect activity level or another standard besides age.

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. They would need far more government funding.

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.

Item 16

Scoring Rubric

Points	Description
2	<p>The exemplar shows a full-credit response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives sufficient evidence of the ability to determine the relationships between ideas and analyze their development over the course of a text • Includes specific examples/details that make clear reference to the text • Adequately explains the relationships between ideas or gives an explanation of their development with clearly relevant information based on the text
1	<p>The exemplar shows a 1-point response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to determine the relationships between ideas and analyze their development over the course of a text • Includes vague/limited examples/details that make reference to the text • Explains the relationships between ideas or gives an explanation of their development with vague/limited information based on the text
0	<p>The exemplar shows a response that would earn no credit. It achieves the following:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to determine the relationships between ideas or analyze their development over the course of a text

Exemplar Response

Points Awarded	Sample Response
2	<p>In “Farm Fresh,” the author’s purpose in describing where their ingredients come from is to educate the public on the benefits of farm-to-table restaurants. The author wants people to know that they buy locally, so that their food is always the freshest possible. The author states, “Our produce doesn’t sit on trucks driving cross-country for days. All our foods come from within a 60-mile radius.” This implies that every other restaurant in the area serves food that is neither as fresh nor as healthy. This sets them apart from other restaurants.</p>
1	<p>The author describes their ingredients to set them apart from other restaurants. They are the restaurant that buys only local and healthy foods. That is where you go when you want healthy food.</p>
0	<p>Farm Fresh is a farm-to-table restaurant.</p>

Item 17

Scoring Rubric

Points	Description
2	<p>The exemplar shows a full-credit response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives sufficient evidence of the ability to draw a conclusion based on the texts and to explain the support for a conclusion drawn about the texts • Includes specific examples/details that make clear reference to the texts • Adequately explains the conclusion drawn with clearly relevant information based on the texts
1	<p>The exemplar shows a 1-point response. It achieves the following:</p> <ul style="list-style-type: none"> • Gives limited evidence of the ability to draw a conclusion based on the texts or to explain the support for conclusions drawn from the texts • Includes vague/limited examples/details that make reference to the texts • Explains the conclusion drawn or gives an explanation of its development with vague/limited information based on the texts
0	<p>The exemplar shows a response that would earn no credit. It achieves the following:</p> <ul style="list-style-type: none"> • Gives no evidence of the ability to draw a conclusion based on the texts or to explain the support for a conclusion drawn about the texts

Exemplar Response

Points Awarded	Sample Response
2	<p>Based on this detail from the story, the reader can conclude that many people have complained that the menu at Fast Freddy’s Grill is small. The owners say that they want to be “. . . your go-to burger joint,” so burgers are their focus. Burgers are the only food described in the text. They mention a veggie burger, too. They say that they offer several toppings, but no sides are talked about. Therefore, Fast Freddy’s Grill has a limited menu that does not apply to many different groups of people. Farm Fresh is not limited to one kind of food. They serve a large variety of healthy foods.</p>
1	<p>Fast Freddy’s Grill has a small menu that people have complained about. They serve lots of burgers with many toppings to choose from. Farm Fresh has lots of different kinds of foods.</p>
0	<p>People complain about Fast Freddy’s Grill and its menu but not about Farm Fresh.</p>

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 feature, 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, the scorer need only choose the description 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 description 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.

Four-Point Holistic Rubric

Genre: Narrative

Writing Trait	Points	Criteria
<p><i>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.</i></p>	4	<p><i>The student's response is a well-developed narrative that fully develops a real or imagined experience based on text as a stimulus.</i></p> <ul style="list-style-type: none"> • 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	<p><i>The student's response is a complete narrative that develops a real or imagined experience based on text as a stimulus.</i></p> <ul style="list-style-type: none"> • 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*
	2	<p><i>The student's response is an incomplete or oversimplified narrative based on text as a stimulus.</i></p> <ul style="list-style-type: none"> • 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*

Four-Point Holistic Rubric

Genre: Narrative (continued)

Writing Trait	Points	Criteria
<i>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.</i>	1	<p><i>The student's response provides evidence of an attempt to write a narrative based on text as a stimulus.</i></p> <ul style="list-style-type: none"> • 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	<p><i>The student's response is flawed for various reasons and will receive a condition code:</i></p> <p>The condition codes can be found on page 210 of this guide.</p>

*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 Appendix A for those standards that need continued attention beyond the grade in which they were introduced.

Seven-Point, Two-Trait Rubric

Trait 1 for Informational/Explanatory Genre

Writing Trait	Points	Criteria
<p>Idea Development, Organization, and Coherence</p> <p><i>This trait examines the writer's ability to effectively establish a controlling idea and to support the idea with evidence from the text(s) read and to elaborate on the idea with examples, illustrations, facts, and other details in order. The writer must integrate the information from the text(s) into his/her own words and arrange the ideas and supporting evidence (from text that they have read) in order to create cohesion for an informative/explanatory essay.</i></p>	4	<p><i>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.</i></p> <ul style="list-style-type: none"> • Effectively introduces a topic • Groups related ideas together logically to give some organization to the writing • Effectively develops the topic with multiple facts, definitions, concrete details, quotations, or other information and examples related to the topic • 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	<p><i>The student's response is a complete informative/explanatory text that examines a topic and presents information based on a text as a stimulus.</i></p> <ul style="list-style-type: none"> • 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	<p><i>The student's response is an incomplete or oversimplified informative/explanatory text that cursorily examines a topic.</i></p> <ul style="list-style-type: none"> • 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	<p><i>The student's response is a weak attempt to write an informative/explanatory text that examines a topic.</i></p> <ul style="list-style-type: none"> • 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	<p><i>The student's response is flawed for various reasons and will receive a condition code: The condition codes can be found on page 210 of this guide.</i></p>

Seven-Point, Two-Trait Rubric

Trait 2 for Informational/Explanatory Genre

Writing Trait	Points	Criteria
Language Usage and Conventions <i>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.</i>	3	<i>The student's response demonstrates full command of language usage and conventions.</i> <ul style="list-style-type: none"> • 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	<i>The student's response demonstrates partial command of language usage and conventions.</i> <ul style="list-style-type: none"> • 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	<i>The student's response demonstrates weak command of language usage and conventions.</i> <ul style="list-style-type: none"> • 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	<i>The student's response is flawed for various reasons and will receive a condition code:</i> The condition codes can be found on page 210 of this guide.

*Note: 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 Appendix A for those standards that need continued attention beyond the grade in which they were introduced.

Seven-Point, Two-Trait Rubric

Trait 1 for Opinion Genre

Writing Trait	Points	Criteria
<p>Idea Development, Organization, and Coherence</p> <p><i>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.</i></p>	4	<p><i>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.</i></p> <ul style="list-style-type: none"> • 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	<p><i>The student's response is a complete opinion piece that examines a topic and presents a point of view based on text.</i></p> <ul style="list-style-type: none"> • 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	<p><i>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.</i></p> <ul style="list-style-type: none"> • 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	<p><i>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.</i></p> <ul style="list-style-type: none"> • 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	<p><i>The student's response is flawed for various reasons and will receive a condition code:</i></p> <p>The condition codes can be found on page 210 of this guide.</p>

Seven-Point, Two-Trait Rubric

Trait 2 for Opinion Genre

Writing Trait	Points	Criteria
Language Usage and Conventions <i>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.</i>	3	<i>The student's response demonstrates full command of language usage and conventions.</i> <ul style="list-style-type: none"> • 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	<i>The student's response demonstrates partial command of language usage and conventions.</i> <ul style="list-style-type: none"> • 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	<i>The student's response demonstrates weak command of language usage and conventions.</i> <ul style="list-style-type: none"> • 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	<i>The student's response is flawed for various reasons and will receive a condition code:</i> The condition codes can be found on page 210 of this guide.

*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 Appendix A for those standards that need continued attention beyond the grade in which they were introduced.

ACTIVITY

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

Standards: ELAGSE5.RL.1, ELAGSE5.RL.2, ELAGSE5.RL.3, ELAGSE5.W.3

Story Time!

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

- Work with family or friends.
- Choose a character you just read about.
- Make a list of clues you learned 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?

MATHEMATICS

DESCRIPTION OF TEST FORMAT AND ORGANIZATION

The Grade 5 Mathematics EOG assessment consists of a total of 73 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.

The test will be given in two sections.

- You may have up to 85 minutes per section to complete Sections 1 and 2.
- The test will take about 120 to 170 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), technology-enhanced (multiple-select or two-part), constructed-response, and extended constructed-response items.

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 10

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 $\frac{1}{10}$ of what it represents in the place to its left.

Look at these two numbers:

563 436

How much greater is the digit 6 in 563 than the digit 6 in 436?

- A. 6 times greater
- B. 10 times greater
- C. 60 times greater
- D. 100 times greater

Correct Answer: B

Explanation of Correct Answer: The correct answer choice is (B) 10 times greater. The digit 6 is in the tens place in 563 and in the ones place for 436. The value of the same digit in the tens place is always ten times greater than 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 digit in 563, but this does not compare the value of the digit in the two numbers. Choice (D) is incorrect because it shows what the difference would be if the digit 6 were in the hundreds place rather than the tens place.

Example Item 2**Constructed-Response**

DOK Level 2: This is a DOK level 2 item because it assesses the ability to evaluate multi-step expressions with and without parentheses and apply the order of operations rules.

Mathematics Grade 5 Content Domain: Operations and Algebraic Thinking.

Standard: MGSE5.OA.1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

Evaluate these two expressions.

a) $(7 + 5) \times 4$

b) $7 + 5 \times 4$

Part A: Which expression has a greater value—a or b?

Correct Answer: a

Part B: Explain why this expression has a greater value.

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Explanation of Correct Answer: The correct answer is choice (a). This expression has a value of 48, which is greater than choice b, which has a value of 27. Expression (a) has parentheses around 7 and 5, so you have to add these numbers first to find a sum of 12. Next you multiply the sum 12 by 4. The total value is 48. For the second expression, there are no parentheses. The order of operations states that you perform operations in parentheses first. If there are no parentheses in an expression, multiplication comes before addition. For expression (b), you must multiply 5 times 4, which is 20. Next you add 7, which is a total of 27.

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a complete understanding of how to evaluate multi-step expressions with and without parentheses. • Give 2 points for a correct response and a valid process. <ul style="list-style-type: none"> • Response is correct and complete. • Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a partial understanding of how to evaluate multi-step expressions with and without parentheses. • Give 1 point for a correct response but no valid process, or give one point for a calculation mistake made in an otherwise correct process. <ul style="list-style-type: none"> • Response is mostly correct but contains either a computation error or an unclear or incomplete explanation. • Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates no understanding of how to evaluate multi-step expressions with and without parentheses. <ul style="list-style-type: none"> • Response shows no application of a strategy. • Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.

Exemplar Response

Points Awarded	Sample Response
2	<p>a; This expression has a value of 48, which is greater than the value of b, which is 27. Expression a has parentheses around 7 plus 5, so you have to add these numbers first to find a sum of 12. Next you multiply the sum of 12 by 4. The total value is 48. For the second expression, there are no parentheses. The order of operations states that you perform operations in parentheses first. If there are no parentheses in an expression, multiplication comes before addition. For expression b you must multiply 5 times 4, which is 20. Next you add 7 to 20, which is 27.</p>
1	a
0	<i>Response is irrelevant, inappropriate, or not provided.</i>

Example Item 3

Extended Constructed-Response

DOK Level 3: This is a DOK level 3 item because it asks students to assess the reasonableness of a given answer and justify their assessment. The students then must determine how to correct the error and explain their reasoning.

Mathematics Grade 5 Content Domain: Use equivalent fractions as a strategy to add and subtract fractions.

Standard: MGSE5.NF.2. Solve word problems involving addition and subtraction of fractions, including cases of unlike denominators (e.g., by using visual fraction models or equations to represent the problem). Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$, by observing that $\frac{3}{7} < \frac{1}{2}$.

Use the fraction bars to help you solve the problem.

$\frac{1}{3}$				$\frac{1}{3}$				$\frac{1}{3}$			
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$

Anita is making chocolate fudge brownies. She needs $\frac{1}{3}$ cup of water and $\frac{3}{4}$ cup of vegetable oil for the recipe. Anita pours both the water and vegetable oil into a large mixing bowl. She measures the combined total amount of the water and vegetable oil and sees that it is more than one cup.

Part A: How much more than one cup is Anita's mixture of water and vegetable oil?

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Correct Answer: Adding $\frac{1}{3}$ and $\frac{3}{4}$ is the same as adding $\frac{4}{12}$ and $\frac{9}{12}$ because $\frac{1}{3} = \frac{4}{12}$ and $\frac{3}{4} = \frac{9}{12}$. $\frac{4}{12} + \frac{9}{12} = \frac{13}{12}$ and $\frac{13}{12} = 1\frac{1}{12}$ which is $\frac{1}{12}$ more than 1 cup.

Part B: How could Anita know, without measuring, that $\frac{1}{3}$ cup of water and $\frac{3}{4}$ cup of oil together is less than 2 cups?

Correct Answer: Both $\frac{1}{3}$ and $\frac{3}{4}$ are each less than 1, so their sum must be less than 2.

Part C: How much less than 2 is the sum of $\frac{1}{3}$ and $\frac{3}{4}$?

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Correct Answer: $2 = \frac{24}{12}$ and $1\frac{1}{12} = \frac{13}{12}$, so $\frac{24}{12} - \frac{13}{12} = \frac{11}{12}$.

Scoring Rubric

Points	Description
3	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a complete understanding of using benchmark fractions and number sense to estimate mentally and assess the reasonableness of answers when solving a real-world problem involving fraction addition. • Give 3 points for 3 parts answered correctly. <ul style="list-style-type: none"> • Response is correct and complete. • Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a good understanding of using benchmark fractions and number sense to estimate mentally and assess the reasonableness of answers when solving a real-world problem involving fraction addition. • Give 2 points for 2 out of 3 parts answered correctly or for making 1 error in any of the 3 parts. <ul style="list-style-type: none"> • Response is mostly correct but contains either a computation error or an unclear or incomplete explanation. • Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a limited understanding of using benchmark fractions and number sense to estimate mentally and assess the reasonableness of answers when solving a real-world problem involving fraction addition. • Give 1 point for 1 out of 3 parts answered correctly or for making 2 errors in any of the 3 parts. <ul style="list-style-type: none"> • Response is only partially correct. • Response shows incomplete or inaccurate application of a relevant strategy. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates no understanding of using benchmark fractions and number sense to estimate mentally and assess the reasonableness of answers when solving a real-world problem involving fraction addition. <ul style="list-style-type: none"> • Response shows no application of a strategy. • Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.

Exemplar Response

Points Awarded	Sample Response
3	<p>Part A: Adding $\frac{1}{3}$ and $\frac{3}{4}$ is the same as adding $\frac{4}{12}$ and $\frac{9}{12}$ because $\frac{1}{3} = \frac{4}{12}$ and $\frac{3}{4} = \frac{9}{12}$. $\frac{4}{12} + \frac{9}{12} = \frac{13}{12}$ and $\frac{13}{12} = 1 \frac{1}{12}$ which is $\frac{1}{12}$ more than 1 cup.</p> <p>Part B: Both $\frac{1}{3}$ and $\frac{3}{4}$ are each less than 1, so their sum must be less than 2.</p> <p>Part C: $2 = \frac{24}{12}$ and $1 \frac{1}{12} = \frac{13}{12}$, so $\frac{24}{12} - \frac{13}{12} = \frac{11}{12}$.</p>
2	The student correctly answers two of three parts.
1	The student correctly answers one of three parts.
0	<i>Response is irrelevant, inappropriate, or not provided.</i>

MATHEMATICS 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 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.

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.

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 using the distributive, commutative, and associative properties.

KEY TERMS

A **numerical expression** is a set of numbers and operations including addition, subtraction, multiplication, and division. The expression may also contain parentheses, brackets, or braces. (OA.1)

Evaluate a numerical expression: Find the value of the expression by completing the operations for each number in the expression. (OA.2)

To evaluate a numerical expression in the correct order, use the **order of operations** to complete each step in the expression. Operations in **parentheses, brackets, or braces** are completed first, then division and multiplication of digits from left to right. Finally, subtraction and addition can be completed from left to right. (OA.1)

A multiplication equation or expression has three parts. The **multiplicand** and **multiplier** are numbers that are multiplied to result in the **product**. (NBT.5)

Dividing whole numbers includes partitioning the **dividend** into an equal number of groups or into groups of equal size that are equivalent to the **divisor**. The **quotient** shows the size of each group or the total number of groups that are created. (NBT.6)

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. (NBT.5)
- Other strategies for multiplication and division include using the properties of operations or models such as **rectangular arrays, area models, and fair-sharing**. (NBT.6)


Properties of Operations:

- The **distributive property** multiplies a factor that is outside of a set of parentheses with each addend within the parentheses to solve.
- The **commutative property** allows for addends in addition equations or factors in a multiplication equations to be moved or placed in a different order while solving.
- The **associative property** allows for addends in addition equations or factors in multiplication equations to be grouped together into different pairs while solving. (NBT.6)

Place value is the numerical value of a digit in a number based on its 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. (NBT.1)

A **power of 10** refers to a multiple of 10. For example, 10^3 is 10 with an **exponent** of 3. The exponent shows the number of times to multiply ten ($10 \times 10 \times 10 = 1000$). Multiplying a number by 10^3 is the same as multiplying by 1000. The effect on the number is that it becomes 10 times greater 3 times. (NBT.2)

Important Tip

 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.

Sample Items 1–4

Item 1

Constructed-Response

There are 14 students making sculptures with craft sticks. There are 644 craft sticks in a box. Each student gets an equal number of craft sticks.

Part A: Explain each step needed to determine the maximum number of craft sticks that each student can get.

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Part B: How does the equation $644 \div 14 = \square$ model the problem and what number should go in the box?

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Item 2

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 3

Constructed-Response

Rita wants to find the number that is *3 times as large as the sum of 5 and 7*.

She writes this expression: $3 \times 5 + 7$.

Part A: Explain why Rita cannot use this expression to find the number.

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Part B: How could Rita change the expression to find the correct number?

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Item 4**Technology-Enhanced****Part A**

Which expression represents the calculation “subtract 7 and 1, 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

Unit 2: 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

A **decimal** is another way to write a **fraction**. Both a decimal and a fraction show a value that is between whole numbers. For example, $\frac{1}{2}$ or 0.5 is a value between the whole numbers 0 and 1. (NBT.7)

Decimal point: 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). Digits to the right of the decimal point indicate fractions, or parts, of a unit (tenths, hundredths, thousandths). (NBT.3)

Place value is the numerical value of a digit in a number based on its 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)

Decimal numbers can be written using numerals or number words. They can also be written using expanded notation. **Expanded notation** creates an addition expression 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)

To **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)

Decimal numbers can be **rounded** to a given place value. Models such as number lines can be used to determine the nearest number of the given place value. (NBT.4)

Addition and **subtraction** of decimal numbers require 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. (NBT.7)

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 or place value.

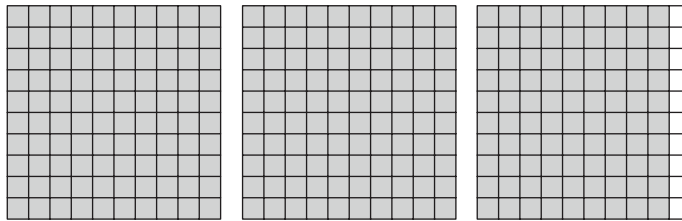
Sample Items 5–8

Item 5

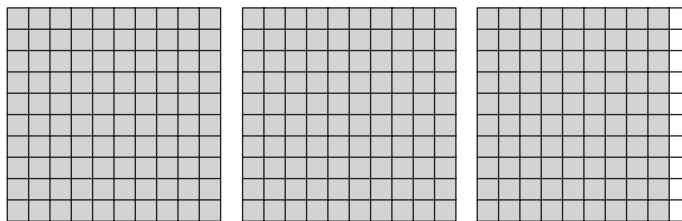
Extended Constructed-Response

Miguel, Jane, and Robert rode 8.7 miles in a bike relay race. They each rode the same distance. Jane shaded the models shown to determine how many miles each person rode. Each hundred model stands for 1 mile.

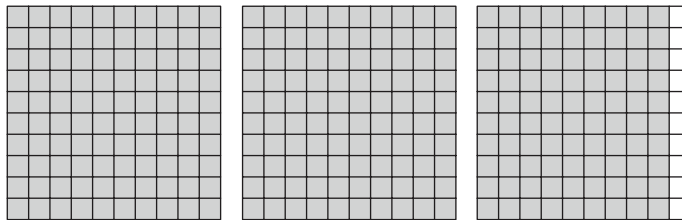
Miguel:



Jane:



Robert:



Part A: What is the total number of miles each person rode?

Part B: Explain how the models illustrate the problem and answer.

<hr/> <hr/> <hr/> <hr/>

Item 6

Selected-Response

Which 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 7

Selected-Response

What is 5.816 rounded to the nearest tenth?

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

Item 8

Technology-Enhanced

The mass of a quarter to be 5.67 grams and the mass of a half-dollar coin to be 11.34 grams.

Part A

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

$$5.67 < \underline{\hspace{2cm}}$$

- A. 5.609
- B. 5.762
- C. 5.665
- D. 5.098
- E. 5.677
- F. 5.045

Part B

Which number when 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

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

A **decimal** is another way to write a **fraction**. Both a decimal and fraction show a value that is between whole numbers. For example, $\frac{1}{2}$ or 0.5 is a value between the whole numbers 0 and 1. (NBT.7)

Place value is the numerical value of a digit based on its 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.

- **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.7)

The same strategies used to multiply and divide whole numbers can be used with decimals. (NBT.7)

When **multiplying** a whole number by a decimal number, the product will have a smaller value than the whole number factor. The equation $2 \times 0.01 = 0.02$ shows that 2 groups of 1 hundredth are equal to 2 hundredths. (NBT.7)

When **dividing** a whole number by a decimal number, the **quotient** will have a greater value than the **dividend**. The equation $2 \div 0.01 = 200$ shows that there are 200 hundredths in the number 2. (NBT.7)

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 the equation. (NBT.7)

Using a **power of 10** creates a pattern in the number of zeros in a number. For example, 10^3 is 10 with an **exponent** of 3. The exponent shows the number of times to multiply ten ($10 \times 10 \times 10 = 1000$). Multiplying a number by 10^3 is the same as multiplying by 1000. The effect on the number is that it becomes 10 times greater 3 times 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 Tip

- ✍ Estimation can be used before computing the product or quotient of the equation. Decimal numbers can be rounded to the nearest whole number to determine a reasonable estimate.

Sample Items 9–11

Item 9

Selected-Response

Hannah multiplies 0.542 by powers of 10.

$$0.542 \times 10^1 = 5.42$$

$$0.542 \times 10^2 = 54.2$$

$$0.542 \times 10^3 = 542$$

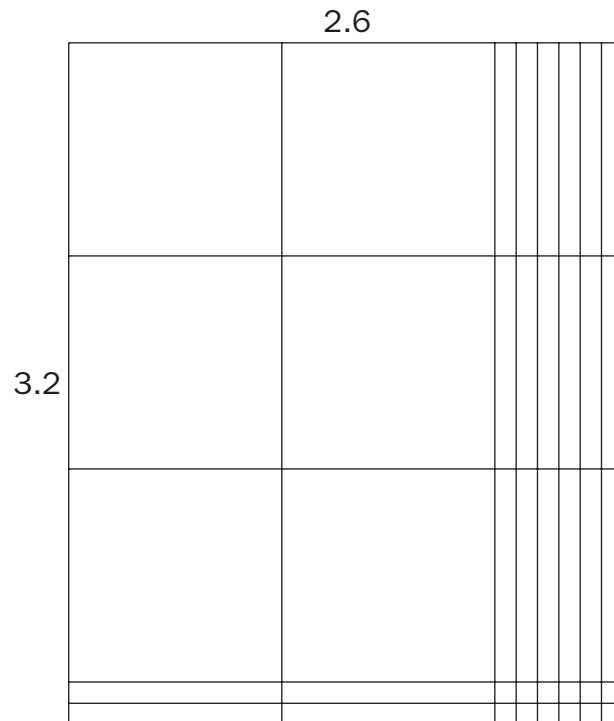
$$0.542 \times 10^4 = 5,420$$

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

Item 10**Selected-Response**

The area model illustrates the product of 2.6×3.2 .



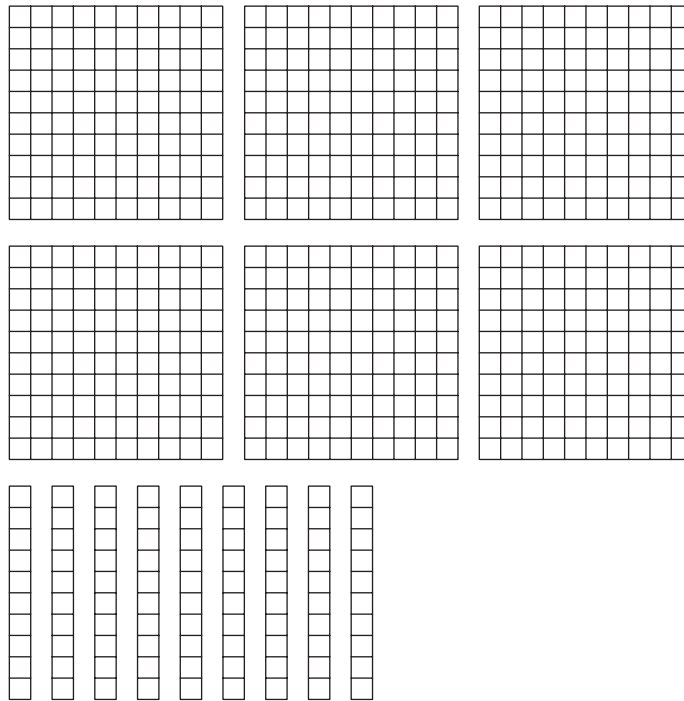
What is the product?

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

Item 11

Selected-Response

Ted is using a model to find the quotient of $6.9 \div 2.3$. 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

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, as well as equivalent fractions. You will use fraction models, number lines, and other visual models.

KEY TERMS

A **fraction** represents the division of two numbers. (NF.3) 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)

Fractions greater than 1 are written as **improper fractions** where the numerator is greater than the denominator or as **mixed numbers**, which include a whole number and a fraction. (NF.1)

Before adding or subtracting fractions, find a **common denominator**. If the fractions in the equation have **unlike denominators**, replace each fraction with **equivalent fractions** that have the same denominator. (NF.1)

After creating a common denominator, **add** the numerators to find the **sum**, or **subtract** the numerators to find the **difference**. (NF.1)

When adding and subtracting fractions, an **estimate** can be made by comparing each fraction with a **benchmark fraction** such as $\frac{1}{2}$. For example, if both fractions are greater than $\frac{1}{2}$, then a reasonable sum would be greater than 1. (NF.2)

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)

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. (NF.4b)

Scaling: Comparing the value of one object to the value of another using a fraction. An example of scaling would be saying, “That rope is $\frac{1}{3}$ as long as this rope.”

Unit fraction: 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 the equation. (NF.7)

Important Tip

✍ Fractions in an equation must represent parts of the same whole. When using models to solve the equations, use models that are also parts of the same whole by using models that are the same size and shape.

Sample Items 12–14**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. $\frac{2}{15}$ pounds
- B. $6\frac{1}{2}$ pounds
- C. $7\frac{1}{2}$ pounds
- D. $8\frac{1}{2}$ pounds

Item 13**Selected-Response**

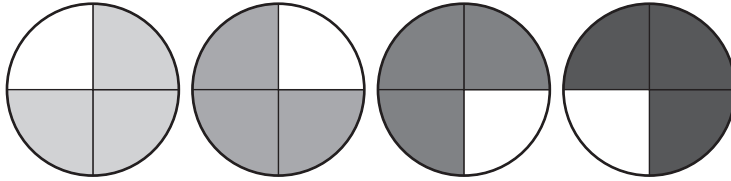
What is the difference of these fractions?

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

- A. $\frac{2}{24}$
- B. $\frac{16}{24}$
- C. $\frac{23}{24}$
- D. $\frac{11}{5}$

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

Unit 5: 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: A sequence of numbers that are created by following a set of **rules** such as “add 5.” Generate two numerical patterns using a given rule. Using the terms created, form and graph ordered pairs on a coordinate plane. A line can be generated from the pattern. (OA.3)

Ordered pairs: A set of numbers that are used to label the location of a point on the coordinate plane. Ordered pairs are written as $(1, 2)$. (OA.3)

A **coordinate plane** is created by **intersecting** two perpendicular number lines at 0. The point where the two lines meet is called the **origin**. The **horizontal number line** is called the **x-axis** and the **vertical number line** is called the **y-axis**. (G.1)

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


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

The x-coordinate represents the value on the x-axis, moving horizontally from the origin. The y-coordinate represent the value on the y-axis moving vertically from the origin. For example, the point $(2, 3)$ moves to the right 2 units, then up 3 units. (G.1)

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

The coordinate plane can be used to represent real-world situations by **graphing** points and finding the value of points as it relates to the situation. (G.2)

Important Tip

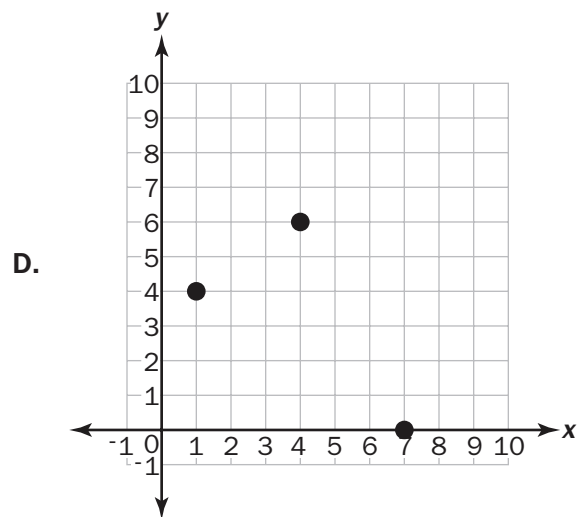
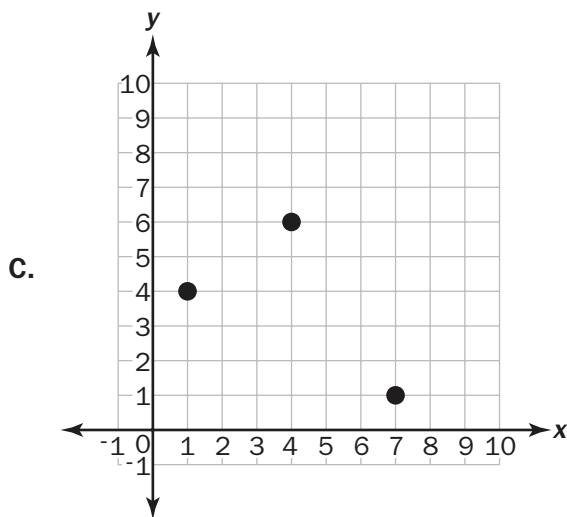
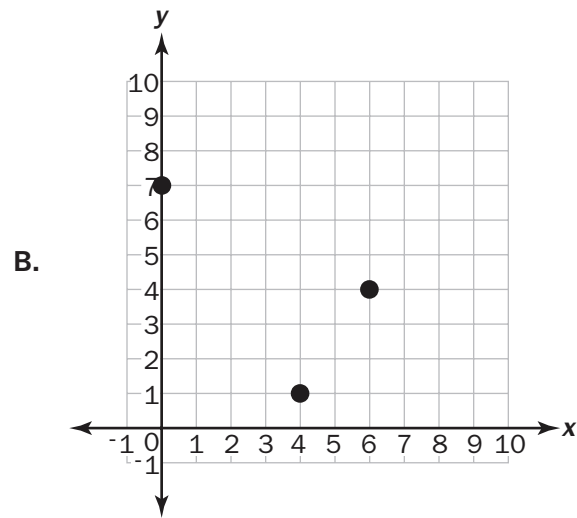
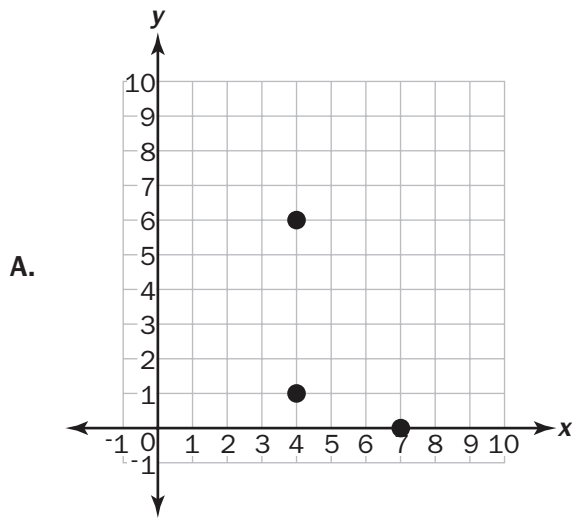
 An ordered pair lists the x-coordinate first, then the y-coordinate. When graphing a point using the ordered pair, move across the x-axis using the x-coordinate and then move up the y-axis using the y-coordinate.

Sample Items 15–17

Item 15

Selected-Response

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



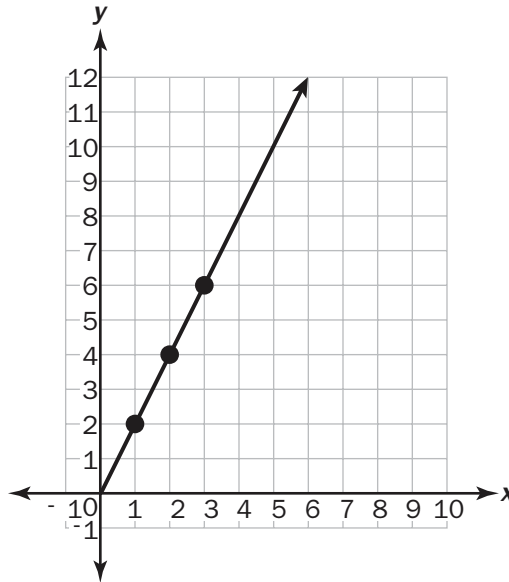
Item 16

Constructed-Response

Kirk wants to show two number patterns on a coordinate grid.

Use the coordinate grid and the table to help Kirk show his patterns.

Row	x	y
A	1	—
B	—	4
C	3	6
D	—	—
E	—	—



Part A: Identify the missing numbers in the table and write each row as an ordered pair.

Row A: (1, _____)

Row B: (_____, 4)

Row C: (3, 6)

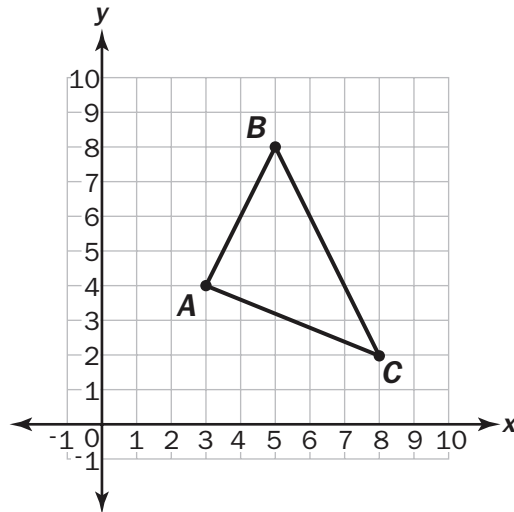
Row D: (_____, _____)

Row E: (_____, _____)

Part B: Describe the relationship between the x -values and the y -values that are in the same row of the table.

Item 17**Selected-Response**

Felipe made a triangle on a coordinate grid.



What are the coordinates for point C?

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

Unit 6: Two-Dimensional (2-D) 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 Figures: A **plane figure** that has two dimensions, such as a rectangle that has the dimension of length and one of width. (G.3)

The **attributes** of a 2-D figure are **properties** including the following:

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

Category: 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: A smaller group of items within a category that share at least one attribute. (G.3)

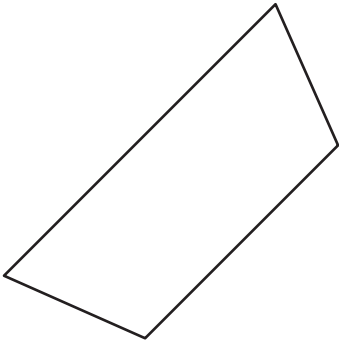
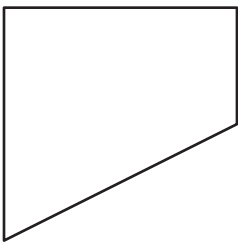
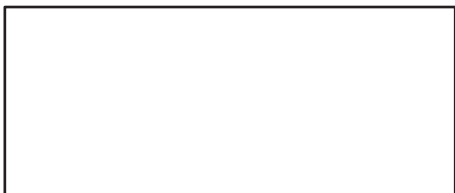
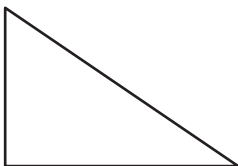
Geometric shapes include triangles, rectangles, squares, rhombi, pentagons, hexagons, trapezoids, quadrilaterals, quarter circles, half circles, and circles.

- **Polygon:** A closed geometric shape with multiple straight sides.
- **Regular polygon:** A geometric shape with multiple sides that all have equal angles and lengths.
- **Irregular polygon:** A geometric shape with multiple sides where the side lengths vary. (G.4)

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 sub-category of squares. (G.4)

Important Tip

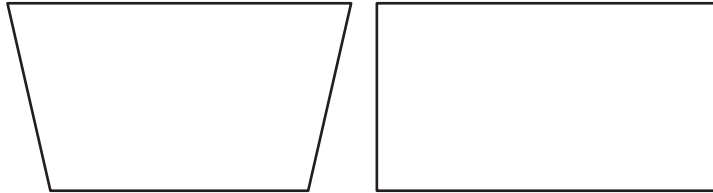
- ✍ A two-dimensional figure can belong in more than one category as well as more than one subcategory.

Sample Items 18–21**Item 18****Selected-Response****Which figure has four right angles?****A.****B.****C.****D.**

Item 19

Selected-Response

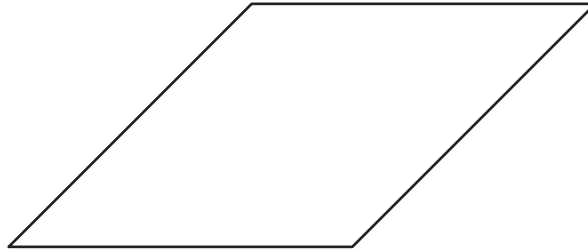
What attributes do these two figures have in common?



- A. Both figures have four right angles.
- B. Both figures have two pairs of equal sides.
- C. Both figures have two pairs of parallel sides.
- D. Both figures have at least one pair of parallel sides.

Item 20**Extended Constructed-Response**

Look at this figure.



Part A: Name the type of figure shown.

Part B: Explain why you gave the figure this name.

<hr/> <hr/>

Part C: What other name could you give this figure?

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Item 21

Technology-Enhanced

Greg wants to rent a warehouse to store his company's lumber. The warehouse must have a volume of at least 5,000 cubic meters but no more than 8,000 cubic meters.

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

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

- A. 20 meters wide, 15 meters long, 13 meters high
- B. 18 meters wide, 18 meters long, 15 meters high
- C. 25 meters wide, 20 meters long, 15 meters high
- D. 22 meters wide, 28 meters long, 10 meters high
- E. 30 meters wide, 20 meters long, 15 meters high
- F. 35 meters wide, 15 meters long, 15 meters high

Unit 7: 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: changing between units within the same measurement system. (MD.1)

Customary Measurements:

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

Metric Measurements:

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

Time is measured in seconds, minutes, and hours. (MD.1)

A **line plot** is 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. (MD.4)

A **solid figure**, or 3-D figure, has a volume. One example of a solid figure is a **right rectangular prism**. Each face of the right rectangular prism is a rectangle. (MD.3)

A cube with all side lengths equal to 1 unit is called a **unit cube** and has a volume of 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. (MD.3)

The volume of a shape is the number of unit cubes that fit in the three-dimensional shape.



Volume is measured in **cubic units**. These may include cubic centimeters, cubic inches, cubic feet, or other length measurements. (MD.4)

The volume of a solid figure can also 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)

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. (MD.5c)

Important Tips

-  To convert a measurement, choose another unit used to measure the same dimension within the customary or within the 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 one dimension such as height, but the size of the base will affect the total volume as well.

Sample Items 22–24

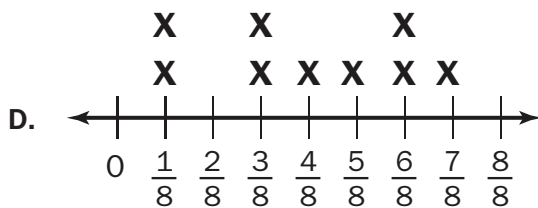
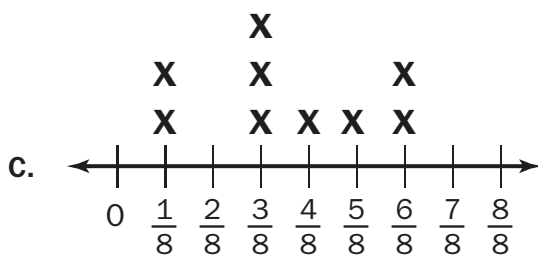
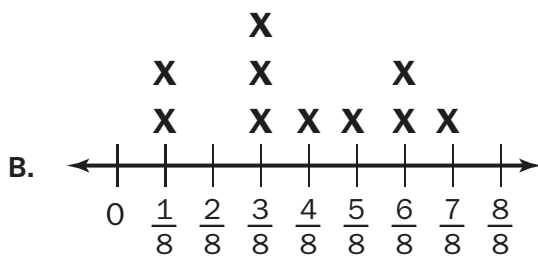
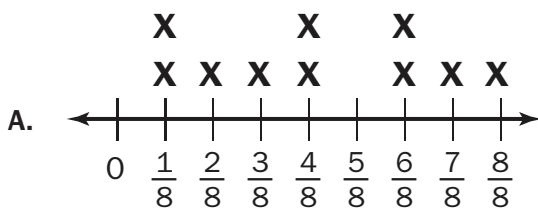
Item 22

Selected-Response

Ten students measured the amount of water in their water bottles. Here are the measurements found in liters:

$$\frac{5}{8}, \frac{3}{8}, \frac{1}{8}, \frac{3}{8}, \frac{6}{8}, \frac{3}{8}, \frac{1}{8}, \frac{7}{8}, \frac{6}{8}, \frac{4}{8}$$

Which line plot shows the data?



Item 23

Constructed-Response

Ms. Reyes wants to display three students' paintings on a wall. The lengths of the paintings are 54 inches, 3.5 feet, and 1 yard.

<p style="text-align: center;">Unit Conversions</p> <p style="text-align: center;">1 yard = 3 feet</p> <p style="text-align: center;">1 foot = 12 inches</p>

Part A: What is the total length of the paintings, in feet? Explain your answer.

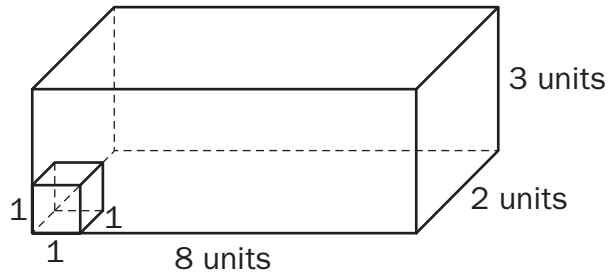
<p>Total length of paintings: _____ feet</p> <hr/> <hr/> <hr/> <hr/> <hr/>
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Part B: What is the total length of the paintings, in inches? Explain your answer.

<p>Total length of paintings: _____ inches</p> <hr/> <hr/> <hr/> <hr/> <hr/>
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Item 24**Selected-Response**

Find the volume of the rectangular prism using the formula
 $\text{Volume} = (\text{area of base}) \times (\text{height})$.



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

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

MATHEMATICS ADDITIONAL SAMPLE ITEM KEYS

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
1	MGSE5.NBT.6	2	N/A	See scoring rubric and sample response beginning on page 121.
2	MGSE5.OA.1	1	C	The correct answer is choice (C) $(3 + 2) \times (13 - 5)$. The order of operations requires that you solve the operations within the parentheses first, and then multiply and divide and add and subtract from left to right. The values inside the two parentheses in $(3 + 2) \times (13 - 5)$ are 5 and 8, which are multiplied together for a product of 40. Choice (A) is 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 multiply the sum of 3 and 2, which is 5, by 13, for a product of 65. Finally you subtract, $65 - 5 = 60$.
3	MGSE5.OA.2	3	N/A	See scoring rubric and sample response beginning on page 123.
4	GSE-1: 5.OA.2	2	Part A: C Part B: B	See scoring rubric on page 125.
5	MGSE5.NBT.7	2	N/A	See scoring rubric and sample response on page 126.
6	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 $8 \times (10) + 3 \times (1) + 9 \times \left(\frac{1}{10}\right)$.

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
7	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 round down to 8 tenths. Choice (D) is incorrect because it indicates rounding to the nearest whole number rather than to the nearest tenth.
8	GSE-1: 5.NBT.4	2	Part A: B/E Part B: D	See scoring rubric on page 127.
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 larger. If you multiply by 10 seven times, the decimal moves to the left 7 places. Choice (A) is incorrect because it shows a movement to the left of only 5 places. This number is 54,200. Choice (B) is incorrect because it shows a movement to the left of only 6 places. This number is 542,000. Choice (D) is incorrect because it shows a movement to the left of 8 places, rather than 7. This number is 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 an error in regrouping tenths and hundredths. 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.

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
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. Choice (C) is incorrect because the response indicates the student misplaced the decimal point when dividing. Choice (D) is incorrect because the response indicates the student misplaced the decimal point when dividing.
12	MGSE5.NF.3	1	C	The correct is choice (C) $7\frac{1}{2}$ pounds. This response indicates that student wrote 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 the subtrahend of the new fraction with the common denominator. No subtraction was performed. Choice (D) is incorrect because the response indicates the student did not find a common denominator needed for the minuend and subtrahend.
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 the total of the circles that is 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.

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
15	MGSE5.G.2	1	D	The correct answer is choice (D) graph with points on (1, 4), (7, 0), and (4, 6). This response shows the points graphed correctly. 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 a point (7, 1) rather than (7, 0).
16	MGSE5.OA.3	2	N/A	See scoring rubric and sample response beginning on page 128.
17	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 C, first move across 8, then up 2. Choice (A) is incorrect because its coordinates show the location for point A. Choice (B) is incorrect because its coordinates show the location for point B. Choice (D) is incorrect because it reverses the x- and y-coordinates, showing a movement of across 2, then up 8, which would locate a point at a different location than point C.
18	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 has two right angles. Choice (D) is incorrect because it is a right triangle, which has only one right angle.
19	MGSE5.G.3	1	D	The correct answer is choice (D) Both figures have at least one pair of parallel sides. The first figure is a trapezoid, and the top and bottom sides are parallel. It has one set of parallel sides. The second figure is a rectangle and it has two pairs of parallel sides. Choice (A) is incorrect because only the rectangle has four right angles. Choice (B) is incorrect because the trapezoid has only one pair of equal sides, while the rectangle has two. Choice (C) is incorrect because only the rectangle has two sets of parallel sides.
20	MGSE5.G.4	3	N/A	See scoring rubric and sample response beginning on page 130.

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
21	GSE-1: 5.MD.5b	2	C/D/F	See scoring rubric on page 132.
22	MGSE5.MD.2	1	B	The correct answer is choice (B). This line plot shows the correct representation of the provided data. Choice (A) is incorrect because the line plot shows X's for fraction amounts that were not recorded by students, such as $\frac{2}{8}$ and $\frac{8}{8}$. Choice (C) is incorrect because the line plot is missing the data value $\frac{7}{8}$. Choice (D) is incorrect because the line plot is missing one of the $\frac{3}{8}$ measurements.
23	MGSE5.MD.1	2	N/A	See scoring rubric and sample response beginning on page 133.
24	MGSE5.MD.5	1	D	The correct answer is choice (D) 48. This response shows that the student correctly multiplied the length and width to find the area of the base and then multiplied that product by the height to find the volume, or counted rows and columns of unit cubes. Choice (A) is incorrect because it shows the area of the one side, or how many unit cubes are needed to cover that side, not the volume of the entire prism. Student only multiplied width times height. Choice (B) is incorrect because it shows the area of the base, or how many unit cubes are needed to cover the base, not the volume of the entire prism. The student only multiplied length times width. Choice (C) is incorrect because it shows the volume for only half of the figure rather than the whole figure. The student only multiplied length times height.

MATHEMATICS SAMPLE SCORING RUBRICS AND EXEMPLAR RESPONSES

Item 1

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a complete understanding of using division to solve a real-world problem. • Give 2 points for a correct response and valid explanations. <ul style="list-style-type: none"> • Response is correct and complete. • Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a partial understanding of using division to solve a real-world problem. • Give 1 point for correct responses but no valid explanations or calculation mistakes made in an otherwise correct process. <ul style="list-style-type: none"> • Response is mostly correct, but contains either a computation error or an unclear or incomplete explanation. • Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates no understanding of using division to solve a real-world problem. <ul style="list-style-type: none"> • Response is incorrect. • Response shows no application of a strategy. <p>Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.</p>

Exemplar Response

Points Awarded	Sample Response
2	<p>Part A: To find the number of craft sticks, find the number of sets of 14 there are in 644. If you multiply 14 by 46, the answer is 644. Each student gets 46 craft sticks.</p> <p>AND</p> <p>Part B: The equation models the problem because it shows a total of 644 craft sticks separated into 14 equal groups.</p> <p>Each student can get a maximum of 46 craft sticks.</p>
1	<p>Part A: To find the number of craft sticks, find the number of sets of 14 there are in 644. If you multiply 14 by 46, the answer is 644. Each student gets 46 craft sticks.</p> <p>AND</p> <p>Each student can get a maximum of 48 craft sticks.</p>
0	<p><i>Student does not produce a correct response or a correct process.</i></p>

Item 3

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a complete understanding of writing expressions, identifying incorrect expressions, and justifying errors. • Give 2 points for a correct response and valid explanation. <ul style="list-style-type: none"> • Response is correct and complete. • Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a partial understanding of writing expressions, identifying incorrect expressions, and justifying errors. • Give 1 point for 1 part answered correctly. <ul style="list-style-type: none"> • Response is mostly correct. • Response shows inaccurate application of a relevant strategy. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates no understanding of writing expressions, identifying incorrect expressions, or justifying errors. <ul style="list-style-type: none"> • Response is incorrect. • Response shows no application of a strategy. • Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.

Exemplar Response

Points Awarded	Sample Response
2	<p>Part A: Rita wants to find the value of three times the sum of 5 and 7, so the expression must show that 5 and 7 must be added first and then that sum is multiplied by 3. As the expression is now, it shows that 3 and 5 are multiplied first and then 7 is added to that product.</p> <p>AND</p> <p>Part B: She should write the addition part first in the expression to show that the addition must be done before the multiplication.</p> <p>AND</p> <p>Part C: 36</p>
1	<p>Part A: Rita wants to find the value of three times the sum of 5 and 7, so the expression must show that 5 and 7 must be added first and then that sum is multiplied by 3. As the expression is now, it shows that 3 and 5 are multiplied first and then 7 is added to that product.</p> <p>AND</p> <p>Part B: She should write the addition part first in the expression to show that the addition must be done before the multiplication.</p> <p>AND</p> <p>Part C: 22</p>
0	<i>Response is irrelevant, inappropriate, or not provided.</i>

Item 4

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 2 indicates complete understanding of how to write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. • The student determines that the correct answer for Part A is Choice (C). AND • The student determines that the correct answer for Part B is Choice (B).
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 1 indicates a partial understanding of how to write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. • The student determines that the correct answer for Part A is Choice (C). OR • The student determines that the correct answer for Part B is Choice (B).
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 0 indicates limited to no understanding of how to write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

Item 5

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a complete understanding of dividing a decimal number by a whole number. • Give 2 points for a correct response and valid explanation. <ul style="list-style-type: none"> • Response is correct and complete. • Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a partial understanding of dividing a decimal number by a whole number. • Give 1 point for a correct response but no valid explanation or a calculation mistake made in an otherwise correct response. <ul style="list-style-type: none"> • Response is mostly correct, but contains either a computation error or an unclear or incomplete explanation. • Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates no understanding of dividing a decimal number by a whole number. <ul style="list-style-type: none"> • Response is incorrect. • Response shows no application of a strategy. • Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.

Exemplar Response

Points Awarded	Sample Response
2	<p>Each person rode 2.9 or 2.90 miles. AND A total of 8 ones and 7 tenths are shaded to model the total length of the race. The shading is equally divided into 3 groups to model the 3 riders. And each group has 2 ones and 9 tenths shaded to model the distance each person rode.</p>
1	<p>Each person rode 2.9 or 2.90 miles. [NO explanation of models is given.]</p>
0	<p><i>Response is irrelevant, inappropriate, or not provided.</i></p>

Item 8

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 2 indicates a complete understanding of how to use place value to round decimals up to the hundredths' place. • The student determines that the correct answers for Part A are Choice (B) and Choice (E). AND • The student determines that the correct answer for Part B is Choice (D).
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 1 indicates a partial understanding of how to use place value to round decimals up to the hundredths' place. • The student determines that the correct answers for Part A are Choice (B) and Choice (E). OR • The student determines that the correct answer for Part B is Choice (D).
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 0 indicates limited to no understanding of how to use place value to round decimals up to the hundredths' place.

Item 16

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a complete understanding of how to identify a two-numerical pattern given examples and form ordered pairs from corresponding terms in the two patterns. • Give 2 points for a correct response and valid process. <ul style="list-style-type: none"> • Response is correct and complete. • Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a partial understanding of how to identify a two-numerical pattern given examples and form ordered pairs from corresponding terms in the two patterns. • Give 1 point for a correct response but no valid process or a calculation mistake made in an otherwise correct process. <ul style="list-style-type: none"> • Response is mostly correct, but contains either a computation error or an unclear or incomplete explanation. • Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates no understanding of how to identify a two-numerical pattern given examples and form ordered pairs from corresponding terms in the two patterns. <ul style="list-style-type: none"> • Response is incorrect. • Response shows no application of a strategy. • Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.

Exemplar Response

Points Awarded	Sample Response
2	Part A: Row A: 2 Row B: 2 Row D: 4, 8 Row E: 5, 10 AND Part B: The x-values in each row are doubled to get the y-values of the same row.
1	Completes only one part correctly or completes both parts with no more than two errors. Part A: Row A: 2 Row B: 2 Row D: 4, 8 Row E: 5, 10 OR Part B: The x-values in each row are doubled to get the y-values of the same row.
0	<i>Response is irrelevant, inappropriate, or not provided.</i>

Item 20

Scoring Rubric

Points	Description
3	<p>The response achieves the following:</p> <ul style="list-style-type: none"> The response demonstrates a complete understanding of classifying two-dimensional figures based on properties. Give 3 points for 3 parts answered correctly. <ul style="list-style-type: none"> Response is correct and complete. Response shows application of a reasonable and relevant strategy. Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> The response demonstrates a good understanding of classifying two-dimensional figures based on properties. Give 2 points for correct identification of the given figure and identification of another figure that fits the criteria for the classification in Part B. However, the student only provides one attribute to describe the given figure or both figures. <ul style="list-style-type: none"> Response is mostly correct, but contains either a computation error or an unclear or incomplete explanation. Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> The response demonstrates a limited understanding of classifying two-dimensional figures based on properties. <ul style="list-style-type: none"> Response is only partially correct. Response shows incomplete or inaccurate application of a relevant strategy. Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> The response demonstrates no understanding of classifying two-dimensional figures based on properties. <ul style="list-style-type: none"> Response is incorrect. Response shows no application of a strategy. Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding

Exemplar Response

Points Awarded	Sample Response
3	Part A: (Answers may vary.) quadrilateral, rhombus, or parallelogram; Part B: The figure has four sides, which makes it a quadrilateral. The fact that it has two pairs of parallel sides with opposite sides being equal in length as well as opposite angles being equal makes it a parallelogram. The fact that all four sides are congruent makes it a rhombus or other correct response. AND Part C: quadrilateral, rhombus, or parallelogram; (Whichever term was not used in Part A.)
2	Student gives two correct responses.
1	Student gives one correct response.
0	<i>Response is irrelevant, inappropriate, or not provided.</i>

Item 21

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 2 indicates complete understanding of how to relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. • The student selects Choice (C), Choice (D), and Choice (F).
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 1 indicates a partial understanding of how to relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. • The student selects Choice (C) and Choice (D), with or without an additional incorrect answer. OR • The student selects Choice (C) and Choice (F), with or without an additional incorrect answer. OR • The student selects Choice (D) and Choice (F), with or without an additional incorrect answer.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • A score of 0 indicates limited to no understanding of how to relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. • The student selects Choice (C), with or without any additional incorrect answers. OR • The student selects Choice (D), with or without any additional incorrect answers. OR • The student selects Choice (F), with or without any additional incorrect answers. OR • The student does not select any correct answers.

Item 23

Scoring Rubric

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a complete understanding of how to convert among customary units of length and use the conversions in solving a real-world problem. • Give 2 points for a correct response and valid process. <ul style="list-style-type: none"> • Response is correct and complete. • Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • Response demonstrates a partial understanding of how to convert among customary units of length and use the conversions in solving a real-world problem. • Give 1 point for a correct response but no valid process or a calculation mistake made in an otherwise correct process. <ul style="list-style-type: none"> • Response is mostly correct, but contains either a computation error or an unclear or incomplete explanation. • Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. • Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates no understanding of how to convert among customary units of length and use the conversions in solving a real-world problem. <ul style="list-style-type: none"> • Response is incorrect. • Response shows no application of a strategy. • Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding

Exemplar Response

Points Awarded	Sample Response
2	<p>Part A: The total length of the three paintings is 11 feet. Since 12 inches is 1 foot, I converted 54 inches to feet by dividing by 12. I know that 1 yard is 3 feet. Then I added the three lengths, in feet, to get a total length of 11 feet. AND Part B: The total length of the three paintings is 132 inches. Since each foot is 12 inches, I multiplied 11 feet by 12 to convert the total length in inches to feet. OR Part B: The total length of the three paintings is 132 inches. Since each foot is 12 inches, I multiplied the length given in feet by 12 to get 42 inches. Since 1 yard is 3 feet, I multiplied 3 by 12 to convert 1 yard to 36 inches. Then I added the three lengths, in inches, to get a total length of 132 inches.</p>
1	<p>Part A: The length of the three paintings is 11 feet. Part B: The length of the three paintings is 132 inches. OR Part A: The total length of the three paintings is 11 feet. Since 12 inches is 1 foot, I converted 54 inches to feet by dividing by 12. I know that 1 yard is 3 feet. Then I added the three lengths, in feet, to get a total length of 11 feet. OR Part B: The total length of the three paintings is 132 inches. Since each foot is 12 inches, I multiplied 11 feet by 12 to convert the total length in inches to feet. OR Part B: The total length of the three paintings is 132 inches. Since each foot is 12 inches, I multiplied the length given in feet by 12 to get 42 inches. Since 1 yard is 3 feet, I multiplied 3 by 12 to convert 1 yard to 36 inches. Then I added the three lengths, in inches, to get a total length of 132 inches.</p>
0	<p><i>Response is irrelevant, inappropriate, or not provided.</i></p>

ACTIVITY

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

Standards: MGSE.5.OA.1, MGSE.5.OA.2, MGSE.5.OA.3

Place Value

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

Directions:

- Put all of 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 number 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.

ACTIVITY

The following activity develops skills in Unit 7: Volume and Measurement.

Standards: MGSE.5.G.1, MGSE.5.G.2, MGSE.5.G.3

You can do this activity yourself or in small groups with your family.

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

- Choose a location in the house 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 it takes to say each sentence to the nearest quarter minute. Record the time data on a line plot. Use the plot to determine how long each sentence would be if you redistributed the total amount of time needed to say all the sentences equally among the ten sentences.

SCIENCE

DESCRIPTION OF TEST FORMAT AND ORGANIZATION

The Grade 5 Science EOG assessment has a total of 75 items.

The test will be given in two sections.

- You may have up to 70 minutes per section to complete Sections 1 and 2.
- The total estimated testing time for the Grade 5 Science EOG assessment ranges from approximately 90 to 140 minutes.

CONTENT

The Grade 5 Science EOG assessment will measure the Grade 5 Science standards that are described at www.georgiastandards.org. The science items also relate to a Characteristics of Science standard. Because science consists of a way of thinking and investigating and includes a growing body of knowledge about the natural world, you will need to understand both the **Characteristics of Science** standards and the **Content** standards for Science. The Characteristics of Science standards can also be found at www.georgiastandards.org.

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. Some items in the field-test positions will be technology-enhanced items.

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: Life Science

Standard: S5L3 Students will diagram and label parts of various cells (plant, animal, single-celled, multi-celled). b. Identify parts of a plant cell (membrane, wall, cytoplasm, nucleus, chloroplasts) and of an animal cell (membrane, cytoplasm, and nucleus), and determine the function of the parts.

Standard: S5CS4 Students will use ideas of system, model, change, and scale in exploring scientific and technological matters. a. Observe and describe how parts influence one another in things with many parts.

Which of these BEST describes the function of the cell membrane?

- A. It produces energy for cell functions.
- B. It is responsible for cell reproduction.
- C. It controls what enters and leaves the cell.
- D. It stores water and nutrients until needed by the cell.

Correct Answer: C

Explanation of Correct Answer: The correct answer is choice (C) It controls what enters and leaves the cell. Choice (A) is incorrect. Energy is manufactured elsewhere in the cell. Choice (B) is incorrect because the membrane is not responsible for cell reproduction. Choice (D) is incorrect because the function of storing materials is done elsewhere in the cell.

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: Physical Science

Standard: S5P2 Students will explain the difference between a physical change and a chemical change. c. Investigate the properties of a substance before, during, and after a chemical reaction to find evidence of change.

Standard: S5CS8 Students will understand important features of the process of scientific inquiry. a. Scientific investigations can take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.

A teacher is demonstrating physical and chemical changes to her class.

Which action should she use to demonstrate a chemical change?

- A. cutting a piece of paper
- B. folding a piece of paper
- C. tearing a piece of paper
- D. burning a piece of paper

Correct Answer: D

Explanation of Correct Answer: The correct answer is choice (D) burning a piece of paper. Chemical changes occur when matter is changed from one form to another without creating a new substance. When paper is burned, new substances (smoke and ash) are created. Choices (A), (B), and (C) are incorrect because they all represent physical changes. The paper is changed, but a new substance is not created.

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: Physical Science

Standard: S5P2 Students will explain the difference between a physical change and a chemical change. b. Recognize that the changes in state of water (water vapor/steam, liquid, ice) are due to temperature differences and are examples of physical change.

Standard: S5CS8 Students will understand important features of the process of scientific inquiry. a. Scientific investigations can take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.

Students observed as small drops of water collected on the outside of a glass.



Which statement BEST describes why the water vapor in the air formed liquid water on the outside of the glass?

- A. The humidity outside the glass turns the vapor to liquid water.
- B. The water vapor pulls the water from inside the glass to outside the glass.
- C. The temperature of the water inside the glass is colder than the air outside the glass.
- D. The temperature of the water inside the glass is warmer than the air outside the glass.

Correct Answer: C

Explanation of Correct Answer: The correct answer is choice (C) The temperature of the water inside the glass is colder than the air outside the glass. The cold temperature on the outside of the glass causes the water vapor on the outside of the glass to form liquid water on the surface of the glass. Choices (A) and (B) are incorrect. The humidity level is not as important to the formation of water vapor as the lower temperature. Choice (D) is incorrect because water vapor would not form on the outside of a glass that is warmer than the air that surrounds the glass.

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 vocabulary words. This section also contains practice questions, with an explanation of the correct answers, and activities that you can do 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.

CONTENT DESCRIPTION

- Identify how different surface features of Earth, like volcanoes, river deltas, and sand dunes, are formed.
- Analyze how technology provides information and helps us control constructive and destructive processes like earthquakes, flooding, and coastal erosion.
- Describe how human interventions can influence the effects of constructive and destructive processes in the environment.
- Investigate the idea of conservation of mass by verifying that an object is the sum of its parts.
- Recognize a physical and a chemical change, and explain the difference between them.
- Explain the how changes in the state of water are related to temperature differences.
- Explain the causes of static electricity.
- Investigate simple electric circuits and the components necessary for them to work.
- Examine the characteristics of insulators and conductors of electricity.
- Compare the characteristics of bar magnets with those of electromagnets.
- Classify organisms according to different criteria.
- Distinguish between learned behaviors and inherited traits.
- Explain the role of genes in the transfer of traits.
- Diagram the parts of the animal and plant cells and explain their functions.
- Compare multi-celled and single-celled organisms.
- Describe how microorganisms benefit or harm other organisms.

CHARACTERISTICS OF SCIENCE STANDARDS

- Understand process skills.
- Test a hypothesis, keep records, use safety procedures, and use appropriate tools and instruments.
- Apply math and technology.
- Analyze data, interpret results, and communicate information.
- Offer reasons for findings, and consider reasons offered by others.
- Keep records of investigations and observations, and understand why you should not alter records.
- Use numerical data to describe and compare objects.
- Use reference books, back issues of magazines or newspapers, and computer databases to locate scientific information. Then use the information found in these sources to support statements.
- Realize that safety is a fundamental concern in all experimental science, and follow safety guidelines. Wear goggles any time chemicals, glassware, or heat is used.
- Investigate scientific concepts and understand that science is a process for gaining knowledge about the natural world.
- Use hands-on activities to discover and explain phenomena.
- Conduct experiments, and report findings in the form of written reports, charts, and various other presentations, including multimedia projects.
- Emphasize evidence, and begin to use scientific principles, models, and theories.
- Convert fractions (halves, thirds, fourths, fifths, tenths, and hundredths) to decimals in scientific calculations, and identify the largest and smallest possible value of something.

Unit 1: Cells and Microorganisms

In this unit, you will study life science. You will explain how magnifiers such as microscopes or hand lenses are used to observe cells and their structure. You will recognize and determine the functions of plant and animal cell structures (i.e., cell membrane, cell wall, cytoplasm, nucleus, chloroplasts). You will distinguish between the structure and function of cells in multi-celled organisms and single-celled organisms. You will identify beneficial microorganisms and explain why they are beneficial, and you will identify harmful microorganisms and explain why they are harmful.

KEY TERMS

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)

A **microscope** is 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. All cells come from other cells. (S5L3b)

Cells are made up of many different parts. This table shows where you will find some cell **structures** and describes some of the **functions** of these cell parts. (S5L3b)

	Animal Cell	Plant Cell
Cell Wall	not found in animal cells	<ul style="list-style-type: none"> outer layer of a cell provides support and structure to cell most plant cell walls are rigid
Cell Membrane	outer layer of the cell	separates the cell wall from everything inside the cell
Cytoplasm	<ul style="list-style-type: none"> the fluid and cell parts found within the cell all cell activity happens in the cytoplasm 	<ul style="list-style-type: none"> the fluid and cell parts found within the cell all cell activity happens in the cytoplasm
Nucleus	the part that controls all the activity in a cell	the part that controls all the activity in a cell
Chloroplast	not found in animal cells	produces sugar for the plant to use and to store

Single-celled organisms are made up of one cell, and all cell functions are performed by the one cell. Single-celled organisms are individual living organisms. (S5L3c)

Multi-celled organisms are made up of more than one cell. Different cells perform different functions within the organism. Multi-celled organisms have cells that depend on each other for the organism to survive. (S5L3c)

Microorganisms are living things that are too small to be seen without magnification. They are not plants or animals, and they live on every part of the planet Earth. (S5L4a)


Some microorganisms are **beneficial** to people and the environment. Other microorganisms can be **harmful** and can cause **disease** and death. (S5L4a, b)

Bacteria are single-celled microorganisms. There are many different kinds of bacteria. Some bacteria can be used to make cheese. Bacteria are the oldest known life forms on Earth and live in almost every environment on Earth. Many bacteria are beneficial, but many other bacteria are harmful. (S5L4a, b)

A **germ** is a microorganism that can cause a disease. Because most microorganisms live in water, the tap water you drink has been cleaned to make the water safe to drink. (S5L4b)

Microbe is another word used for microorganisms. (S5L4a)

Important Tip

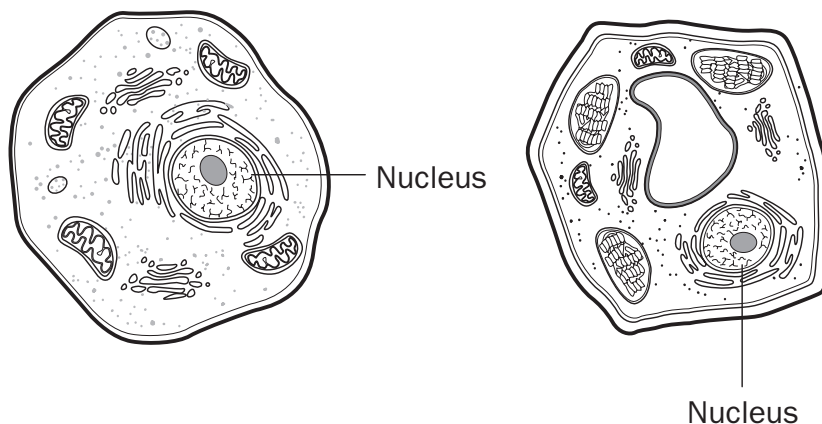
 If you are having trouble remembering the parts of a plant cell, think of your home. The outside wall is like the cell wall, protecting what is inside and providing structure. The inside walls are like the cell membrane, which is just inside the cell walls. The cytoplasm is everything inside your home: you, the refrigerator where food is stored, everything. The nucleus is like a parent who decides what gets done and when inside the home. The chloroplasts are like the plants inside your home, making energy from the sunlight. (S5L3b)

Sample Items 1–4

Item 1

Selected-Response

Students identified the nucleus in an animal cell and a plant cell.



How is the function of the nucleus the same in both kinds of cell?

- A. It protects the parts of the cell.
- B. It gives the cell a rigid structure.
- C. It controls the activities of the cell.
- D. It regulates what enters and exits the cell.

Item 2

Selected-Response

In the 1670s, Antony Leeuwenhoek discovered microorganisms in the human mouth. Later these microorganisms were determined to cause dental plaque, which is harmful to teeth.

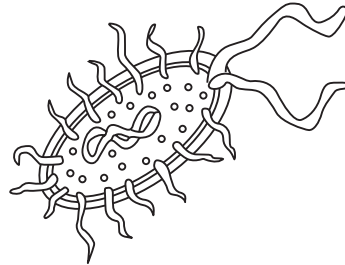
Which of these describes another way microorganisms can be harmful?

- A. Microorganisms act on milk to make yogurt.
- B. Microorganisms break down dead organisms.
- C. Microorganisms break down meat before it is eaten.
- D. Microorganisms break down sugars in your digestive system.

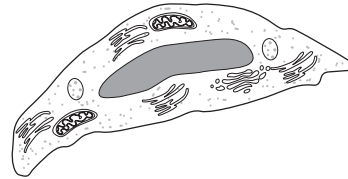
Item 3

Selected-Response

Students drew sketches of a microorganism and a muscle cell.



Microorganism



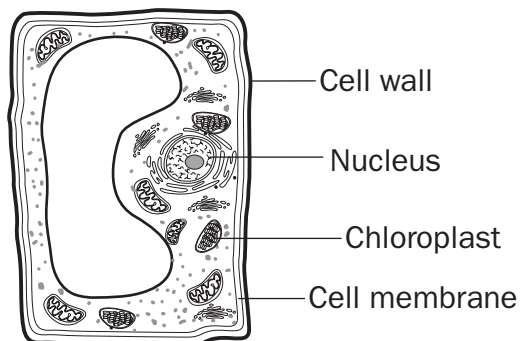
Muscle cell

How are these two cells different in function?

- A.** The microorganism contains several different organelles surrounded by membranes, while the muscle cell does not.
- B.** The muscle cell has a rigid cell wall that gives structure to the cell, but the microorganism only has a cell membrane.
- C.** The muscle cell is able to reproduce by itself, but the microorganism needs to have another cell in order to reproduce.
- D.** The microorganism performs all functions within a single cell, while the muscle cell performs a certain function within an organism.

Item 4**Selected-Response**

A teacher shows her class a drawing of a plant cell.



A student states that the function of the cell membrane is to maintain the cell's shape. The teacher states that this is incorrect.

Which description provides the correct function for the cell membrane?

- A. It provides the cell's energy.
- B. It directs the cell's activities.
- C. It stores water and nutrients for the cell.
- D. It controls what enters and leaves the cell.

Unit 2: Classification

In this life science unit, you will learn how plants and animals are sorted into groups (i.e., fish, amphibian, reptile, bird, and 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 TERMS

You **classify** things when you organize them into **groups** based on **characteristics** they share. Scientists classify things so 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)

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)

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**. Primates and rodents are examples of vertebrates. (S5L1a)

Animals without backbones, known as **invertebrates**, make up 97% of all animal species. 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.

Many plants are classified by scientists as **vascular plants**. Vascular plants have tissues that let the plant move resources like water and sugars in the plant. Grasses and fruit trees are examples of vascular plants. **Nonvascular** plants are plants that do not have the tissues that vascular plants use to move resources. The nonvascular plants rely on simpler ways to move resources. Nonvascular plants also do not have stems and grow lower to the ground. Mosses and algae are examples of nonvascular plants. (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)

Many plants are also classified by scientists as **deciduous**. Deciduous plants shed their leaves every year. **Coniferous** plants are plants that are classified as not losing their leaves **every season**. The majority of coniferous plants are trees. Most conifers are **evergreens**, such as pine, fir, and cedar trees. (S5L1b)

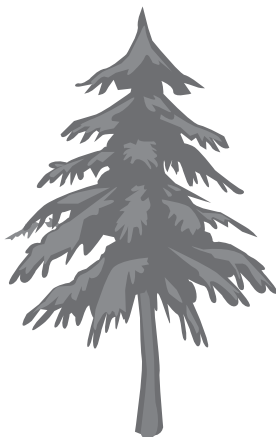
Flowering plants that protect their seeds by enclosing them in a structure such as a fruit are called **angiosperms**. Non-flowering plants that keep their seeds visible, usually in a cone, are called **gymnosperms**. Coniferous plants are gymnosperms. (S5L1b)

Important Tip

✍ The ways scientists have classified organisms has 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)

Sample Items 5–8**Item 5****Selected-Response**

A teacher showed her students a picture of a tree that does not lose all its leaves every year.



How should the tree be classified?

- A. flowering
- B. fruit bearing
- C. non-flowering
- D. non-seed bearing

Item 6**Selected-Response**

A biologist made a table to show the characteristics of six organisms.

	Habitat	Food Source	Internal Structure	Presence of Scales
Sea Stars	Water	Mostly animals	No backbone	No
Jellyfish	Water	Mostly animals	No backbone	No
Earthworms	Land	Mostly plants	No backbone	No
Birds	Land	Plants and animals	Backbone	Yes
Frogs	Land and water	Mostly animals	Backbone	No
Sharks	Water	Mostly animals	Backbone	Yes

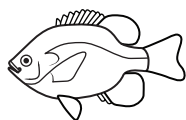
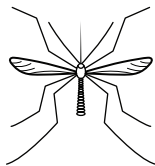
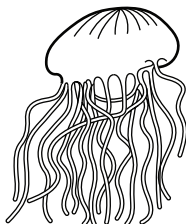
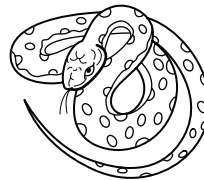
She wanted to classify the organisms into two groups.

Which characteristic should be used to classify the organisms as vertebrates or invertebrates?

- A. habitat
- B. food source
- C. internal structure
- D. presence of scales

Item 7**Selected-Response**

Ms. Lee asked her students to draw pictures of invertebrates.

**Student A****Student B****Student C****Student D**

Which students correctly identified invertebrates?

- A. Students A and C, because both organisms live in water
- B. Students B and D, because both organisms live on land
- C. Students B and C, because both organisms lack backbones
- D. Students A and D, because both organisms have backbones

Item 8**Selected-Response**

A group of science students were asked to draw pictures of animals they observed on a field trip to a zoo.



In which group would all these animals be classified?

- A. fish because they all need water
- B. mammals because they all have legs
- C. amphibia because they all have scales
- D. vertebrates because they all have backbones

Unit 3: Genetics

In this life science unit, you will learn about the characteristics of learned behaviors and inherited traits. You will be able to describe what a gene is and the role genes play in the transfer of traits.

KEY TERMS

In genetics, a **trait** is a physical characteristic of an organism that is inherited from the parents. The color of your eyes is a trait. Your **genes** will determine your physical traits such as skin, eye, and hair color. Other traits, such as height and weight, might be affected by your genes but will not be completely determined by genes. The collection of your traits makes you an individual, unique in your own way. (S5L2b)


Traits are said to be common when the majority of organisms have a similar trait. Being right-handed is a common trait because most people are right-handed. (S5L2b)

An **offspring** is the product of one or more parents. You are the offspring of your parents. Yeast, which is used to make bread, is an example of the offspring of a single parent. Each parent passes an equal amount of their genetic code to the offspring. (S5L2b)

The passing of traits from parent(s) to offspring is known as **heredity**. The color of your hair is an example of a trait that is passed down from parents to offspring. A trait that has been passed down is known as a **hereditary** trait. (S5L2a)

In contrast to traits, an organism also has **learned behaviors**. These are ways organisms act and react to their environment. When you get ready for school, at some point you tie your shoes. This is an example of a learned behavior. (S5L2a)

Important Tip

 The environment plays a role in making you who you are. Your genes will determine some of your traits, like hair color, but environmental factors can also affect your hair color. As an older adult, your hair will start to turn gray or white. Some scientists have hypothesized and done studies that show that stress will cause your hair to change color earlier in your life. (S5L2a)

Sample Items 9–12

Item 9

Selected-Response

Which of these is an inherited trait?

- A. throwing a ball
- B. getting wrinkles
- C. having blue eyes
- D. playing the piano

Item 10

Selected-Response

A girl observed her younger brother and listed the behaviors she saw.

Which of these was a learned behavior?

- A. blinking
- B. reading
- C. sleeping
- D. swallowing

Item 11

Selected-Response

Gregor Mendel was a scientist who lived in the 1800s. He studied inherited traits in pea plants.

Which of these could have been one of the observations about inherited traits that he recorded?

- A. The plants with purple flowers grew in the shade.
- B. The plants with yellow pods received more water.
- C. The plants with shriveled pods were growing in sandy soil.
- D. The plants with green seeds came from parents with green seeds.

Item 12

Selected-Response

Sickle cell anemia is a disease caused by the presence of a trait that changes the shape of the red blood cells.

What information would BEST help a researcher understand if this is an inherited trait?

- A.** the age of the parents of a child with sickle cell anemia
- B.** the genes of the parents of a child with sickle cell anemia
- C.** the health of the parents of a child with sickle cell anemia
- D.** the heights of the parents of a child with sickle cell anemia

Unit 4: Electricity/Magnetism

In this unit 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, without touching them, an object that has been electrically charged pulls on uncharged objects and may either push or pull other 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 TERMS

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. (S5P3)

Electric current is the flow of an electric charge through a conductor. When electric currents move through a conductor, they create heat and magnetic fields. Lightning, static electricity, and the movement of electricity in power lines are examples of electric currents. (S5P3)

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 the second object. When the electrical charge jumps from one object to another, it is said to have discharged. This is the spark you see. (S5P3a)

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. (S5P3a)


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 to the circuit. (S5P3b)

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 and rubber are very common **insulating materials**. Insulators are used to protect people from electric currents. (S5P3c)

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. (S5P3d)

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. (S5P3d)

Important Tip

 Electricity and magnetism are connected to each other. Electricity can produce magnetism. When an electric current flows through a wire, it 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 it, it 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. (S5P3d)

Sample Items 13–16**Item 13****Selected-Response**

Students conducted an investigation with balloons and made the notes shown.

Balloon Observations

Action	Observation
Placed Balloon A and Balloon B next to each other	No movement
Rubbed Balloon A with a wool cloth	Balloons moved toward each other
Rubbed both balloons with a wool cloth	Balloons moved away from each other

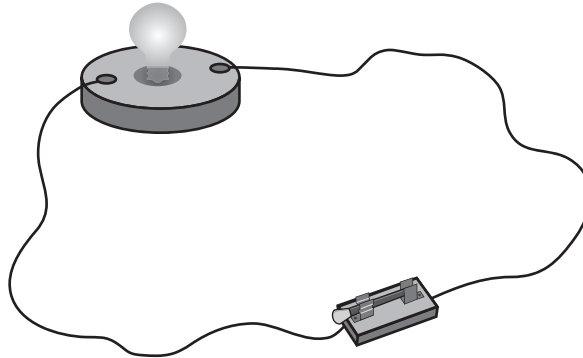
What can explain the movement of the balloons?

- A. static electricity
- B. gravitational pull
- C. current electricity
- D. magnetic attraction

Item 14

Selected-Response

A student in science class made this circuit, but the bulb did not light.



What did his teacher explain he should have done to make the bulb light?

- A. use a power source
- B. use a second switch
- C. make both of the wires longer
- D. connect the bulb to only one wire

Item 15

Selected-Response

A class is gathering materials to make a circuit that will light a bulb.

Which material will be the BEST conductor of electricity for the circuit?

- A. glass
- B. metal
- C. rubber
- D. wood

Item 16**Selected-Response**

On a field trip to a recycling center, a class sees this magnet in use.



The class debates if it is a bar magnet or an electromagnet.

What is the **BEST** evidence to explain which it is?

- A. An electromagnet is larger than a bar magnet.
- B. An electromagnet cannot be used outside when it is raining.
- C. An electromagnet must be plugged into an electrical outlet to operate.
- D. An electromagnet is a temporary magnet allowing it to release the objects.

Unit 5: Chemical and Physical Change

In this physical science unit, 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. You will develop a basic understanding of the Law of Conservation of Matter.

KEY TERMS

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. (S5P2a)

Chemical properties are any properties that can only be measured 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. (S5P2c)

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. (S5P2a)

Substance is matter of any form that cannot be broken down into separate elements by physical means but can be broken down using chemical changes. (S5P2c)

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. (S5P2c)

A **chemical reaction** is a process where two or more substances change chemically from one substance to one or more other substances. When iron is combined with air, the iron is slowly converted into rust. (S5P2c)

A **mixture** is something that contains two or more substances that are not combined chemically. Salted popcorn is an example of a mixture. (S5P2a)


Something is a mixture if you can physically **separate** the substance 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 in the glass is some salt. (S5P2a)

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. (S5P2b)

Matter is anything that has mass and is in one of the states of matter. (S5P1a)

Regardless of how parts of an object are assembled, the total weight of the whole object is always the same as the sum of the parts. (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. (S5P2a, b)

Sample Items 17–20**Item 17****Selected-Response**

A science teacher shows his students a mixture of plastic beads and metal beads. He then uses a magnet for a demonstration.

What is the teacher **MOST LIKELY** demonstrating?

- A. making a solution
- B. separating a mixture
- C. creating a chemical change
- D. changing the state of matter

Item 18**Selected-Response**

A group of students place a beaker of liquid water outside. They measure the temperature of the water at different times and record its state.

Time	Temperature	Appearance
8:00	50°C	Liquid
10:00	43°C	Liquid
12:00	39°C	Liquid
2:00		Solid

Which **BEST** predicts the temperature of the water at 2:00?

- A. lower than 39°C
- B. higher than 50°C
- C. between 39°C and 43°C
- D. between 43°C and 50°C

Item 19**Selected-Response**

A science teacher lit a candle and described to his students that some of the wax is burning while some of the wax is melting. Student A states that these are both physical changes. Student B states that these are both chemical changes.

Which statement BEST describes the students' conclusions?

- A. Student A is correct.
- B. Student B is correct.
- C. Both are incorrect, because burning wax is a chemical change and melting wax is a physical change.
- D. Both are incorrect, because burning wax is a physical change and melting wax is a chemical change.

Item 20**Selected-Response**

A student is creating a potting soil mix. She combines 100 grams of sand, 200 grams of soil, and 200 grams of pebbles to make her potting soil.

What is the mass of the potting soil?

- A. 100 grams
- B. 200 grams
- C. 300 grams
- D. 500 grams

Unit 6: Earth Science

In this unit 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 TERMS

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)

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. Erosion can also be a constructive process, such as in the Mississippi Delta. Soil is eroded from farther up the Mississippi River and is carried down to the delta where it creates new land. (S5E1a)

Deposition is the process whereby soil and rock that is eroded from one location is deposited as **sediment** in another location, such as the soil in the Mississippi Delta. (S5E1a)

Continental drift is the process of the continents slowly moving around the surface of Earth. 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)

Trenches can be found where faults are located under the ocean. Much smaller trenches are also created by erosion. **Glaciers**, sheets of very old ice the size of states that move along Earth's surface, also create trenches 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)

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 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 Hawai'i are **landforms** created by volcanoes. (S5E1a)

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 the 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. (S5E1b)

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)

Scientists have a tool they use to predict earthquakes, volcanic eruptions, and tsunamis. This tool is known as a **seismograph**. Seismic waves are vibrations that move through Earth. As an earthquake or volcanic eruption starts, a seismograph detects the increase in the strength and frequency of seismic waves. (S5E1c)

Important Tips

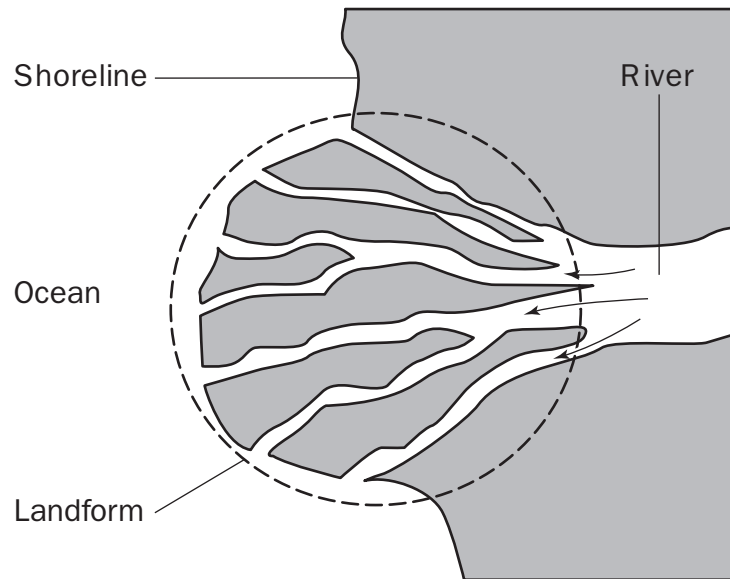
- ✍ There are many areas on Earth where tectonic plates meet. One such area is known as the Ring of Fire, which runs from the southern tip of South America, up the Pacific Ocean side of North America, across the Bering Strait, down the Asian coastline, and alongside Japan and Australia. The tectonic plates along this area move around a lot. The crust is also thinner in this area, so there are a lot of volcanoes, which is how it got the name “Ring of Fire.” (S5E1b)
- ✍ 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 moves downhill, higher areas of Earth will always see more erosion than lower areas. (S5E1a, b)

Sample Items 21–24

Item 21

Selected-Response

A teacher shows her class a sketch of a river flowing out to an ocean.



A student thought that the landform was caused by a volcanic eruption. The teacher said he was incorrect.

Which statement **BEST** describes what the landform is and how it was created?

- A. A fault was formed as the river eroded the beach.
- B. An island was formed as the river eroded the beach.
- C. A dune was formed as the river deposited sediment from upstream.
- D. A delta was formed as the river deposited sediment from upstream.

Item 22**Selected-Response**

A group of students visit the coast with their science class. A year later the students return to the same spot and observe that the beach is much smaller.

Student 1 says that the coastline was affected by erosion. Student 2 says it was affected by deposition.

Which student is correct and why?

- A. Student 1, due to erosion caused by ocean water
- B. Student 2, due to deposition caused by ocean water
- C. Student 1, due to erosion caused by fault movement
- D. Student 2, due to deposition caused by fault movement

Item 23**Selected-Response**

A scientist recently sent this e-mail.

Dr. Draper,

I have observed an area of the coastal shoreline for the past five years. My records show that the coastal shoreline is getting narrower by approximately 0.5 meter a year.

I am recommending that we try dredging in these areas.

Sincerely,
Dr. Tran

Why is the scientist recommending dredging?

- A. It acts as a flood control measure.
- B. It protects the wildlife in the ocean.
- C. It reclaims beaches lost to water erosion.
- D. It forms a barrier to reduce wind erosion.

Item 24**Selected-Response**

For five months, a scientist measured the depth of sand in a certain part of coastal shoreline. She recorded her observations in a table.

Month	January	February	March	April	May
Depth of Sand	115 cm	131 cm	157 cm	172 cm	191 cm

What is the BEST explanation of the data?

- A. water eroding sand to create a gully
- B. wind depositing sand to form a dune
- C. rock being deposited by ocean waves
- D. shells washing ashore from the ocean

SCIENCE ADDITIONAL SAMPLE ITEM KEYS

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
1	S5L3b	S5CS4a	1	C	The correct answer is choice (C) It controls the activities of the cell. The nucleus is found in both cells. It controls the functions of the other cell parts including moving, eating, and reproducing. Choice (A) describes the cytoplasm, which is the fluid that fills the cell and protects the parts of the cell. Choice (B) describes the cell wall, which is found only in the plant cell. Choice (D) describes the cell membrane in a plant and an animal cell.
2	S5L4a	S5CS7b	2	C	The correct answer is choice (C) Microorganisms break down meat before it is eaten. Microorganisms such as those that cause dental plaque and food to rot are harmful to humans. Choices (A), (B), and (D) all are incorrect. These all describe ways that microorganisms are beneficial to humans.
3	S5L3c	S5CS4c	2	D	The correct answer is choice (D) The microorganism performs all functions within a single cell, while the muscle cell performs a certain function within an organism. Microorganisms are single-celled organisms. Choice (A) is incorrect. Microorganisms do not have membrane-bound organelles. Choice (B) is incorrect because the distinction between a microorganism and a cell from a multi-celled organism is not based on the presence of a cell wall. Choice (C) is incorrect. The distinction between a microorganism and a cell from a multi-celled organism is not based on reproduction.

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
4	S5L3b	S5CS1c	2	D	The correct answer is choice (D) It controls what enters and leaves the cell. Choice (A) is incorrect because the cell membrane does not provide the cell's energy. Choice (B) is incorrect because the cell membrane does not direct the cell's activities. Choice (C) is incorrect because the cell membrane does not store water and nutrients for the cell.
5	S5L1b	S5CS8a	2	C	The correct answer is choice (C) non-flowering. Choice (A) is incorrect because this tree is a conifer, which is a non-flowering plant. Choice (B) is incorrect because conifers are not fruit-bearing trees. Choice (D) is incorrect because conifers do have seeds.
6	S5L1a	S5CS8a	2	C	The correct answer is choice (C). The organisms are classified as vertebrates or invertebrates according to whether they have a backbone, that is, their internal structure. Choice (A) is incorrect because the defining characteristic of vertebrates and invertebrates is independent of habitat. Choice (B) is incorrect because the defining characteristic of vertebrates and invertebrates is independent of food source. Choice (D) is incorrect because the defining characteristic of vertebrates and invertebrates is independent of the presence of scales.

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
7	S5L1b	S5CS8a	2	C	The correct answer is choice (C). Students B and C have identified an insect and a jellyfish as lacking backbones and, therefore, being invertebrates. Choices (A) and (B) are incorrect because invertebrates are not identified by their habitats. Choice (D) is incorrect because invertebrates do not have backbones.
8	S5L1a	S5CS8a	2	D	The correct answer is choice (D). Organisms are identified as vertebrates because of the presence of backbones. Choice (A) is incorrect because, although all the organisms shown do need water, that is not the defining characteristic of fish. Choice (B) is incorrect because the defining characteristic of a mammal is not the presence of legs. Choice (C) is incorrect because amphibians do not include reptiles such as those shown.
9	S5L2a	S5CS8a	2	C	The correct answer is choice (C) having blue eyes. Choice (A) is incorrect. Throwing a ball is a learned behavior, not an inherited trait. Choice (B) is incorrect. Wrinkles are not an inherited trait. Choice (D) is incorrect. Playing the piano is not an inherited trait.
10	S5L2a	S5CS8a	2	B	The correct answer is choice (B) reading. Reading is a learned behavior. Babies do not inherit this trait from their parents. Choice (A) is incorrect because blinking is an instinct to protect the eye. Choice (C) is incorrect. Sleeping is not a learned behavior. Babies are born knowing how to sleep. Choice (D) is incorrect. Swallowing does not need to be taught.

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
11	S5L2b	S5CS7b	2	D	The correct answer is choice (D) The plants with green seeds came from parents with green seeds. Seed color is an inherited trait that parent plants pass along. Choices (A), (B), and (C) are incorrect. They list environmental factors that influence plant growth. They do not describe observations about inherited traits.
12	S5L2b	S5CS1c	2	B	The correct answer is choice (B) the genes of the parents of a child with sickle cell anemia. Sickle cell anemia is an inherited trait. The parents pass the genes for sickle cells to their offspring. Knowing the genes of the parents can help a researcher predict whether a child will have sickle cell anemia. Choices (A), (C), and (D) are factors that would not influence this type of inherited trait.
13	S5P3a	S5CS8a	3	A	The correct answer is choice (A) static electricity. Static electricity is an electrical charge that builds up on an object. Rubbing the wool cloth on the balloons caused the electrical charge to build up on the balloons. Choice (B) is incorrect. While gravity is working on the balloons, it does not explain the movement toward or away from each other. Choice (C) is incorrect, as current electricity is a steady stream of charges. The static electricity on the balloon is not steady. Choice (D) is incorrect, as latex balloons are not magnetic.

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
14	S5P3b	S5CS3a	2	A	The correct answer is choice (A) use a power source. The circuit lacks a power source. A battery is one power source for a circuit. Once the battery is added to the closed circuit, the light bulb will light. Choices (B) and (D) are incorrect. A single wire would not allow the bulb to light, and the circuit does not need an additional switch to light the light bulb. Choice (C) is incorrect because making the wires longer would not allow the bulb to light without a power source.
15	S5P3c	S5CS3a	2	B	The correct answer is choice (B) metal. Metal is a good conductor of electricity. Choices (A), (C), and (D) are incorrect as glass, wood, and rubber are poor conductors of electricity.
16	S5P3d	S5CS4a	3	D	The correct answer is choice (D) An electromagnet is a temporary magnet allowing it to release the objects. Electromagnets are temporary magnets that are caused by an electrical current. When the current turns off, the magnet no longer pulls. When the electricity flows through the arm of the crane, the crane can pick up magnetic materials. When the electricity flow stops, the magnet releases the items. Choice (A) is incorrect because electromagnets can be small or large. Choice (B) is incorrect because a magnet is not affected by rain. Choice (C) is incorrect because electromagnets can be powered by other means such as batteries.

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
17	S5P2a	S5CS4a	2	B	The correct answer is choice (B) separating a mixture. A mixture occurs when two or more substances are blended together but not chemically combined. The plastic and metal beads are combined, but each keeps its own individual properties. The magnet lifts the metal, which separates the mixture. Choice (A) is incorrect. In a solution the items are uniformly distributed. Choice (C) is incorrect because separating a mixture is a physical change. Choice (D) is incorrect. The materials were separated but did not undergo a change in state.
18	S5P2b	S5CS4c	2	A	The correct answer is choice (A) lower than 39°C. The temperature is decreasing. The appearance shows that the water changed states from a liquid to a solid. This occurs when there is a temperature change lowering the temperature of the water to the freezing point. Choices (B), (C), and (D) are incorrect. For the water to change from a liquid to a solid state, the temperature needed to decrease to the freezing point.
19	S5P2c	S5CS1c	2	C	The correct answer is choice (C) Both (students) are incorrect, because burning wax is a chemical change and melting wax is a physical change. Choices (A), (B), and (D) are incorrect because they do not identify the changes correctly. Melting is a physical change. The wax has not chemically changed. Burning is a chemical change. The wax has become new substances.

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
20	S5P1a	S5CS2a	2	D	The correct answer is choice (D) 500 grams. The mass of an object is equal to the sum of its parts. 100 grams plus 200 grams plus 200 grams equals 500 grams. Choices (A), (B), and (C) are incorrect as the sum of the parts would be equal to the mass of the mixture.
21	S5E1a	S5CS1c	2	D	The correct answer is choice (D) A delta was formed as the river deposited sediment from upstream. A delta is sediment and other materials that are deposited in a fan shape at the mouth of a river or stream. In the drawing, the flow of the river has been redirected into branches from the accumulation of sediment. Choice (A) is incorrect because faults are formed along plate boundaries, not by rivers eroding beaches. Choice (B) is incorrect because islands are not formed by rivers eroding beaches. Choice (C) is incorrect because rivers do not create dunes.
22	S5E1b	S5CS1c	2	A	The correct answer is choice (A) Student 1, due to erosion caused by ocean water. Water erosion occurs by wearing away sand from the beach over time. Choice (B) is incorrect as deposition would increase the size of the beach. Choice (C) is incorrect because fault movement causes weathering, not erosion. Choice (D) is incorrect because fault movement causes weathering, not deposition, and deposition would increase the size of the beach.

Item	Standard/ Element	Characteristics of Science	DOK Level	Correct Answer	Explanation
23	S5E1c	S5CS4a	2	C	<p>The correct answer is choice (C) It reclaims beaches lost to water erosion. Dredging uses machines to remove sand from the ocean floor, pump it to the surface, and place it on beaches along the shoreline. Dredging is an example of one way in which humans use technology to help control the destructive processes of nature. The new sand helps to reclaim beaches that have washed away due to erosion. Choice (A) is incorrect, as dredging does not prevent floods. Measures such as levees, dams, and storm drains help to manage flooding. Choice (B) is incorrect. Dredging does not protect wildlife in the ocean and may even disrupt their habitats. It can provide homes to animals along the shoreline such as nesting turtles. Choice (D) is incorrect. The newly reclaimed beach is still susceptible to erosion, necessitating repeat dredging.</p>
24	S5E1a	S5CS4c	2	B	<p>The correct answer is choice (B) wind depositing sand to form a dune. Deposition is the process where sediment and other materials are deposited from the action of water or wind. A sand dune is an example of a surface feature that can be created by constructive processes such as deposition. Choice (A) is incorrect because a sand dune is an example of a surface feature created by construction. Erosion is an example of deconstruction. Choices (C) and (D) are incorrect. Over time rock and shell particles can produce sand, but that would not occur in a five-month time frame.</p>

ACTIVITY

The following activities will help you continue to develop skills in Unit 2: Classification.

Standards: S5L1a, S5CS1a, S5CS4a, S5CS4b, S5CS5b, S5CS5d, S5CS6a

Classify Vertebrates

- Choose from fish, amphibian, reptile, bird, or mammal.
- Find 3–4 pictures of animals from the group that you selected. Use textbooks, magazines, or the Internet.
- Look at the pictures. How are the animals the same? How are they different? (Example: Fish have a backbone. They breathe using gills.)
- Research the characteristics of each animal group using your textbook, websites, and other resources in your classroom or school library.
- Repeat this for each animal group.

Draw a Vertebrate

- Choose an animal from the fish, amphibian, reptile, bird, and mammal groups.
- Create a poster for your animal. (Examples: elephant for mammals and penguin for birds)
- Add labels to show why your animal fits the description of animals in that classification group.

Create a Vertebrate

- Create a drawing of an imaginary animal that fits the classification of one of the groups.
- Use the posters and other resources to see what the characteristics of each animal group should be.

ACTIVITY

The following activities will help you continue to develop skills in Unit 4: Electricity/Magnetism.

Standards: S5P3a, S5P3b, S5p3c, S5p3d, S5CS1a, S5CS1b, S5CS4a, S5CS4b, S5CS5b, S5CS8a

Static Electricity

- Fill a balloon with air. Rub a wool cloth lightly across the surface.
- Investigate what attracts and repels the charged balloon.
- Use different materials, such as paper scraps, paper clips, and aluminum cans.

Electric Circuits

- Draw an electrical circuit that includes a light bulb.
- Gather batteries, battery holders, light bulbs, light bulb holders, and connectors.
- Use your drawing to create a circuit.
- Challenge! Create circuits with multiple pathways and switches.
- Draw each circuit and describe what happens to the light bulbs. Are they on? How does their brightness change?

Conductors of Electricity

- Gather a penny, foil, a piece of paper, a paper clip, a toothpick, a straw, and a washer.
- Predict which materials will conduct electricity and which will not.
- Test the materials by using the circuits. Hold each end of a wire to the material to see if the electricity flows through the material, completing the circuit and lighting the light bulb.

Playing with Magnets

- Gather a power supply, magnet wire, and a large nail.
- Create an electromagnet.
- See how your electromagnet works with different types of items.
- Challenge! Can you figure out how a bar magnet and an electromagnet are different?

SOCIAL STUDIES

DESCRIPTION OF TEST FORMAT AND ORGANIZATION

The Grade 5 Social Studies EOG assessment has a total of 75 items.

The test will be given in two sections.

- You may have up to 70 minutes per section to complete Sections 1 and 2.
- You will have about 90 to 140 minutes for the complete Social Studies EOG assessment.

CONTENT

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

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

- History
- Geography
- Government and Civics
- Economics

ITEM TYPES

Operational items in the Social Studies portion of the Grade 5 EOG consist of selected-response (multiple-choice) items. Some items in field-test positions will be technology-enhanced items.

SOCIAL STUDIES DEPTH OF KNOWLEDGE EXAMPLE ITEMS

Example items that represent applicable DOK levels of the Social Studies assessment are provided 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 basic information.

Social Studies Grade 5 Content Domain: History

Standard: SS5H1. The student will explain the causes, major events, and consequences of the Civil War. d. Describe the roles of Abraham Lincoln, Robert E. Lee, Ulysses S. Grant, Jefferson Davis, and Thomas “Stonewall” Jackson.

Who was the president of the Confederacy?

- A. Robert E. Lee
- B. Jefferson Davis
- C. Ulysses S. Grant
- D. Abraham Lincoln

Correct Answer: B

Explanation of Correct Answer: The correct answer is choice (B) Jefferson Davis. Davis was the president of the Confederate States of America. Choice (A) is incorrect because Lee was a Confederate general, not a political leader. Choice (C) is incorrect because Grant was a Union general, not a Confederate leader. Choice (D) is incorrect because Lincoln was the president of the United States, not the Confederacy.

Example Item 2

Selected-Response

DOK Level 2: This is a DOK level 2 item because it requires the student to understand the purpose of a constitutional amendment.

Social Studies Grade 5 Content Domain: Government and Civics

Standard: SS5CG3. The student will explain how amendments to the U.S. Constitution have maintained a representative democracy. a. Explain the purpose of the 12th and 17th Amendments.

How does the 17th Amendment help maintain a representative democracy?

- A. by allowing only elected officials to choose the senators
- B. by preventing senators from voting more than once on each law
- C. by having the public choose their senators by voting for them in elections
- D. by keeping the number of senators equal to the number of representatives

Correct Answer: C

Explanation of Correct Answer: The correct answer is choice (C) by having the public choose their senators by voting for them in elections. The 17th Amendment established the direct election of senators by popular vote. Before the amendment, senators had been chosen by state legislators. Choice (A) is incorrect because elected officials do not choose senators. Choice (B) is incorrect because it does not explain the purpose of the amendment. Choice (D) is incorrect because there are more members in the House of Representatives than there are in the Senate.

Example Item 3

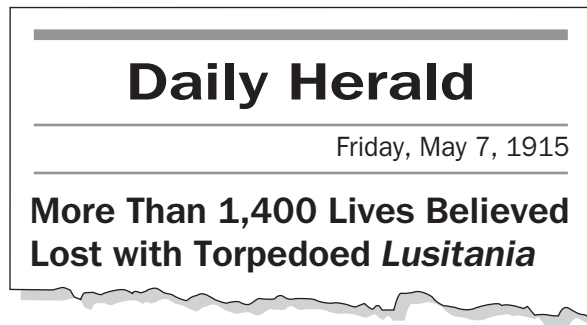
Selected-Response

DOK Level 3: This is a DOK level 3 item because it requires the student to analyze a primary source, have knowledge of the event, understand its significance, and recall the broad outline of World War I.

Social Studies Grade 5 Content Domain: History

Standard: SS5H4 The student will describe U.S. involvement in World War I and post-World War I America. a. Explain how German attacks on U.S. shipping during the war in Europe (1914–1917) ultimately led the United States to join the fight against Germany; include the sinking of the *Lusitania* and concerns over safety of U.S. ships, U.S. contributions to the war, and the impact of the Treaty of Versailles in 1919.

Read the newspaper headline.



Which event can be **MOST** directly linked to the event described in the headline?

- A. the invasion of Normandy, France
- B. the attack on Pearl Harbor, Hawaii
- C. the United States' entry into World War I
- D. the election of Franklin Roosevelt as president

Correct Answer: C

Explanation of Correct Answer: The correct answer is choice (C) the United States' entry into World War I. The sinking of the *Lusitania* turned American public opinion against Germany and led to America's involvement in World War I. Choices (A) and (B) are incorrect because those events are associated with World War II. Choice (D) is incorrect because it was not directly related to the sinking of the *Lusitania* or World War I.

SOCIAL STUDIES 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 Social Studies 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 with your classmates or family to prepare for the test.

The organization of Social Studies units in this guide is based on Frameworks developed by the Curriculum and Instruction Division of the Georgia Department of Education. The Social Studies section begins with Unit 2. Unit 1 focuses on over-arching themes and concepts, rather than specific standards. Unit 1 will, therefore, not be a part of the End-of-Grade assessment. These Frameworks can be accessed at <https://www.georgiastandards.org/Frameworks/Pages/BrowseFrameworks/socialstudiesK-5.aspx>.

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

CONTENT DESCRIPTION

The four domains (History, Geography, Government/Civics, and Economics) are fully integrated.

Some of the topics you will study in this guide are the following:

- United States history beginning with the Civil War and continuing to the present
- Influence of geography on United States history
- Rights outlined in the amendments to the United States Constitution
- Historical events and their connection to the United States economy
- The interdependence and functions of the United States economy
- Personal budgeting and spending

Unit 2: Effective Citizenship

In this unit, you will learn to explain the responsibilities and freedoms of citizens. Students will understand due process of law and demonstrate understanding of its connection to the U.S. Constitution and citizens' rights. Students will also explore and explain the purpose of the amendment process, the relationship between constitutional amendments and our representative democracy, and the impacts of particular amendments on citizens of our society.

KEY TERMS

Bill of Rights: The first ten amendments to the U.S. Constitution, written by James Madison to guarantee individual liberties for citizens of the newly established nation. (CG1b)

Citizenship: Membership of an individual in a country. A citizen is expected to give allegiance to the government. The government is expected to protect the safety, rights, and freedoms of the citizen in the United States. (CG1a)

Rights of a citizen: Freedoms protected by the U.S. Constitution. In the United States, these include the rights to assemble peacefully, to worship or not worship as one pleases, to freely express one's opinion, and to own property. (CG1b)

Responsibilities of a citizen: Obligations to help maintain the nation of which a citizen is a member. In the United States, these include obligations to pay taxes, serve on juries, and vote. (CG1a)

Market: Place where producers and consumers engage in the exchange of goods and services for money. (E3a)

Price: The cost a consumer must pay to purchase a good or service from a producer. (E3a)

Sample Items 1–2

Item 1

Selected-Response

What is the purpose of the Bill of Rights?

- A. to help the economy
- B. to protect individual freedoms
- C. to strengthen the government
- D. to determine government leaders

Item 2

Selected-Response

What would **MOST LIKELY** increase a store's sales of a product?

- A. reducing the store's hours
- B. reducing the store's employees
- C. lowering the price of the product
- D. limiting advertising of the product

Unit 3: The Civil War: The Nation Divided

In this unit, you will learn about the Civil War. You will examine historical events and the key figures who influenced history and major events. You will learn about the Confederacy and the Union, states' rights, and some famous Civil War battles.

KEY TERMS

The Civil War: A result of sectional differences between the North (Union) and the South (Confederacy). (H1)

John Brown: Led the raid on Harper's Ferry, Virginia, (now West Virginia) in the mid-1800s. (H1a)

Harper's Ferry, Virginia (now West Virginia): Site of a raid in the mid-1800s by white abolitionist John Brown. Brown led an army of eighteen men in a raid on a U.S. arsenal, planning to use the weapons for an armed slave revolt. This event led the nation closer to the Civil War. (H1a)

Uncle Tom's Cabin: An anti-slavery novel by Harriet Beecher Stowe. It is considered by many to have brought the issue of abolition into public awareness. It brought the nation closer to the Civil War. (H1a)

Slavery: The practice of owning human beings. In the pre-Civil War American South, more than three million African Americans were held in slavery, mostly by white owners. (H1b)

States' rights: The idea that the federal government has very limited authority over the laws of individual states. The notion was used by Southern states before and during the Civil War to justify resistance to federal laws regulating or prohibiting slavery before the Civil War. (H1b)

The Confederacy: Also called the Confederate States of America, this was the collective name for the eleven Southern states that seceded from the Union before and during the Civil War. In order of secession, they were South Carolina, Mississippi, Florida, Alabama, Georgia, Louisiana, Texas, Virginia, Arkansas, North Carolina, and Tennessee. (H1)

The Union: States that did not secede from the United States during the Civil War. (H1e)

Jefferson Davis: President of the Confederacy from its establishment. (H1d)

Stonewall Jackson: Successful Confederate general during the Civil War. His death from pneumonia in 1863 dealt a severe blow to the Confederacy. (H1d)

Abraham Lincoln: The president of the United States and leader of the Union during the Civil War. He was assassinated by actor John Wilkes Booth less than a week after the war's conclusion. (H1d)

Fort Sumter: Site of the battle that marked the beginning of the Civil War. (H1c)

Atlanta Campaign: A Civil War military campaign led by Union General William T. Sherman against Confederate forces in the South. The success of the Union forces in taking the city of Atlanta proved a large setback for the South. (H1c)

Gettysburg, Pennsylvania: Site of the Civil War’s largest battle. This failed attempt by Confederate General Robert E. Lee to invade the North is considered by many to be the Civil War’s turning point. (H1c)

Sherman’s March to the Sea: Civil War campaign in which General William T. Sherman marched 60,000 Union soldiers from Atlanta, Georgia, to Savannah, Georgia. The purpose of the march was to intimidate Confederate citizens into demanding an end to the war. (H1c)

Appomattox Court House: The Virginia village where Confederate General Robert E. Lee surrendered to Union General Ulysses S. Grant in 1865. This surrender effectively ended the Civil War. (H1c)

Sample Items 3–4

Item 3

Selected-Response

What was the MAIN cause of the Civil War?

- A. disagreements about taxes
- B. disagreements about foreign policy
- C. disagreements about slavery and states’ rights
- D. disagreements about immigration and settlement

Item 4

Selected-Response

What was the first conflict of the Civil War?

- A. the Atlanta Campaign
- B. the Battle of Gettysburg
- C. the Battle of Fort Sumter
- D. the Raid on Harper’s Ferry

Unit 4: Reconstruction: The Nation Reunited

In this unit, you will learn about the period following the Civil War, known as Reconstruction. You will learn about amending the U.S. Constitution and some key amendments.

KEY TERMS

The Reconstruction Era: The period immediately following the Civil War, when the federal government set the conditions by which Confederate states would be allowed to return to the Union. (H2)

13th Amendment: A Reconstruction constitutional amendment that abolished slavery. One of three Reconstruction-period amendments passed after the Civil War, it was added to the U.S. Constitution in 1865. (H2a, CG3b)

14th Amendment: A Reconstruction constitutional amendment granting full citizenship to anyone born in the United States, including freed African Americans. It also guarantees due process for all citizens and prohibits individual states from denying anyone equal protection under the law. (H2a)

15th Amendment: A Reconstruction constitutional amendment that prohibits federal and state governments from denying a citizen the right to vote based on his or her race. (H2a, CG3b)

Due process: The U.S. Constitution's guarantee of fair treatment for any citizen accused of a crime. (CG1c)

Freedmen's Bureau: A government agency initiated by President Abraham Lincoln. Its purpose was to help newly freed African Americans following the Civil War. The Freedmen's Bureau built schools, provided housing, created hospitals, and helped newly freed slaves find jobs. (H2b)

Jim Crow laws: Named after a minstrel-show character. These laws were passed by Southern states following Reconstruction. Their purpose was to establish and enforce racial segregation (separation of the races) in everyday life. (H2c)

Literacy tests: Tests administered by state governments to make sure all voters could read. These tests were often given in ways intended to prevent African Americans from voting. (H2c)

Poll taxes: Taxes required in order to vote in elections. These taxes often prevented African Americans and poor whites from being able to vote. (H2c)

Sharecropping: An arrangement in which a farmer grows crops on land belonging to someone else. In return, the farmer receives a share of the value of the crops. This practice became widespread in the South after the abolition of slavery. (H2c)

KEY IDEA**AMENDING THE U.S. CONSTITUTION (CG2)**

There are two ways to propose a constitutional amendment:

1. An amendment can be proposed by two-thirds of both houses of Congress.
2. Two-thirds of the nation's state legislatures can call upon Congress to hold a Constitutional Convention where amendments can be proposed. (This has never been done.)

There are also two ways to ratify (approve) a constitutional amendment:

1. Three-fourths of the nation's state legislatures can vote for ratification.
2. Three-fourths of all states can hold ratifying conventions during which they approve an amendment. (This has only been done once.)

Sample Items 5–6**Item 5****Selected-Response**

Read the list in the box.

- Poll taxes
- Literacy tests
- Separate schools
- Separate restrooms
- Segregated restaurants

What is the BEST title for this list?

- A. Practices of Slavery
- B. Causes of the Civil War
- C. Examples of Jim Crow Laws
- D. Effects of the Freedmen's Bureau

Item 6**Selected-Response**

Which phrase BEST describes the actions of the Freedmen's Bureau?

- A. helping slaves escape from plantations
- B. helping former slaves exercise their new rights
- C. helping Union soldiers return home and find work
- D. helping Confederate soldiers move North and find work

Unit 5: Bigger, Better, Faster: The Changing Nation

In this unit, you will learn how the United States became an industrial and world power. Some of the famous historical figures you will study are George Washington Carver, Thomas Alva Edison, and the Wright Brothers. You will learn about the Chisholm Trail and the Panama Canal.

KEY TERMS

Alexander Graham Bell: A Scottish immigrant credited with inventing the first practical telephone. (H3b)

Business sector: In our nation's free-market economy, the business sector is the segment that includes the production of goods and services. (E2a)

George Washington Carver: An African American, born into slavery in Missouri, who revolutionized American agriculture with his research into new crops, new uses for crops, and effective methods of soil conservation. (H3b)

Chisholm Trail: A trail used to drive longhorn cattle from Texas to Kansas during the period following the Civil War. (H3a, G1b)

Thomas Alva Edison: An American inventor who received more than 1,000 patents. He is credited with the development of the phonograph, the motion picture, and the electric light bulb. (H3b)

Entrepreneur: Someone who takes a risk to start and maintain a business. (E3c)

Panama Canal: A water passage located in the nation of Panama. It connects the Atlantic Ocean to the Pacific Ocean. (H3c, E1e)

Spanish-American War: A conflict between Spain and the United States. It brought about the end of Spanish colonization in North and South America. At the end of the war, the United States gained control of Guam, Puerto Rico, and the Philippines and expanded its influence in world affairs. (H3c)

Wright Brothers: Orville and Wilbur Wright were two American inventors who are credited with inventing the first successful airplane. They made the first heavier-than-air human flights at Kitty Hawk, North Carolina, at the start of the 20th century. (H3b)

Sample Items 7–9

Item 7

Selected-Response

Which of these describes a function of private business?

- A. collecting taxes for the government
- B. producing goods and services for the public
- C. providing loans and checking accounts to the public
- D. controlling the price of goods bought by consumers

Item 8

Selected-Response

What was the MAIN reason the Northeast became an industrial center during the late 1800s?

- A. It had a mild climate.
- B. It had rich soil for farming.
- C. It had good public education.
- D. It had good access to waterways.

Item 9

Selected-Response

What did the 1914 opening of the Panama Canal accomplish?

- A. It brought about an end to World War I.
- B. It divided North America from South America.
- C. It created a new route for trade between nations.
- D. It marked the beginning of a new period of industrialization.

Unit 6: Ups and Downs: World War I, the Jazz Age, and the Great Depression

In this unit, you will move into the 20th century with a focus on history and economics. You will learn about World War I and the major movements of that time period, such as the growth of the free-market economy, the Great Depression, the Harlem Renaissance, the Jazz Age, and President Roosevelt's New Deal.

KEY TERMS

World War I: An international conflict that primarily involved European nations until the United States entered the war in 1917. The Allied Powers (France, Italy, Great Britain, and Russia), with the help of the United States, emerged victorious over the Central Powers (Germany, Austria-Hungary, and Turkey). (H4a)

Lusitania: A British cruise ship attacked and sunk by a German submarine. There were nearly 2,000 civilians on board, including several Americans. The attack was one reason for the United States' entry into World War I. (H4a)

19th Amendment: Guaranteed women the right to vote. The amendment was ratified in 1920. (CG3b)

The Roaring Twenties: Name given to the 1920s, ending with the onset of the Great Depression. The period was marked by a powerful U.S. economy, the rise of the middle class, and a mood of optimism. (H4b)

Herbert Hoover: A president of the United States. He took office shortly before the Great Depression and was defeated by Franklin Roosevelt after a single term. (H5a)

Franklin Delano Roosevelt: A president of the United States. He was the first president to take office after the beginning of the Great Depression. He was reelected three times, presided over the nation's economic recovery, and died in Warm Springs, Georgia, while he was still president. (H5a)

The Great Depression: A period of economic hardship affecting the United States and other nations. It began with the stock market crash of 1929 and lasted into the 1940s. (H5a)

Banking sector: The part of the economy that provides financial support for individuals and businesses. (E2c)

Business sector: In a free-market economy, the business sector is the segment that produces goods and services. (E2b)

Government sector: The part of the economy that collects taxes and provides and manages public services. (E2d)

Dust Bowl: The name given to the south-central area of the Great Plains during the 1930s, when drought and soil erosion resulted in a period of severe dust storms. (H5a)

New Deal: The name given to President Franklin Roosevelt's economic policies and programs designed to lift the U.S. economy from the Great Depression. (H5b)

KEY IDEA

**Cultural Development and Individual Contributions
of the 1920s and 1930s**

Harlem Renaissance: A period of intense African American artistic creativity in literature, art, and music that originated in Harlem, New York, and expanded across the country. Langston Hughes contributed to the Harlem Renaissance through literature.

Jazz Age: The period when the genre of music known as jazz became popular. Louis Armstrong and Duke Ellington helped make jazz popular.

Babe Ruth: A famous baseball player who increased the popularity of the sport.

Henry Ford: An entrepreneur who improved the assembly line and created a car (the Model T) that was affordable for most Americans. He contributed to the economic boom of the 1920s and put the United States on the move.

Charles Lindbergh: The first person to fly solo across the Atlantic Ocean.

Margaret Mitchell: An author who wrote *Gone with the Wind*.

Jesse Owens: An African American athlete who won gold medals at the 1936 Olympic Games in Berlin.

Sample Items 10–11**Item 10****Selected-Response**

What did the 15th and 19th Amendments to the U.S. Constitution change?

- A. They added the District of Columbia to the Electoral College.
- B. They ended the practice of slavery.
- C. They helped the due process rights of citizens.
- D. They expanded voting rights.

Item 11**Selected-Response**

Read the quotation in this box.

“I pledge you, I pledge myself, to a new deal for the American people.”
– Franklin D. Roosevelt, accepting the Democratic Party nomination for president, 1932

What was one way President Franklin D. Roosevelt worked to accomplish this promise?

- A. by asking Congress to end poll taxes
- B. by authorizing food rationing during World War II
- C. by establishing the Works Progress Administration
- D. by freezing wages after the U.S. stock market crash

Unit 7: Hot & Cold: World War II and Its Aftermath

In this unit, you will learn about World War II and the events that followed it. You will learn about communism, the Cold War, the Cuban missile crisis, the atomic bomb, the Holocaust, and the Iron Curtain. You will study historical figures who left their impact on the world, including Winston Churchill, Emperor Hirohito, Joseph McCarthy, Joseph Stalin, Adolf Hitler, and American Presidents Franklin Delano Roosevelt and Harry S. Truman. You will also learn about the contributions of the Tuskegee Airmen.

KEY TERMS

Franklin Delano Roosevelt: A president of the United States and leader of the nation during most of World War II. He died in office, and Vice President Harry S. Truman took office after him. (H6d)

Harry S. Truman: A president of the United States. He authorized the use of atomic bombs on the cities of Hiroshima and Nagasaki during World War II, which led to Japan's surrender. (H6d)

Winston Churchill: Prime Minister of Great Britain during World War II. (H6d)

Hirohito: Emperor of Japan during World War II who fought against the United States. He ruled Japan as a monarch for over 62 years. (H6d)

Adolf Hitler: Dictator of Germany during World War II. He ordered attacks on neighboring countries in Europe, which started World War II, and founded the Nazi Party. (H6d)

Benito Mussolini: Fascist dictator of Italy and ally of Adolf Hitler during World War II. (H6d)

Joseph Stalin: Communist dictator of the Soviet Union during and after World War II. Under his rule, the Soviet Union was a member of the Allies. (H6d)

The Holocaust: The organized mass murder of European Jews by Hitler's Nazi Party during World War II. (H6b)

Pearl Harbor: Hawaiian site of the U.S. naval base that was attacked by Japan in 1941. The United States responded by declaring war on Japan and entering World War II. (G1b, H6b)

Rosie the Riveter: A fictional character who symbolized American female factory workers during World War II. (H6e)

Tuskegee Airmen: Group of African American aviators who served with distinction during World War II. Their success helped pave the way for integration of the U.S. armed forces. (H6e)

D-day: The name given to June 6, 1944. It was on that day that Allied forces invaded Western Europe, setting the stage for Allied victory in World War II. (H6b)

Iwo Jima: An island in the West Pacific taken from Japan by the United States during World War II. (H6b)

Hiroshima and Nagasaki: Japanese cities that the United States dropped atomic bombs upon during World War II. These acts led to Japan's surrender. (H6c)

V-E Day: May 8, 1945. This was the day that Germany's Nazi forces surrendered to the Allies, marking the end of World War II in Europe. The abbreviation "V-E" stands for "Victory in Europe." (H6b)

V-J Day: September 2, 1945. This was the day of Japan's official surrender to the Allies, marking the end of World War II in the Pacific arena. The abbreviation "V-J" stands for "Victory over Japan." (H6b)

NATO: The North Atlantic Treaty Organization, an alliance of Western democratic nations formed after World War II to defend themselves against communist aggression. (H7b)

United Nations: An international organization formed after World War II to promote cooperation among nations. It is headquartered in New York City. (H6f)

Berlin Wall: A concrete and barbed wire wall separating East and West Berlin. The wall prevented defections from East Berlin (which was communist) to West Berlin (which was democratic). (H7a)

Berlin Airlift: A military operation led by the United States after World War II. The residents of West Berlin, Germany, were blockaded by the Soviet Union. Led by the United States, Western nations delivered food and supplies to them by airplane. (H7b)

Cold War: The battle for international influence that arose between communist and democratic nations following the end of World War II. (H7)

Iron Curtain: The name given to the physical and political division between Eastern, or communist, countries and Western, or capitalist, nations during the Cold War. The United States fought a "cold war," or nonmilitary battle, against the Soviet Union to prevent the spread of communism into democratic countries. (H7a)

Communism: The political idea that all property should be publically owned and managed by a central government. (H7a)

Korean War: A conflict between communist North Korea hoping to unify the country under a Communist government and democratic South Korea. North Korea was allied with the Chinese, and South Korea was allied with UN forces led by the United States. The war ended and divided Korea into communist North Korea and democratic South Korea. (H7b)

Cuban missile crisis: A dispute during the Cold War between the United States and the Soviet Union. The Soviet Union had built missile sites in Cuba. President John F. Kennedy set up a naval blockade of the island until Soviet leader Nikita Khrushchev ordered the missiles removed. (H8a)

Joseph McCarthy: The U.S. senator who believed that some other congressmen and senators were secretly communist. He led investigations of his peers, as well as of several military officials and civilians, during the early 1950s. (H7c)

Opportunity cost: An economic term for what you must give up to obtain something else. It is always your second-best alternative. (E1a)

Sample Items 12–13

Item 12

Selected-Response

The U.S. government had a food rationing program during World War II. This was an example of which economic concept?

- A. specialization
- B. opportunity cost
- C. supply and demand
- D. voluntary exchange

Item 13

Selected-Response

Look at the poster of Rosie the Riveter.



Source: The National Archives

Which event led to changing roles for women as shown in the poster?

- A. involvement in World War II
- B. the beginning of the Cold War
- C. the formation of the United Nations
- D. establishment of the Works Progress Administration

Unit 8: Overcoming the Past: The Age of Civil Rights

In this unit, you will move into the latter part of the 20th century. Major events during the period included the Civil Rights movement, the Vietnam War, and the assassinations of three major leaders. Students are not required to memorize Lee Harvey Oswald, Jack Ruby, Sirhan Sirhan, or James Earl Ray.

KEY TERMS

24th Amendment: An amendment to the U.S. Constitution that banned poll taxes as a condition for voting. Poll taxes had been one of many methods used in some Southern states to discourage certain groups, especially African Americans, from voting. (CG3b)

Literacy tests: Tests administered by state governments to prevent African Americans from voting. (H8b)

Poll taxes: Taxes required in order to vote in elections. These taxes often prevented African Americans and poor whites from being able to vote. (H8b)

Thurgood Marshall: African American attorney who successfully argued *Brown v. Board of Education* before the Supreme Court. He became the first African American Supreme Court justice when he was appointed by President Lyndon B. Johnson in 1967. (H8b)

Brown v. Board of Education: The 1954 Supreme Court case ruling that racial segregation of public schools is unconstitutional. Previously, many districts had maintained separate schools for white and African American children. After the decision, the federal government required actions to racially integrate public schools. (H8b)

Civil Rights Act of 1964: Legislation passed by Congress that outlawed discrimination based on race, color, religion, sex, or national origin. The act required any business that operated in the public sector to provide equal access to its goods and services to all Americans. (H8b)

Montgomery Bus Boycott: A mass campaign by African American citizens in Montgomery, Alabama that began in 1955. The public transit system in that city was segregated by race, and Rosa Parks's refusal to give up her bus seat to a white man resulted in her arrest. In protest, African Americans stopped using the bus system. This campaign continued for 381 days until the Supreme Court ruled racial segregation of public transit unconstitutional. (H8b, G1b)

Voting Rights Act of 1965: Legislation passed by Congress and signed by President Lyndon B. Johnson. The act made it illegal to require African Americans to take literacy tests in order to vote. (H8b)

Vietnam War: Conflict between Communist and anti-Communist forces that began in Vietnam. The United States was heavily involved in the war. In 1973, the United States pulled its forces from the Southeast Asian country. Afterward, the nation became united under a Communist government. (H8a)

Sample Items 14–15

Item 14

Selected-Response

Read this excerpt from *Brown v. Board of Education*.

We conclude that, in the field of public education, the doctrine of “separate but equal” has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated for whom the actions have been brought are, by reason of the segregation complained of, deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment.

—*Brown v. Board of Education* (1954)

What was the MAIN result of this decision?

- A. Public schools were required to integrate.
- B. Public schools would offer the same courses.
- C. Public schools were considered equal under the law.
- D. Public schools would receive the same amount of money.

Item 15

Selected-Response

Whose action initiated the Montgomery Bus Boycott?

- A. Rosa Parks
- B. John F. Kennedy
- C. Thurgood Marshall
- D. Martin Luther King, Jr.

Unit 9: Understanding the News: America's Role in the 21st Century

In this unit, you will learn about the arrival of the 21st century. Major events of this time period include the 9/11 attacks and the war on terrorism, the birth of the Internet, and the economic principle of voluntary exchange.

KEY TERMS

Collapse of the Soviet Union: In 1991, Soviet Leader Mikhail Gorbachev resigned his post as leader of the Soviet Union. Russian President Boris Yeltsin assumed Gorbachev's authority over that nation, and the remainder of the Soviet Union countries became independent. (H9a)

Persian Gulf War: A conflict in which the United States helped the Middle Eastern nation of Kuwait repel an invasion by Iraq led by dictator Saddam Hussein. (H9a)

9/11 attacks: The worst terrorist incident in U.S. history took place on September 11, 2001. On that morning, a group of radical Islamic terrorists took over four commercial airplanes. Two of the planes were deliberately crashed into the World Trade Center in New York City, killing nearly 3,000 people. A third was flown into the Pentagon, killing more than 230 people. The fourth plane crashed into a field in Pennsylvania after passengers took action to prevent it from being used to crash into the U.S. Capitol building. Everyone on board was killed: thirty-three passengers, seven crew members, and four hijackers. (H9a)

War on terrorism: The international campaign against terrorist activity that was launched after the 9/11 attacks. (H9a)

The Internet: The informal name for a worldwide communication system that links individuals and businesses. Since the early 1980s, this development has revolutionized how people interact and conduct business. (H9b)

Voluntary exchange: The economic principle that buyers and sellers will willingly engage in free-market transactions. For this to occur, both the buyer and the seller must believe that they are better off as a result of the transaction. (E1d)

Sample Item 16

Item 16

Selected-Response

Which of these led to U.S. involvement in the Persian Gulf War?

- A. the war on terrorism
- B. the reaction to the 9/11 attacks
- C. the collapse of the Soviet Union
- D. the invasion of a neighboring country by Iraq

Unit 10: Effective Citizenship: Conclusion

In this unit, we end where we began, with the concept of citizenship. The focus of the unit is on business, finance, and the growth of the economy.

KEY TERMS

12th Amendment: An amendment to the U.S. Constitution. It reformed the procedure for choosing the nation's president and vice president in the event of a tie vote in the Electoral College. (CG3a)

17th Amendment: An amendment to the U.S. Constitution. It provided for the election of state senators by popular vote. The amendment also set the term length for senators at six years. (CG3a)

23rd Amendment: An amendment to the U.S. Constitution. It allowed residents of the District of Columbia to vote in presidential elections. (CG3b)

24th Amendment: An amendment to the U.S. Constitution that banned poll taxes as a condition of voting. Poll taxes had been one of many methods used in some Southern states to discourage certain groups, especially African Americans, from voting. (CG3a)

Banking sector: The part of the economy that provides financial support for individuals and businesses. (E2)

Business sector: In a free-market economy, the business sector is the segment that produces goods and services. (E2b)

Government sector: The part of the economy that collects taxes and provides and manages public services. (E2d)

Personal finance: The set of financial choices made by individuals. Responsible personal finance includes sensible budgeting, investment, and saving. (E4)

Sample Items 17–18

Item 17

Selected-Response

What are the two MAIN elements of a personal budget?

- A. capital and labor
- B. needs and wants
- C. supply and demand
- D. income and expenses

Item 18

Selected-Response

What did the 12th Amendment to the U.S. Constitution change?

- A. the age the president was required to be
- B. the total length of a vice-presidential term
- C. the procedures for choosing a president and a vice president
- D. the number of terms that a president and a vice president can serve

SOCIAL STUDIES ADDITIONAL SAMPLE ITEM KEYS

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
1	SS5CG1b	2	B	The correct answer is choice (B) to protect individual freedoms. The first ten amendments to the Constitution are called the Bill of Rights because they guarantee that specific rights cannot be taken away by the government. Choice (A) is incorrect because the Bill of Rights does not directly pertain to the economy. Choices (C) and (D) are incorrect because the Bill of Rights pertains to individuals, not the government.
2	SS5E3a	2	C	The correct answer is choice (C) lowering the price of the product. Choices (A) and (B) are incorrect because reducing store hours and store employees would most likely decrease the sales of a product. Choice (D) is incorrect because advertising a product less would be more likely to decrease that product's sales.
3	SS5H1b	2	C	The correct answer is choice (C) disagreements about slavery and states' rights. The South believed that the Constitution gave states the right to practice slavery, and it seceded over fears that slavery would be abolished. Choices (A), (B), and (D) are incorrect because those issues did not play a part in the South's decision to secede from the Union.
4	SS5H1c	1	C	The correct answer is choice (C) the Battle of Fort Sumter. Choices (A), (B), and (D) are incorrect because although they name conflicts of the Civil War, none was the first conflict.
5	SS5H2c	2	C	The correct answer is choice (C) Examples of Jim Crow Laws. Each item on the list is an example of laws passed that discriminated against African Americans in the South following the Civil War. Choice (A) is incorrect because Jim Crow laws were passed after slavery had been abolished. Choice (B) is incorrect because Jim Crow laws were passed after the Civil War; they did not cause it. Choice (D) is incorrect because the Freedmen's Bureau worked on behalf of African Americans, not against them.
6	SS5H2b	2	B	The correct answer is choice (B) helping former slaves exercise their new rights. The Freedmen's Bureau was established after the Civil War to help formerly enslaved persons build independent lives. Choice (A) is incorrect because the Freedman's Bureau was formed after slavery ended. Choices (C) and (D) are incorrect because the Freedmen's Bureau was not established to help soldiers, whether Confederate or Union.

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
7	SS5E2b	1	B	The correct answer is choice (B) producing goods and services for the public. The private business sector provides goods and services to consumers, stimulating the economy. Choice (A) is incorrect because it describes a function of the government. Choice (C) is incorrect because it describes the banking sector of the economy. Choice (D) is incorrect because it describes a function of the government in some economies.
8	SS5G2a	2	D	The correct answer is choice (D) It had good access to waterways. This made it easy for the area to ship in raw materials and ship out finished goods. Choice (A) is incorrect because the Northeast's climate cannot accurately be described as mild. Choice (B) is incorrect because the area's farmland was poorer than that of the South. Choice (C) is incorrect because public education at the time, while improving, still left many without access to learning.
9	SS5E1e	2	C	The correct answer is choice (C) It created a new route for trade between nations. The Panama Canal allowed trade ships easy passage between the Atlantic and Pacific Oceans. Choice (A) is incorrect because the canal did not play a significant role in ending World War I. Choice (B) is incorrect because the canal created no significant new division between North and South America. Choice (D) is incorrect because industrialization was already well under way by 1914.
10	SS5CG3b	2	D	The correct answer is choice (D) They expanded voting rights. The 15th Amendment let all races and former slaves vote, and the 19th Amendment guaranteed suffrage to women. The other three choices are incorrect because they refer to other amendments. Choice (A) is the 23rd Amendment, choice (B) is the 13th Amendment, and choice (C) is the 14th Amendment.
11	SS5H5b	3	C	The correct answer is choice (C) by establishing the Works Progress Administration. It was one of many programs Roosevelt established in an effort to end the Great Depression. Choice (A) is incorrect because the 24th Amendment prohibiting poll taxes was not passed until well after Roosevelt's presidency. Choice (B) is incorrect because food rationing was a part of the war effort, not the New Deal. Choice (D) is incorrect because the stock market crash occurred well before Roosevelt took office.

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
12	SS5E1a	3	B	The correct answer is choice (B) opportunity cost. Roosevelt restricted the supply of food to civilians in order to provide food to soldiers during World War II. Choices (A), (C), and (D) are incorrect because they are not the MOST precise descriptions of the economic concept illustrated here.
13	SS5H6e	3	A	The correct answer is choice (A) involvement in World War II. As men enlisted in the service, women entered the workplace in record numbers. This caused a new appreciation for women's abilities in all areas of society. Choices (B) and (C) are incorrect because they occurred after the poster was first created. Choice (D) is incorrect because the establishment of the Works Progress Administration employed men almost exclusively.
14	SS5H8b	2	A	The correct answer is choice (A) Public schools were required to integrate. This case overturned the Supreme Court's <i>Plessy v. Ferguson</i> decision, which had supported the legal principle of "separate but equal." Choices (B), (C), and (D) are incorrect because they provide incorrect information about schools.
15	SS5H8b	1	A	The correct answer is choice (A) Rosa Parks. Her refusal to give up her bus seat to a white person resulted in her arrest and a mass boycott of public transportation in the city of Montgomery, Alabama. Choice (B) is incorrect because Kennedy was not involved in the boycott. Choice (C) is incorrect because Marshall did not start the boycott but did help end it. Choice (D) is incorrect because King did not spark the boycott, although he did organize its continuation.
16	SS5H9a	1	D	The correct answer is choice (D) the invasion of a neighboring country by Iraq. The United States entered the war on Kuwait's side when that nation was invaded by Iraq in 1990. Choice (A) is incorrect because the war on terrorism was a reaction to the 9/11 attacks. Choice (B) is incorrect because the 9/11 attacks happened after the Persian Gulf War. Choice (C) is incorrect because the collapse of the Soviet Union was not related to this war.

Item	Standard/ Element	DOK Level	Correct Answer	Explanation
17	SS5E4	1	D	The correct answer is choice (D) income and expenses. To budget properly, you must know how much money you have coming in and how much you are obliged to spend for things that you need. Choice (A) is incorrect because it names two items of a business's budget, not a personal one. Choice (B) is incorrect because it does not consider how much money is coming in. Choice (C) is incorrect because it names an economic concept rather than the elements of a personal budget.
18	SS5CG3a	2	C	The correct answer is choice (C) the procedures for choosing a president and a vice president. Before the amendment, the candidate with the most electoral votes became president and the second-highest number of votes determined the vice president. Choice (A) is incorrect because the age for becoming president is set forth in Article II Section 1 of the Constitution. Choice (B) is incorrect because that rule is specified in the Constitution itself. Choice (D) is incorrect because it describes the 22nd Amendment, not the 12th Amendment.

ACTIVITY

The following activity develops skills in Unit 2: Effective Citizenship.

Standard: SS5CG1b

Find a family member or friend to partner with on this activity.

You are going to take a closer look at the amendments in the Bill of Rights.

- On separate index cards, each person will write a description in two to four words of each amendment in the Bill of Rights.
- On the opposite side of the card, write a two- to three-sentence example, explanation, or drawing for the same amendment in the Bill of Rights.

The Internet and other reference material may be used to complete this part of the activity.

- Next, either you or your partner will write a two- to four-word summary for each amendment in the Bill of Rights on a sheet of paper, poster paper, or the board.
- Then, the other person will present the two- to three-sentence example, explanation, or drawing of the amendments in the Bill of Rights.
- Discuss how the example, explanation, or drawing each of you came up with were different or similar to each other. Discuss other possible examples of each amendment.
- Add the additional examples below each amendment.

ACTIVITY

The following activity develops skills in Unit 5: Bigger, Better, Faster: The Changing Nation.

Standard: SS5H3b

Choose one of the following people:

The Wright Brothers, George Washington Carver, Alexander Graham Bell, or Thomas Alva Edison.

- On a sheet of paper or a poster board, write facts about the inventions for which your choice was responsible. Include what was used before the invention was created and the inventions that followed. Also discuss how that invention impacted people at the turn of the 20th century and how this invention impacts you today.

Reference works or the Internet may be used as needed.

- Create a flowchart on the sequence of events about your subject.
- Discuss with your family the sequence on the flowchart and how each event or invention led to the next one.
- For example, choose the topic “Methods of Communication.”

Possible sequence: Reading fliers in public squares, messengers traveling by foot or horse, postal services, the telegraph, Alexander Graham Bell’s telephone, two-way radio, cell phones, the Internet, smartphones, etc.

APPENDIX A: 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., <i>to/too/two; there/their</i>).								
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.1.1-12.3a

APPENDIX B: CONDITION CODES

Condition Codes (Non-Score)

The student response is flawed for various reasons and will receive a condition code (non-score). Students who receive a condition code (non-score) have a score of zero (0).

- For the extended writing tasks, both traits receive a score of 0. For Trait 1: Ideas, the score is 0 out of 4 possible points, and for Trait 2: Language Usage, the score is 0 out of 3 points. (Or the score is 0 points out of a possible 7 points.)
- For the narrative item, the score is 0 out of a possible 4 points.

Non-Score (Code)	Performance Scoring: Non-Score (Code) Description	Full Description
B	Blank	<ul style="list-style-type: none"> • Blank • Student’s response did not contain words. • In some instances, student may have drawn pictures.
C	Copied	<ul style="list-style-type: none"> • Student’s response is not his/her own work. • Student does not clearly attribute words to the text(s). • Student copies from the text(s) that serve(s) as writing stimulus.
I	Too Limited to Score	<ul style="list-style-type: none"> • Student’s response is not long enough to evaluate his/her ability to write to genre or his/her command of language conventions.
F	Non-English/ Foreign Language	<ul style="list-style-type: none"> • Written in some language other than English • The writing items/tasks on the test require the student to write in English.
T	Off Topic/Off Task	<ul style="list-style-type: none"> • Student may have written something that is totally off topic (e.g., major portion of response is unrelated to the assigned task). • Student response did not follow the directions of the assigned task (i.e., off task).
U	Unreadable/ Illegible/ Incomprehensible	<ul style="list-style-type: none"> • Response is unreadable. • An illegible response does not contain enough recognizable words to provide a score. • An incomprehensible paper contains few recognizable English words or it may contain recognizable English words arranged in such a way that no meaning is conveyed.
S	Offensive	<ul style="list-style-type: none"> • Student uses inappropriate or offensive language or pictures.

END OF GRADE 5
*EOG STUDY/RESOURCE GUIDE
FOR STUDENTS AND PARENTS*

Study/Resource Guide
for Students and Parents
Grade 5
End-of-Grade

