CRCT Study Guide

Grade 3

Georgia

Criterion-Referenced Competency Tests

Reading
English/Language Arts
Mathematics
Science
Social Studies
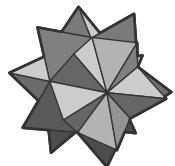
Table of Contents

Using the CRCT Study Guide

This Study Guide focuses on the knowledge and skills that are tested on the Georgia Criterion-Referenced Competency Tests (CRCT). It is designed for teachers to use with their students and for parents to use with their children. Go to **www.gadoe.org**/ to find further information about and support for the CRCT.

The following section of this guide, "About the CRCT," contains an overview of the CRCT and test-taking strategies to review with your students.

– The content tested on the CRCT is based on Georgia's state-mandated content standards, which describe what all students should know, understand, and be able to do.

The chapters of this guide are organized by subject. In each chapter you can explore the skills needed to succeed in a specific tested domain (grouping of similar content standards). The subject chapters include a snapshot of each domain, instructional **Activities** that address covered skills, and a **Practice Quiz** with annotated **Solutions** to help assess student progress.

This document is intended as a student resource. Photocopying is allowed as needed for student use.

Overview of the CRCT

What is the CRCT?

The Grade 3 CRCT is a state-mandated achievement test that measures the subject areas of Reading, English/Language Arts, Mathematics, Science, and Social Studies.

What does the CRCT measure?

The CRCT is designed to measure student acquisition and understanding of the knowledge, concepts, and skills set forth in the state-mandated content standards.

The tests accomplish the following:

– Ensure that students are learning
– Provide data to teachers, schools, and school districts so they can make better instructional decisions
– Provide data for use in Georgia's accountability measures and reports.

CRCT results measure the academic achievement of students, classes, schools, school systems, and the state. This information can be used to identify individual student strengths and weaknesses or, more generally, to measure the quality of education throughout Georgia.

How are CRCT questions scored?

The CRCT currently uses only selected-response (multiple-choice) questions. There are four choices for each question, labeled A, B, C, and D.

Students are not compared to each other. They are measured on their achievement in meeting the standards. Scores are reported according to three performance levels: Does Not Meet the Standard, Meets the Standard, and Exceeds the Standard. For more information, go to the CRCT website **http://www.gadoe.org/Curriculum-Instruction-and-Assessment/ Assessment/Pages/CRCT.aspx**

Since the spring of 2006, performance on the Reading portion of the CRCT has been linked to Lexile® Framework for Reading. Visit **www.gadoe.org/ Curriculum-Instruction-and-Assessment/Assessment/Pages/Lexile-Framework.aspx** for more information on this national reading measure.

Preparing for the CRCT

Test-Taking Strategies

Weeks Before the Test

Set academic goals with students for the upcoming weeks and months (short and long term). Write down and post students' goals where they can be seen at least once a day.

Help students gather study materials ahead of time.

Set up a place to work that is free of distractions.

Build in time to review what was learned in the last study session.

Divide assignments into manageable chunks. Studying for a long time non-stop is not productive!

Model and have students mark the main idea of each paragraph with a pencil as they read. This will help them focus on what they are reading.

Have students ask questions that arise while they are studying and encourage them to find the answers.

At the end of each study session, review what they have learned.

....

Day Before the Test

Remind students to get a good night's rest.

Remind students that they can talk to a teacher or parent if they are feeling nervous about the test.

Assure students that this test is only one measure of their knowledge.

During the Test

Remind students of the following strategies to use during the test:

Relax by taking slow, deep breaths.

Read the directions carefully. Make sure you understand what you need to do. If you are not sure, ask the teacher.

Read each question carefully.

When you use scratch paper, make sure that you copy the problem correctly from the test onto your paper.

You can underline and make marks on your test to help you while you work, but the only answers that will be scored are those in the correct locations on your answer sheet.

Fill in the corresponding circle fully when you choose your answer. Erase any marks outside of the circle.

Use your time wisely. Leave a question blank if you are unsure of the answer, then return to it at the end.

Don't spend too much time on one question.

Be sure to answer all of the questions.

Review your answers when you have finished the test.

Try to stay calm during the test. This is a chance for you to show what you know. Do the best you can!

Related Links

Below are links to important resources that contain information related to the CRCT.

CCGPS/GPS Resources:
www.georgiastandards.org

CRCT Content Descriptions:
www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/CRCT.aspx

CCGPS/GPS Frameworks:
www.georgiastandards.org

Lexile Framework for Reading:
www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Lexile-Framework.aspx

The Study Guides are intended to serve as a resource for parents and students. They contain a few activities and short practice quizzes for each content area. They also provide teachers an additional tool for student practice. The standards identified in the Study 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**

Since different students have different strengths and needs, the activities in this Study Guide can be scaffolded for students who need more support, extended to challenge advanced students, or presented as is (with appropriate modeling) for grade-level students.

Reading

Reading

In Grade 3, students are making the transition from learning to read, to reading to learn. They read much more widely on a variety of topics. Grade 3 students increase their ability to read aloud with fluency and comprehension. They read more thoughtfully, discover more details, extract deeper meaning in what they read, and read more complex texts. They enjoy a variety of genres, including fiction and nonfiction texts and poetry.

The Reading activities focus on some of the concepts that are assessed on the Grade 3 CRCT Reading domains. These domains are as follows:

❶ **Reading Skills and Vocabulary Acquisition**

❷ **Literary Comprehension**

❸ **Reading for Information**

Activities
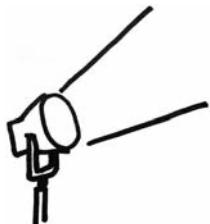
❶ Reading Skills and Vocabulary Acquisition
Common Core Georgia Performance Standards ELACC3.L.4 and ELACC3.L.5

Within the Reading Skills and Vocabulary Acquisition domain, students will acquire the skills necessary to read and interpret difficult text. They will also obtain new vocabulary from a variety of texts. By understanding the meanings of common suffixes, prefixes, and common root words, students will be able to determine or clarify the meaning of an unknown word. Grade 3 students will determine the meaning of unknown words and alternate word choices using context clues and a dictionary or thesaurus.

The following activities develop skills in this domain:

– To build students' basic knowledge and skills in the meaning and use of synonyms (words with similar meanings), play *Word-Pair Bingo*. Using plain white paper and a ruler, show students how to create Bingo card grids with four empty columns and rows. Compile a list of sixteen synonym pairs (see the table below), and write the first word only of each synonym pair on the board. Students should choose eight of the words on the board to write randomly in empty squares on their Bingo card (one word per square). Pass out pre-cut circles of construction paper for chips. Call out the *second* word of any of the synonym pairs, use it in a sentence, and repeat the word. Keep track of the words used by writing them in order on the board. Students should scan their Bingo cards, and if they have the called word's synonym on their cards, they may cover it with a chip. The first student to get four chips in a horizontal, vertical, or diagonal row should raise his or her hand. In order to win, the student must name the words covered and identify the words called.

Synonyms

clever / smart	finish / end
fine / good	look / see
start / begin	unhappy / sad
job / task	filthy / dirty
wealthy / rich	woman / lady
strange / weird	hard / difficult
thin / slim	ill / sick
listen / hear	late / tardy

– To develop students' understanding of synonyms, build on the previous activity with practice using the thesaurus. Provide practice using a thesaurus by playing a game of *Break the Code.* Present pairs or small

groups of students with a sentence that contains advanced vocabulary. For example, *The garrulous professor gesticulated wildly as he articulated his ideas.* Students should read the sentence and circle any words they don't understand. They should look up the unknown words in a thesaurus or on an Internet thesaurus site. They will rewrite the sentence replacing the unknown words with words they understand. Students should read the original sentence to the class and then present their translations.

– To help students see how words grow from roots, prefixes, and suffixes, create posters with flowers, roots, stems, and petals. Show students how to draw the roots and stem of a flower and add a circle to the top of the stem. Present students with a list of root words and choose one to write below your drawing. Draw a petal coming out from the circle at the top of the stem. Think of a word that has the root you have chosen and write it in your petal (e.g., for the root word *luck,* write the word *lucky*). Next, think of other words that share the same root and write them in additional petals (e.g., *luckily*). Students can choose their own root words to work with as they draw their own flowers. To help students think of words that share their root, show them a list of possible prefixes (*un-, re-, dis-, in-, mis-, pre-, sub-, im-, bi-, tri-*) and suffixes (*-tion, -ous, -ly, -s, -es, -ed, -ing, -er, -est, -ful, -less, -ness, -y*). Remind students that not every prefix or suffix will work with every root word. Show them that some words may contain both a prefix *and* a suffix (e.g., un*lucky*), and highlight examples where the spelling of the root word changes when adding affixes (e.g., *run* becomes *running, celebrate* becomes *celebration,* and *try* becomes *tried*).

– Once students comprehend the idea that affixes add meaning to words, increase the difficulty and complexity of this activity by writing prefixes and root words on index cards. Create at least one task card for each word in the table. Task cards should direct students to form words based on the definitions. For example, *Make a word that means to find something for the first time.* Students should combine prefixes and root words until they build the word that fits the given meaning (in this case, the word *discover*). Students should write their own sentences using the newly formed word. They will see how a word's meaning is often the sum of its parts.

able	fair	noise
appear	fame	obey
behave	fear	pack
calm	fill	perfect
care	frequent	play
celebrate	friend	power
certain	group	proud
close	happy	quick
color	hard	read

comfort	interest	real
concentrate	kind	sad
correct	lead	search
count	learn	smooth
cover	light	trust
cycle	like	try
decorate	locate	turn
different	loud	use
direct	luck	view
ease	merge	wonder
equal	near	

–   To improve students' understanding of multiple meanings, provide sentences with context clues that correspond to the words' different definitions. The following sentences show the multiple meanings of the word *bat. The bat flew out of the cave. Sarah is the next person to bat the ball. The baseball player carried his bat.* Students should read the sentences and write an explanation of what the word means in the sentence. Student explanations for the example above could include the following: *In the first sentence the word bat means a black animal with wings. In the second sentence the word bat means to hit. In the third sentence the word bat means a wooden or metal stick.* Next, give students sentence strips where they will write their own sentences for each different meaning of the words. Once all the sentences are written, students can use them in a future activity where they group sentences that use the same definition of a given word. See the table below for a list of words with multiple meanings:

bank	cut	mean	ring	smell
bark	dash	might	rock	snap
bat	deck	mind	roll	sound
bear	face	nail	rose	stick
bend	fast	order	row	tape
bowl	jump	paint	run	tip
box	kind	pen	season	trick
can	lap	pet	shell	trip
check	light	play	ship	watch
color	look	race	sink	whistle

–   To familiarize students with the idea that many words have different definitions, provide practice working with printed and online dictionaries. Set up a word hunt by handing out a word with multiple meanings written on an index card to students working in pairs or in a small group. Students

will look up the words using a dictionary. They will copy each definition along with the part of speech onto a sentence strip. On another sentence strip, students will write a sentence corresponding to each definition. When done, students should stack the words, definitions, and sentences into separate piles. After mixing up each stack of paper, the teacher will hand out a word to each group (different from their original word). Sentences and definitions can be laid out on the floor or taped to a wall for easy access. Students will look the new word up using an online dictionary to help identify and locate corresponding definitions. Each person in the pair or group will choose a definition and write a new sentence on a piece of lined paper.

Activities
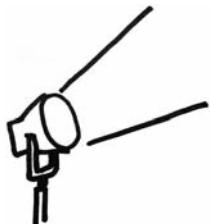
❷ Literary Comprehension

Common Core Georgia Performance Standards ELACC3.RL.1, ELACC3.RL.2, ELACC3.RL.3, ELACC3.RL.4, ELACC3.RL.5, ELACC3.RL.6, ELACC3.RL.7, and ELACC3.RL.9

Within the Literary Comprehension domain, students are expected to comprehend and explore literary works by identifying and analyzing the different elements of short stories, fairy tales, fables, folktales, and poetry. Skills in this domain include using evidence to draw conclusions, determining a central message and key details, and making connections between the text and characters, events, and illustrations. Students will compare and contrast elements of two texts, distinguish points of view, and determine the meaning of literal and non-literal language.

The following activities develop skills in this domain:

−   To get students thinking about how characters contribute to events, prepare a session of *Character Court.* Serving as the judge, select a student volunteer to role-play the main character from a text students have read. The other students will role-play the jury. First, ask the student playing the main character to take the following oath: *Do you swear to tell the truth, the whole truth, and nothing but the truth?* The student role-playing the character will raise his or her right hand and say that he or she does. Ask the student role-playing the main character pre-written questions such as: *Why did you decide to _____? Why did you decide not to _____? Where were you when _____ happened? Where do you usually _____? How did you feel when _____?* The student role-playing the character will offer answers to the best of his or her ability, but members of the jury can counter the claims if they find evidence in the text to prove the answers are unfounded. Once all the evidence is presented, members of the jury will vote to determine whether the character has a justifiable case.

−   To emphasize the importance of using evidence from the text to support inferences and conclusions, stage a text investigation. Pre-read a text you will read with students. Write six inferences or conclusions about it on sentence strips or chart paper. Three of the sentences should be supported by evidence in the text, and three sentences should be unsupported inferences or conclusions that are *not* based on evidence in the text. After students read the text, present them with the six inferences and conclusions, one at a time. Explain that together you are on a mission to find out whether each statement is supported by evidence in the text. With a magnifying glass in hand, model literary detective work by carefully reading over the text. Students should help look for sentences that either state or imply that the inferences and conclusions are valid. Circle or underline the supporting evidence you find in the text and display the supported inferences and

conclusions on the board. Give students a template of a magnifying glass image where they will write the evidence found in the text for each valid inference and conclusion. Discuss why the three inferences and conclusions *not* supported by evidence in the text are invalid. Students' detective skills will improve with each different text you read and investigate.

– To examine how illustrations can contribute to an understanding of a text, ask students to visualize and draw pictures that are related to a text that they have read. Direct them to choose an aspect of the text that they feel is significant in understanding the text as a whole. Once the pictures are completed, ask students to share what they have drawn. Ask them questions during their presentation such as: *Does your picture help a reader to understand the appearance of the main character? Would a reader have a better understanding of the setting if this picture were included? How would including this picture impact the mood of the story?* If the original version of the text included art, remove it before this activity. It can then be presented at the end and lead to a larger discussion. Show them the author's choice for an illustration and have the students compare what they drew to what the author used.

Activities
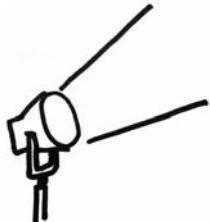
❸ Reading for Information

Common Core Georgia Performance Standards ELACC3.RI.1, ELACC3.RI.2, ELACC3.RI.3, ELACC3.RI.4, ELACC3.RI.5, ELACC3.RI.6, ELACC3.RI.7, ELACC3.RI.8, and ELACC3.RI.9

Within the Reading for Information domain, students are expected to read, recall, and analyze information from various texts. These texts may include nonfiction articles, biographies, subject-area texts, webpages, and reference sources. Skills in this domain include using evidence to draw conclusions, determining the main idea and key details, making connections between different parts of the text and illustrations, determining the meaning of academic words and phrases, locating information, distinguishing points of view, and comparing and contrasting two texts on the same topic.

The following activities develop skills in this domain:

–   To help students learn the difference between facts and opinions, read an informational text together and categorize the information provided as either facts or opinions. Select a complex text with multiple examples of explicit and implicit points of view. Write each sentence of the text on a separate strip of paper. Explain to students that a fact is a statement that can be proven true or false. For example, *Spacecrafts are equipped to travel outside the Earth's atmosphere* is a fact. An opinion, on the other hand, is what someone believes, thinks, or feels. Opinions cannot necessarily be proven true or false, and they may differ from person to person. *The best planet to visit in a spacecraft is Venus* is a good example of such an opinion. In addition, some sentences contain opinions and factual information. Consider the following example: *The most fascinating part of a spacecraft is its engine system, which includes the fuel, valves, pipes, and thrusters.* While it is a fact that a spacecraft's engine system includes the parts mentioned, it is an opinion that they make up the most fascinating feature. Opinions can be used as clues to help determine the author's point of view. Give each student one of the sentences from the text and one colored marker or crayon. Students should underline only the factual information in their sentence. Go over each sentence together. Students should explain *why* they think the underlined information is factual and the unmarked information represents an opinion. Discuss as a class whether students' distinctions are accurate. Once students have grasped the difference between facts and opinions, start an activity that will help them learn how to use opinions to draw conclusions about an author's point of view. Write a series of 5–6 sentences on the board. At least 3 sentences should reflect a point of view that can be determined by drawing conclusions from the opinions already discussed. Ask students to read the opinions and determine which sentences the author would most likely agree/disagree with. Discuss each sentence in turn.

– To boost students' abilities to infer the main idea of an informational text, give them magazine or newspaper articles and books with the titles covered up so they will invent titles of their own. Students will read the text and, based on the information they read as well as the way it is presented, they will come up with two possible titles. Once they have written their ideas down, they should write brief explanations of why they wrote each title and circle the one they think is closest to the title the real author used. Reveal the title used by the author, and students will see how their interpretations match up. If students' titles are very different from the one the author used, engage them in a discussion about why the author may have chosen the title he or she used. Were the students' titles more general or more specific than the author's?

– To help students learn to use language pertaining to sequence ask the students to prepare a food item together by following a recipe, step by step. Select a recipe that uses clear sequential language (e.g., first, next, finally). At the end of the activity, ask students how this language helped to establish the relationship between each of the steps.

Practice Quiz

Genre: Fiction
Read the passage below and answer the questions that follow.

The Snow Day

This year, my family moved from Georgia to Indiana. Ever since we moved, we've had to get used to some differences. One of the biggest changes is the weather. It hardly ever snows in Georgia. When it does snow, it's nothing like this!

One morning we woke up and saw eight inches of snow on the ground! I had never seen a big snowfall like that. Everything was covered with snow! After these large snowstorms, schools close. People in Indiana call that a *snow day*. I was happy because I did not have to go to school and could sleep late. I was beginning to love Indiana!

When I finally got out of bed, Mom and I decided to go outside. We wanted to explore our snow-covered yard. We knew to wear lots of warm clothes. We wore so many layers that we looked puffy in our coats, gloves, and boots.

We had never shoveled snow before, but we cleared the driveway. The snow was very light. It was crisp and sparkling white. We shoveled a little snow at a time. It didn't take us very long to get the job done. After we finished, we decided to build our first snowman. We used peanuts for the eyes, a carrot for the nose, and red candies for the mouth. We then wrapped a scarf around its neck.

Mom saw kids taking their sleds to a big hill of snow. She thought it would be fun to join them. I was nervous when I saw the steep hill. Mom said she would ride with me. We climbed to the top of the hill. With one quick breath, we jumped onto our sled. Seconds later, we slid all the way down to the bottom of the hill. The sled raced down the hill as if it were on ice skates. The wind blew through our hair. The cold air burned our cheeks. When we reached the bottom, we felt great! Mom and I liked it so much that we wanted to do it over and over again.

When we got tired, Mom and I walked back to the house. We were so cold! We felt like frozen ice cream cones. Mom made a big pot of hot chocolate. We baked some chocolate chip cookies. The house smelled like a chocolate factory!

I had fun spending time with my mom on that first big snow day! We both agreed that the snow was better than we expected. Who knew it would be this much fun? Of all the changes we had to adjust to, this has been my favorite.

1 **Which of these BEST describes what happens in the passage?**
   A   A boy teaches his mother how to ride a sled.
   B   A boy and his mother enjoy a day in the snow.
   C   A boy asks his mother to let him stay home from school.
   D   A boy and his mother work all day to shovel the driveway.

2 **Which of these is MOST LIKELY true about the main character?**
   A   He usually sleeps late.
   B   He does not like sledding.
   C   He usually shovels the driveway.
   D   He has never had a snow day before.

3 **Why does the main character sleep late?**
   A   He does not have warm clothes.
   B   He does not want to play outside.
   C   He does not have to go to school.
   D   He does not want to shovel snow.

4 **Which sentence from the passage BEST shows that snow is a new experience for the main character?**
   A   This year, my family moved from Georgia to Indiana.
   B   I was happy because I did not have to go to school and could sleep late.
   C   Mom and I liked it so much that we wanted to do it over and over again.
   D   We both agreed that the snow was better than we expected.

5 **Which of these is MOST LIKELY true about the main character's mother?**
   A   She likes to play outside.
   B   She likes to eat ice cream.
   C   She wishes that they had not moved.
   D   She wishes that school was not closed.

6 **Which of these BEST explains why the main character's mother sleds down the hill?**
   A   because the hill is icy
   B   because the hill is bumpy
   C   because the main character is tired
   D   because the main character is nervous

7   **Which of these BEST describes the central message of the passage?**
    A   Baking cookies is fun.
    B   Making new friends is easy.
    C   Playing in the snow can be fun.
    D   Moving somewhere new can be hard.

8   **How will the main character MOST LIKELY feel the next time it snows?**
    A   proud
    B   lonely
    C   excited
    D   nervous

Use the information in the box below to answer the question.

> **sparkle *v.* 1.** to give off small pieces of fire **2.** to show small flashes of light **3.** to be bubbly and cheerful **4.** to fizz or bubble

9   **Which definition BEST matches the meaning of *sparkling* as it is used in the sentence?**

> The snow was very light. It was crisp and <u>sparkling</u> white.

    A   definition 1
    B   definition 2
    C   definition 3
    D   definition 4

10 **What is the meaning of the word *raced* as it is used in the sentence?**

> The sled <u>raced</u> down the hill as if it were on ice skates. The wind blew through our hair. The cold air burned our cheeks.

    A   moved quickly
    B   moved strangely
    C   moved sideways
    D   moved backwards

Solutions

Number	Correct Answer	Explanation
1	**B**	*Recounts stories through key details in the text. (ELACC3.RL.2)*

The correct answer is **Choice (B) A boy and his mother enjoy a day in the snow.** This sentence provides an accurate description of what the overall passage is about. Choice (A) is not correct because, although the passage describes a boy and his mother going sledding, the boy does not *teach* his mother how to sled, and sledding is not what the overall passage is about. Choice (C) is not correct because the boy does not ask his mother to let him stay home from school. The boy gets to stay home from school because it is a snow day. Choice (D) is not correct because the boy and his mother do not spend the whole day shoveling the driveway. The fourth paragraph of the passage, which describes the mother and son shoveling the driveway, explicitly states, "It didn't take us very long to get the job done."

Number	Correct Answer	Explanation
2	**D**	*Describes characters in a story. (ELACC3.RL.3)*

The correct answer is **Choice (D) He has never had a snow day before.** The first two paragraphs of the passage explain how one of the biggest differences between Georgia and Indiana is the weather. It snows a lot more in Indiana, and as the main character learns, "After these large snowstorms, schools close. People in Indiana call that a *snow day*." It can be inferred that the main character has never had a snow day before. Choice (A) is incorrect because there is nothing in the passage that states or implies he *usually* sleeps late. On the contrary, his excitement about getting to sleep late implies it is something he does not get to do often. Choice (B) is incorrect because although the fifth paragraph of the passage explains that the main character was nervous when he saw the steep sledding hill, at the end of the paragraph the main character writes, "Mom and I liked it so much that we wanted to do it over and over again." Choice (C) is incorrect because the first sentence of the fourth paragraph explicitly states, "We had never shoveled snow before, but we cleared the driveway."

Number	Correct Answer	Explanation
3	**C**	*Describes a character's motivations. (ELACC3.RL.3)*
		The correct answer is **Choice (C) He does not have to go to school.** The second to last sentence of the second paragraph explicitly states, "I was happy because I did not have to go to school and could sleep late." Choice (A) is incorrect because the passage never states or implies that the boy slept late because he did not have warm clothes. In fact, the third paragraph describes all the warm clothes he put on. Choice (B) is incorrect because it is never stated or implied that the boy slept late in order to avoid playing outside with his mother. In fact, the fourth and fifth paragraphs describe how much fun he has playing in the snow. Choice (D) is incorrect because, although the passage describes the boy shoveling snow, it is never stated or implied that he slept late in order to avoid shoveling the snow.
4	**D**	*Answers questions to demonstrate understanding. (ELACC3.RL.1)*
		The correct answer is **Choice (D) We both agreed that the snow was better than we expected.** This sentence shows that the characters had heard about snow, but had never experienced it before. Choice (A) is incorrect because it describes that they were new to Indiana, not that they had never experienced snow. Choice (B) is incorrect because it describes how the character felt because of the snow. Choice (C) is incorrect because the sentence describes how the characters felt about sledding.

Number	Correct Answer	Explanation
5	**A**	*Describes a character's feelings in a story. (ELACC3.RL.3)*
		The correct answer is **Choice (A) She likes to play outside.** The third paragraph of the passage explains how the boy and his mother *wanted* to explore their snow-covered yard. The fifth paragraph describes how the mother saw kids sledding and explicitly states, "She thought it would be fun to join them." Both of these details support the assertion that the boy's mother liked to play outside. Choice (B) is incorrect because the passage does not state or imply that the mother likes ice cream. Ice cream cones are only mentioned to describe how cold the boy and his mother felt. Choice (C) is incorrect because there is no evidence in the passage to suggest that the boy's mother wishes they had not moved. Choice (D) is incorrect because there is no evidence in the passage that suggests the boy's mother wishes school were not closed.
6	**D**	*Describes a character's feelings in a story. (ELACC3.RL.3)*
		The correct answer is **Choice (D) because the main character is nervous.** In the fifth paragraph of the passage, the main character explains, "I was nervous when I saw the steep hill. Mom said she would ride with me." It can be inferred that the mother rode with the boy to make him feel less nervous. Choice (A) is incorrect because, although the main character says the sled "raced down the hill as if it were on ice skates," this is not the reason Mom decides to sled down the hill. Choice (B) is incorrect because the passage does not state or imply that the hill was bumpy. Choice (C) is incorrect because the main character does not get tired until after he and his mom go sledding.

Number	Correct Answer	Explanation
7	**C**	*Determine the central message, lesson, or moral. (ELACC3.RL.2)*
		The correct answer is **Choice** (**C**) **Playing in the snow can be fun.** The main idea can be thought of as the central message of the passage and can be interpreted from the text and the title. The passage describes several events, such as building a snowman and sledding, that show how playing in the snow can be fun. Choice (A) is incorrect because although baking cookies is one event that takes place in the passage, it is not central to the passage as a whole. Choice (B) is incorrect because the passage is not about making new friends. Choice (D) is incorrect because although the characters in the story have moved, the main message of the passage is not that moving somewhere new can be hard. In fact, the passage describes how experiencing new things in a new place can be fun.
8	**C**	*Distinguishes their own point of view from that of the narrator or those of the characters. (ELACC3.RL.6)*
		The correct answer is **Choice** (**C**) **excited.** In the last paragraph of the passage, the main character expresses his excitement about the fun he and his mother had on their first snow day. It is safe to predict that he will feel excited the next time it snows. Choices (A) and (B) are incorrect because the emotion the main character feels throughout his first snow day is not pride or loneliness. It is not likely that he will feel proud or lonely the next time it snows. Choice (D) is incorrect because the main character only felt nervous before going sledding. His overall feeling about the whole day was not nervousness, and it is not likely he will feel nervous the next time it snows.

Number	Correct Answer	Explanation
9	**B**	*Uses glossaries or beginning dictionaries to determine or clarify the precise meaning of key words and phrases. (ELACC3.L.4d)* The correct answer is **Choice (B) definition 2.** Definition 2 describes "sparkle" as something that "shows small flashes of light." Choices (A), (C), and (D) do not describe something that is shiny or bright.
10	**A**	*Uses sentence-level context as a clue to the meaning of a word or phrase. (ELACC3.L.4a)* The correct answer is **Choice (A) moved quickly.** In the sentence "The sled raced down the hill as if it were on ice skates," the word *raced* means moved quickly. The sentences that follow, "The wind blew through our hair" and "The cold air burned our cheeks," provide clues that the sled must have been moving fast. Choice (B) is incorrect because racing does not mean moving strangely. Choice (C) is incorrect because the sled raced "as if it were on ice skates" and ice skates do not move sideways. Choice (D) is incorrect because racing does not mean moving backwards.

English/Language Arts

English/Language Arts

Grade 3 students are more able to work independently on research projects, making their writing more sophisticated and meaningful. With some guidance, they use all aspects of the writing process in producing their own compositions and reports. They are much more adept at summarizing main points from fiction and nonfiction texts, and they use more abstract skills of synthesis and evaluation in writing. By the end of Grade 3, students are aware of the importance of the conventions of language. Grade 3 students understand the importance of spelling and the importance of correct language.

The English/Language Arts activities focus on some of the concepts that are assessed on the Grade 3 CRCT English/Language Arts domains. These domains are as follows:

❶ **Grammar/Sentence Construction**

❷ **Research/Writing Process**

Activities
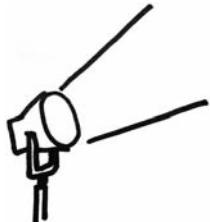
❶ Grammar/Sentence Construction
Common Core Georgia Performance Standards ELACC3.L.1, ELACC3.L.2, and ELACC3.L.3

Within the Grammar/Sentence Construction domain, students understand and control the rules of the English language to use correct capitalization and punctuation. They can spell grade-level words correctly and are able to use reference materials, such as dictionaries, to check spelling. Students can also use simple, compound, and complex sentence structures with correct subject–verb and pronoun–antecedent agreement and know when to use the comparative and superlative forms of adjectives and adverbs. They are able to form and use regular and irregular verbs in simple verb tenses as well as regular and irregular plural nouns. Finally, students are able to explain the grammatical function of nouns, verbs, pronouns, adjectives, and adverbs in particular sentences.

The following activities develop skills in this domain:

– To practice subject–verb agreement, students will complete a cloze activity. For this activity, select a short, high-interest story. Replace the verbs in the story with a blank line. In parentheses after the blank line, give two possible forms of the verb, only one of which would agree with the subject. Select sentences throughout the story and substitute a blank line in place of a verb that should agree with the subject. Before students begin the activity, explain and model the process of looking for the correct word that fits grammatically into the story. Here are a few examples with a blank and two possible fill-ins at the end of each sentence.

  – *Dexter and Lisa _____ across the field. (run, runs)*
  – *My friends and I _____ going to the beach. (is, are)*
  – *The black horse _____ across the field to the barn. (gallop, gallops)*

– To practice understanding how nouns, pronouns, verbs, adjectives, and adverbs function in a sentence, students will discuss a set of sentences and accompanying questions that help them see the grammatical roles these parts of speech can play.

  For example, to practice understanding the direct object role, present students with several simple sentences all of which use direct objects. Students should understand that direct objects receive the action of the verb.

  Sample Practice Sentence: *Susan threw the bright red ball as hard as she could.*

  Practice Questions:
  – *How is the word ball used in the sentence?*
  – *Does it tell who threw? (No.)*

– *Does it describe Susan? (No.)*
– *Does it describe a color? (No.)*
– *Does it tell what Susan threw? (Yes.)*

Address other grammatical functions similarly.

– To practice accurate spelling, punctuation, and complex sentence structure, students will create stories in a round robin using their assigned spelling words. Each student will write one sentence on paper and pass the paper to the next student, or back to you, to write a second sentence. Keep the exchange going until the story naturally ends. At the end of the activity, direct students to read over the whole story to check for accurate spelling and punctuation, combine simple sentences into complex sentences, and make other corrections if needed.

– To help students understand when to use formal or informal language in their writing, have a short discussion about the differences between the two. For example, informal language may include slang words, while formal language does not. Another difference between the two is that informal language uses contractions, while formal language does not. Engage students in the discussion by asking which slang words they use when they write a note to a friend.

Next, students will create a simple chart with examples of writing that fits in each category. The chart should look like the following partially completed table:

Informal language	Formal language
Note to a friend	School report
Personal journal entry	

Activities
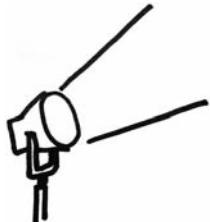
❷ Research/Writing Process

Common Core Georgia Performance Standards ELACC3.W.1, ELACC3.W.2, ELACC3.W.3, ELACC3.W.7, and ELACC3.W.8

Within the Research/Writing Process domain, students begin to use specific sensory details, such as strong verbs and descriptive adjectives, as well as relevant examples, facts, reasons, and anecdotes. Students begin to use structures such as transition words and phrases, bullets, subheadings, and numbering to ensure coherence in their writing. In addition, students begin to select a focus and an organizational pattern for writing. Finally, students use a variety of resources to research and share information on a topic.

The following activities develop skills in this domain:

– Writing with coherence is an important skill that involves selecting a focus, choosing an organizational structure, and using transition words. Students will write organized paragraphs based on sequences of events. They will either describe an exciting experience, such as a trip, or write a set of instructions for doing something they enjoy. Before the students begin writing, they will describe the focus, or main purpose, of their paragraphs and create a list of transition words that they can use throughout their paragraphs (*first, second, next, then, last, finally, etc.*). Encourage students to use a numbered list of steps or bullet points, if appropriate.

– In order to practice using sensory details, students can rewrite short stories in their own words. Sensory details are the parts of the story that describe how something looks, sounds, feels, smells, or tastes. Encourage students to be as descriptive as possible by including adjectives and using a thesaurus as necessary. Students may copy parts of the story they have chosen to rewrite, word for word. The main idea of the activity is for students to see how any piece of writing can be enriched with sensory details. Students will share their rewritten stories when they are finished.

– To practice using reasons to support opinions, provide students with topic sentences that state an opinion. Ask students to think of reasons that could support the stated opinion.

– To help students see the difference between relevant and irrelevant facts and details in writing, prepare three short paragraphs on subjects of student interest. Each paragraph should be only five sentences long and include a sentence with information that does not belong. For example, a paragraph about an upcoming town festival could have a sentence about school hours. Students will identify the sentence that does not fit and explain in their own words why it should be taken out.

– Finding good information quickly using a variety of resources is an important skill. Help students practice finding facts and definitions in reference books or on the Internet by creating a grab bag of challenges. This grab bag should have several strips of paper with questions such as: *What is the capital of Madagascar?* and *What is the definition of an isthmus?* Write the grab bag challenges around a specific unit of study (*Africa*), or keep the questions random. Explain that students will receive one point for each correct answer they write on the back of a strip.

Practice Quiz

1 **Which subject BEST completes the sentence?**

_____ love to read books.

A It
B He
C They
D Their

2 **Which sentence shows the correct way to write a plural noun?**
A A dollar is worth one hundred pennys.
B A curtain divides the room into two halfs.
C The bushs in the yard have grown very big.
D The knives lay on the countertop in the kitchen.

3 **Which word in the sentence needs an apostrophe?**

Anitas friend will go to the zoo on both days.

A Anitas
B will
C both
D days

4 **Which word is a pronoun?**

The pen that ran out of ink was hers.

A pen
B ran
C of
D hers

5 **Which sentence is written correctly?**
A My dog is the more smartest dog in the world.
B Rodney thinks that math is the more hardest class of all.
C That building is the most tallest building I have ever seen.
D This is the most wonderful book that I read on my vacation.

6 **The sentence below has a spelling error. Which underlined word is NOT spelled correctly?**

We took a <u>jurney</u> <u>through</u> the <u>forest</u> to the <u>meadow</u>.

A jurney
B through
C forest
D meadow

7 **What is the BEST order for the sentences?**

Sentence 1: Then, we raked the leaves.
Sentence 2: First, my sister and I pulled weeds.
Sentence 3: We enjoyed lemonade after all of our hard work.
Sentence 4: Dad said it was time to get to work.

A 2, 4, 3, 1
B 4, 2, 1, 3
C 3, 2, 4, 1
D 1, 2, 3, 4

8 **Which sentence in the paragraph does NOT state a reason that supports the opinion the writer is explaining?**

(1) I think that it is fun to have a younger sister or brother. (2) I have a brother who is two years younger than I am. (3) He and I play many games together. (4) Sometimes we play video games. (5) Other times we play with puzzles or other toys. (6) When we are done playing, it is always my job to put all our toys away.

A sentence 3
B sentence 4
C sentence 5
D sentence 6

9 **Under which heading of a magazine article would a student MOST LIKELY find information about brushing teeth?**
A Animal Teeth
B The Inside of Teeth
C Human Teeth
D Keeping Teeth Healthy

10 **Which sentence is BEST to add to the end of the paragraph to show how Patty feels about what she sees and hears?**

> (1) Patty woke up early. (2) It was a cloudy, rainy morning. (3) She got dressed and tiptoed downstairs. (4) Brightly colored balloons and streamers hung from the ceiling. (5) A pink cake with eight candles sat in the middle of the kitchen table. (6) Then Patty heard a soft sound she did not recognize. (7) It was coming from a small, open box in the corner of the room.

A Patty smiled and said, "I think this is going to be a day full of nice surprises!"
B Patty hoped that her parents would wake up and come downstairs very soon.
C Patty thought, "I wonder if the sun is ever going to come out for my birthday?"
D Patty decided that she would walk carefully toward the box and take a quick peek inside.

Solutions

Number	Correct Answer	Explanation
1	**C**	*Ensure subject–verb and pronoun–antecedent agreement. (ELACC3.L.1f)*
		The correct answer is **Choice (C) They.** The verb *love* does not end in an *s*, which means it is plural. *They* is correct because it is a plural pronoun, so it agrees with the verb in the sentence. Choices (A) and (B) are both incorrect because they are singular pronouns. Choice (D) is incorrect because it is a possessive pronoun. Though it is plural like the correct answer, it is not grammatically correct to use a possessive pronoun in this sentence.
2	**D**	*Form and use regular and irregular plural nouns. (ELACC3.L.1b)*
		The correct answer is **Choice (D) The knives lay on the countertop in the kitchen.** The irregular plural noun *knives* is formed correctly. The irregular plural nouns in choices (A), (B), and (C) are not correctly formed. Choice (A) should be *pennies*. Choice (B) should be *halves*. Choice (C) should be *bushes*.
3	**A**	*Form and use possessives. (ELACC3.L.2d)*
		The correct answer is **Choice (A) Anitas.** *Anitas* requires an apostrophe because it shows possession. *Anita's* is a possessive noun. The apostrophe takes the place of the word *of*. It stands for *a friend of Anita*. Choices (B) and (C) are incorrect because they do not show ownership and they are not contractions of two words. Therefore, no apostrophe is necessary. Choice (D) is incorrect because *days* does not show possession and it is not a contraction of two words. *Days* is simply a plural noun, which is why it has an *-s* at the end.

Number	Correct Answer	Explanation
4	**D**	*Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences. (ELACC3.L.1a)* The correct answer is **Choice (D) hers.** A pronoun takes the place of a noun, and hers is the only word in this sentence that takes the place of a noun. In this case, the pronoun is replacing the name of a person, the owner of the pen. Choice (A) is incorrect because it is a noun and does not take the place of another noun. Choice (B) is incorrect because it is a verb and does not take the place of a noun. Choice (C) is incorrect because it is a preposition and does not take the place of a noun.
5	**D**	*Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified. (ELACC3.L.1g)* The correct answer is **Choice (D) This is the most wonderful book that I read on my vacation.** *Most wonderful* is the correct superlative form of the adjective. Choice (A) is incorrect because the superlative form of the adjective is required. The sentence should read: *My dog is the smartest dog in the world.* Choice (B) is incorrect because the superlative form of the adjective is required. The sentence should read: *Rodney thinks that math is the hardest class of all.* Choice (C) is incorrect because the superlative form of the adjective is required. The sentence should read: *That building is the tallest building I have ever seen.*
6	**A**	*Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words. (ELACC3.L.2f)* The correct answer is **Choice (A) jurney.** This is not the correct spelling of the word. The word *journey* is spelled with an *o* before the *u.* Choices (B), (C), and (D) are incorrect because these words are all spelled accurately.

Number	Correct Answer	Explanation
7	**B**	*Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally. (ELACC3.W.3a)*
		The correct answer is **Choice** (**B**) **4, 2, 1, 3.** This choice puts the sentences in the most logical order. Transition words, such as *first, next,* or *last,* can help put information in chronological order. Choice (A) is likely to be chosen because its first sentence begins with the word *first.* However, it is incorrect because Sentence 3 (with the phrase "after all of our hard work") comes before sentence 1 (where the work happens). Choice (C) is incorrect because it begins with the sentence that explains what happened after the work was done. Choice (D) is incorrect because the first word of Sentence 1, *then,* means it should come in the middle or at the end.
8	**D**	*Introduce the topic or book they are writing about, state an opinion, and create an organizational structure that lists reasons. (ELACC3.W.1a)*
		The correct answer is **Choice** (**D**) **sentence 6.** The writer is explaining the opinion that having a younger sibling is fun. Choices (A), (B), and (C) all provide reasons that support the stated opinion. Choice (D), however, does not show that having a younger brother is fun since the older child is responsible for cleaning up after they are done playing.
9	**D**	*Recall information from experience or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (ELACC3.W.8)*
		The correct answer is **Choice** (**D**) **Keeping Teeth Healthy.** The paragraphs under this heading would MOST LIKELY supply information about brushing teeth, because we know this is something people do in order to keep teeth healthy. Choices (A) and (C) are incorrect because these headings do not reference tooth care in any way. Choice (B) is incorrect because *The Inside of Teeth* will have content about the internal structure of the tooth itself, not what one should do to the outside to take care of them.

Number	Correct Answer	Explanation
10	**A**	*Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events. (ELACC3.W.3b)*
		The correct answer is **Choice (A) Patty smiled and said, "I think this is going to be a day full of nice surprises!"** This answer choice best indicates Patty's feelings about everything she sees and hears when she comes downstairs. She is happy, smiling, and feeling pleasantly surprised. Choices (B), (C), and (D) are incorrect because they do not reflect Patty's feelings about what she sees and hears.

Mathematics
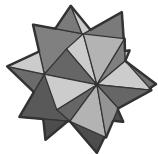
Mathematics

By the end of Grade 3, students will use place value understanding and properties of operations to perform multi-digit arithmetic and develop understanding of fractions as numbers. They will represent and solve problems involving multiplication and division; understand properties of multiplication and the relationship between multiplication and division; multiply and divide within 100; solve problems involving the four operations, and identify and explain patterns in arithmetic. Students will solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects; represent and interpret data; understand concepts of area and relate area to multiplication and to addition; recognize perimeter as an attribute of plane figures and distinguish between linear and area measure. They will also reason with shapes and their attributes.

The Mathematics activities focus on some of the concepts that are assessed on the Grade 3 CRCT Mathematics domains. These domains are as follows:

❶ **Number and Operations**

❷ **Measurement and Data Analysis**

❸ **Geometry**

❹ **Algebra**

The Standards for Mathematical Practices are integrated across the four domains.

Mathematical Practices are listed with each grade's mathematical content standards to reflect the need to connect the mathematical practices to mathematical content in instruction. The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations, and relations), procedural fluency (skill in carrying out procedures

flexibly, accurately, efficiently, and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy).

Activities
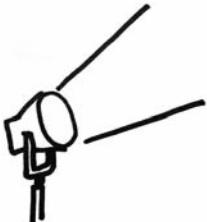
❶ Number and Operations

Common Core Georgia Performance Standards MCC3.OA.1, MCC3.OA.2, MCC3.OA.3, MCC3.OA.5, MCC3.OA.6, MCC3.OA.7, MCC3.OA.8, MCC3.NBT.1, MCC3.NBT.2, MCC3.NBT.3, MCC3.NF.1, MCC3.NF.2, MCC3.NF.3

Within the Number and Operations domain, students will represent and solve problems involving multiplication and division. They will be able to understand properties of multiplication and the relationship between multiplication and division. Students will multiply and divide within 100. They will solve problems involving the four operations and use place value understanding and properties of operations to perform multi-digit arithmetic. They will develop understanding of fractions as numbers.

The following activities develop skills in this domain:

– To develop understanding of place value in context, students will work with money values and base-ten blocks. Find a newspaper flier or an auto sales advertisement. Students will make a list of three or four cars they might want to buy and include the type of car and the price, rounding to the nearest dollar. Once they write down a list, choose prices from the list and underline one digit of each price. Students can then practice identifying the place value of the underlined digits. Students should calculate the total using various methods. They can work with play money using dollars. They should model the same operations using trading and regrouping.

– Give students practice with division by setting up various scenarios showing how a group of people could be regrouped for participation in team sports. Tell students that their class (or a set group, such as 25 students) needs to be split up. Present the following groups: teams of 5 players for basketball, teams of 9 players for baseball, and teams of 11 players for football or soccer. Ask students questions such as: *How many teams can the class make for each sport? Are there any students left over after splitting up the group into teams? Why are there leftovers?* Ask students to explain the difference between "splitting the group into 5 teams" and "splitting the group into teams of 5."

– By participating in the following game, students can improve mental math skills using the properties of operations (addition, subtraction, multiplication, division). Use index cards or a flip chart to write out a number of examples—both correct and incorrect—of the following: the identity property of multiplication (e.g., $5 \times 1 = 5$); the commutative property of multiplication (e.g., $4 \times 3 = 3 \times 4$); the associative property of multiplication (e.g., $2 \times (3 \times 6) = (2 \times 3) \times 6$); multiplication defined as repeated addition (e.g., $5 \times 2 = 10$ and $2 + 2 + 2 + 2 + 2 = 10$); the relationship between multiplication and division (e.g., $3 \times 6 = 18$ and $18 \div 6 = 3$); and the relationship

between division and subtraction (e.g., $12 \div 3$ and $12 - 4 - 4 - 4$). Create examples that vary in complexity and difficulty, saving the most challenging as bonus questions. Students should identify whether the examples are correct and explain their responses.

– Give each group of 2 to 4 students a set of pattern blocks. Have them experiment with the pattern blocks to discover which type of pattern block is equal to $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{6}$ of the yellow hexagon pattern block and record this in the second column of a chart like the one shown below.

Pattern Block Fractions

Fraction	Pattern Block	Equivalent Fraction
1 whole		
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{6}$		N/A

Have the students experiment to find one other way to make each fraction using more than one of the same type of pattern block and record the fraction that would be equivalent. For example, $\frac{1}{2} = \frac{3}{6}$ because 3 of the triangles cover half the hexagon and one triangle is $\frac{1}{6}$.

Next give each group of students 6 rectangles of identical size divided into halves, thirds, fourths, sixths, and eighths, as shown below.

$\frac{1}{2}$	$\frac{1}{2}$

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$

$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
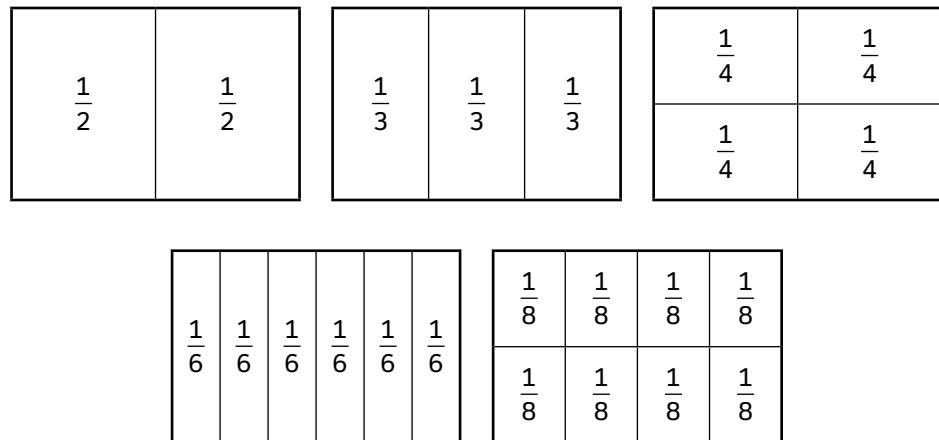
Have the students cut the rectangles into the separate, labeled parts. Have them use the parts to find as many different pairs of equivalent fractions as possible.

Gather the student groups together as a class and make a list of all the equivalent fractions found by the groups.

Activities
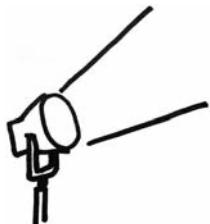
❷ Measurement and Data Analysis

Common Core Georgia Performance Standards MCC3.MD.1, MCC3.MD.2, MCC3.MD.3, MCC3.MD.4, MCC3.MD.5, MCC3.MD.6, MCC3.MD.7, MCC3.MD.8

Within the Measurement and Data Analysis domain, students will solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects (excludes finding the geometric volume of a container). They will represent and interpret data. Students will understand concepts of area and relate area to multiplication and to addition and recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

The following activities develop skills in this domain:

– Students will determine time and write time to the nearest minute, and measure time intervals in minutes using real-life examples. Students should keep a log during the course of one or more days of the times they start and stop certain activities. Students should first identify activities that took an hour, then look for activities that took a half hour, and finally to the nearest minute. Using the start and stop times, students count by fives to determine elapsed time. Students may use representations of clocks or number lines as they work or, for extra challenge, determine intervals of time to the nearest minute without pictorial assistance.

– Take advantage of students' curiosity about their surroundings as they pose information questions and gather data. Students should develop a list of information to gather from friends or neighbors (such as favorite foods or colors of bicycles). Students will decide on a category and develop answer choices before collecting data. They should display their data using a bar graph or table.

– Use the results of the activity above, or another set of data displayed in a similar format, as students solve problems using real-life contexts. For each completed graph or table, create a couple of word problems based on the data. For example, if a student has recorded the number of students who prefer vanilla, chocolate, or strawberry ice cream, generate a word problem based on the graph, such as: *How many students prefer vanilla ice cream?* or *What is the total number of students who prefer vanilla ice cream and chocolate ice cream?* or *How many MORE students prefer chocolate ice cream than vanilla ice cream?* Students should solve the problems using the information displayed in their graph or table.

– To help students interpret simple tables and bar graph, choose one set of data and display it in several different forms. For example, use the results of a survey about the different types of pets owned by each student. Some students are likely to own more than one type of pet, so the results can be

displayed as a bar graph, and a pictograph. Ask students to answer a question about the data and explain which display of data they used to determine the answer. Students should understand that some questions can be answered using any display. For example, the question *How many students own a dog?* could be answered using the bar graph, and the pictograph.

–   To develop students' abilities to identify missing information in graphs of data, gather up a number of examples of bar graphs and pictographs. Make a photocopy of each graph and then remove one piece of information. For instance, cut out the labels from one axis or tape a piece of white paper over the key. After altering each graph, make another copy so that the changes won't be obvious. Divide students into teams. Hold up an altered graph and award points to the first team that identifies what is missing from the graph. Students should develop questions about the graph that cannot be answered without the missing information. For instance, a bar graph about weather is missing labels showing the type of weather indicated by each bar, so the question *How many days did it rain during the month?* cannot be answered. Students should also develop questions that can still be answered using the graph. In the example above, students can still answer the question *How many different types of weather were observed?*

–   Students will improve the ability to compare different graphical representations of a given set of data by evaluating their own data shown in different forms. On one sheet of paper, list tables of data collected in previous student work. On another sheet create a graph representing each data table: a pictograph (e.g., using previously collected data about the number of students participating in each of four sports), or a bar graph (e.g., using data about attendance at the school talent show in each of the last five years). To save time, use a spreadsheet program or tools for creating graphs that you can easily find on the Internet. Label each data table with a large colored letter and each graph with a large colored number. Spread all sheets out on a large, flat surface. Students will choose a data table, find its matching graph, and explain how they made their choices. Students should answer questions about the features of each graph, such as *What do the numbers at the bottom of the graph represent?* or *What is the title of the graph?* Next, have at least one example prepared that shows the same data set represented by more than one graph. Students should compare the features of the different graphs.

–   To practice measuring to the nearest fourth of an inch (or the nearest centimeter), place students into groups of three and give each group a few benchmark objects, such as a paper clip, pencil, and shoelace. The students should measure the objects to the nearest quarter-inch and write down the length. Students can use these measurements to estimate the lengths of other objects. For example, students might find the length of a crayon to

be $3\frac{1}{2}$ inches and, using that, estimate that a stapler is twice as long, or 7 inches. Students should then take turns using their benchmark objects to estimate the lengths of other objects and compare and discuss their findings.

– When working with measurements, objects (several ribbons of different lengths) should be measured using rulers marked with halves and fourths of an inch. Students should record measurement of each object to the nearest whole number, halves or quarters in a table. They should use the measurements (data) recorded in the table to create a line plot and answer questions about the data in the line plot, such as, "What is the difference in length between the shortest and longest measurement recorded on the line plot?"

– When working with square units to measure area, students can create basic figures (squares and rectangles) on grid paper. Students should draw a rectangle on 1-inch square (or 1-centimeter square) grid paper using a ruler with the same units. They can measure the length and width of the rectangle by counting the squares on the grid and checking with the ruler. Students can then count the number of squares inside the rectangle, which represents the total area of the figure. They should record length, width, and area in a table. Repeat this for several rectangles of different sizes. Students should discover that a 6 cm $\times$ 3 cm rectangle will have eighteen 1×1 cm squares inside, six rows with 3 squares in each row or three rows with 6 squares in each row or a total of 18 square centimeters. Students can use this information to make the connection to the formula for simple area: $A = l \times w$. This concept may be related to the Numbers and Operations strand concerning understanding the meaning of multiplication. Students should begin to see this process as one way to model the concept.

Activities
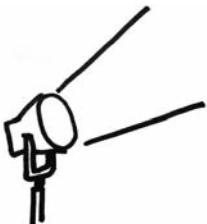
❸ Geometry

Common Core Georgia Performance Standards MCC3.G.1, MCC3.G.2

Within the Geometry domain, students will understand that shapes in different categories may share attributes and that the shared attributes can define a larger category. They will recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. Students will also partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.

The following activities develop skills in this domain:

– Give the students a deck of cards with quadrilaterals on each one. Give them index cards with characteristics on them (has 4 sides, has 4 equal sides, has 2 pairs of parallel sides, has 1 pair of parallel sides, has 4 90-degree angles). Then have the students match the cards in the deck to the characteristic cards—noting that some cards can go in more than one place. The students could then make "special characteristics" cards that would say "have 4 equal sides AND 4 90-degree angles".

– Students can sort shapes by the number of sides and then further sort them as a rhombus, rectangle, or square.

Divide students into pairs or small groups. Give each group of students a set of shapes including quadrilaterals, triangles, pentagons, hexagons, and octagons. The shapes in the quadrilaterals should include 3 or more different squares, rectangles, and rhombuses (rhombi) as well as other quadrilaterals such as trapezoids and parallelograms that are not a rectangle, square, or rhombus.

Define a quadrilateral as a shape with 4 sides.

Have the student groups sort their shapes into quadrilaterals and triangles.

Discuss which attribute they used to sort their shapes. What do all the quadrilaterals have in common? What about the triangles? Why did the other shapes not fit into one of these two categories?

Now have the students keep out the quadrilaterals and put aside (or hand back in) all the other shapes.

Have them sort the shapes into those that are rectangles and those that are not rectangles. Discuss what attributes all the rectangles have in common. If a group included a square in their rectangle sort, discuss what makes a square a rectangle. If no group included a square, you may choose

to ask if any of the other shapes would fit in that category using the attributes you discussed.

Repeat this process with squares.

Repeat this process with rhombuses (rhombi). If your students are not familiar with this term, define it as a shape with 4 equal sides. (Again, you may choose to take this opportunity to discuss how a square fits into this category in preparation for the 5th grade standard.)

Discuss which shapes fit into none of the categories. Why didn't they?

– Students can partition shapes on grid paper into parts with equal areas and identify which fraction of the shape each part is.

Give each student a set of rectangles cut out from grid paper.

Have the students cut the first rectangle into two parts each with an equal area. They can test that the areas are equal by counting the squares in the grid or placing one part on top of the other–it should be the same shape and size. (Either give students more rectangles than they need or have extra rectangles on hand.)

Discuss what fraction of the shape each part is. Write the fraction $\frac{1}{2}$ and draw attention to the denominator (bottom number) showing the total number of equal pieces the whole shape was cut into.

Have the students label their pieces with the appropriate fraction.

Repeat the process for thirds, fourths, sixths, and eighths. In each case emphasize the equal areas by having the students test that their areas are equal. Also emphasize that the fraction shows the total number of pieces in the denominator.

Once students are done, they can scramble the pieces and rebuild the shapes by combining the like fractions.

– To reinforce the properties of new figures, students will work together to develop verbal and visual memory cues. Model a few examples with students before beginning the activity. To begin, ask students if anything about the term *quadrilateral* reminds them in some way of the meaning. Elicit student input to model a mnemonic (memory aid) for the term, emphasizing the importance of connecting the word to its meaning. Students should create mnemonics using drawings, word roots, and other associations.

Activities
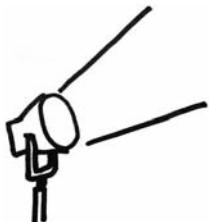
❹ Algebra

Common Core Georgia Performance Standards MCC3.OA.3, MCC3.OA.4, MCC3.OA.8, MCC3.OA.9

Within the Algebra domain, students will represent and solve problems involving multiplication and division. They will also solve problems involving the four operations. Identify and explain patterns in arithmetic.

The following activities develop skills in this domain:

– Students can describe and extend a geometric pattern like the one titled "Triangle Pattern".
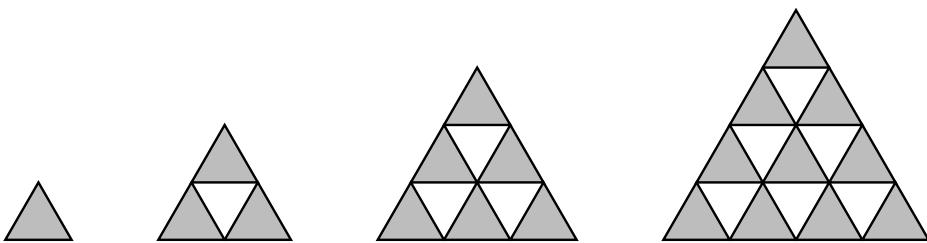
Students should be able to represent the pattern using numbers to represent the number of shaded triangles, i.e., 1, 3, 6, 10, … Also, students should be able to describe and give the number of shaded triangles in the fifth figure in the pattern and the tenth figure in the pattern and explain how they know. Working with number patterns, students should be able to recognize how the numbers in the pattern change, what the next numbers in the pattern would be, and how they know.

– Before beginning the activity, prepare a number of paper rectangles of different sizes (all sides must measure to a whole number). For each rectangle, measure the length of each side and label all but one of the sides. In the center of each rectangle, write the perimeter of the rectangle. Discuss with the class the concept of perimeter, how a number sentence can represent perimeter. Continue to discuss how to represent an unknown number and find the value of the unknown number.

– Distribute the prepared rectangles and work paper. Give students the opportunity to write number sentences with unknowns and to solve for the unknown values. First, have students examine their rectangle and write a number sentence for the shape using □ or Δ as a symbol for the unknown side. Then have students find the value of the unknown side of their shape. Finally, students can share their number sentences with the class and explain the process they used to find the length of the unknown side. After each explanation, other students can verify or correct the answer.

....

- Extend this activity by allowing students to create riddles about perimeter and unknown values. They will create a bulletin board for other classes to view. Provide students with sheets of construction paper, folded in half. On the outside flap, students will write a riddle. For example, *I am a rectangle with a perimeter of 16 units with one side that is 6 units long. What is the length of my three unknown sides?* The correct answers, 6 units, 2 units, and 2 units, will be written under the flap.

- For additional practice using symbols to represent an unknown amount, students should create real-life examples. Provide a few symbols (such as □ or △) to use in place of the unknown, and write them on the board or a flip chart. Students can think of a situation involving an unknown and write it down as a word problem. For example, *A video game costs $24. I have $13 saved and my neighbor paid me $7 for helping him mow his lawn. How many more dollars do I need to buy the game?* They should then write out a number sentence to represent this problem, such as $24 = 13 + 7 + △$. Rewrite this using another symbol, such as $24 + 7 = 13 + □$, and ask students if the value of the unknown changes. Ask them if they can think of a change in the situation they chose that would result in a change in the number sentence. For example, if the video game actually costs $26, the value of the unknown would change. Students should solve the number sentences and explain their results in the context of the real-life situation. Using the example above, students will solve for $△ = 4$ and explain that they would need $4 more to buy the video game.

- Give each student an addition table that is either laminated or placed in a clear plastic folder and a set of dry erase or projection markers that can be easily erased.

Addition Table

+	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	2	3	4	5	6	7	8	9	10	11
2	3	4	5	6	7	8	9	10	11	12
3	4	5	6	7	8	9	10	11	12	13
4	5	6	7	8	9	10	11	12	13	14
5	6	7	8	9	10	11	12	13	14	15
6	7	8	9	10	11	12	13	14	15	16
7	8	9	10	11	12	13	14	15	16	17
8	9	10	11	12	13	14	15	16	17	18
9	10	11	12	13	14	15	16	17	18	19
10	11	12	13	14	15	16	17	18	19	20

Have the students use the markers to shade the addition table to find the rule for different given patterns such as:

3, 6, 9, 12, ….

4, 8, 12, 16, ….

5, 7, 9, 11, 13, ….

2, 4, 8, 16, ….

Once students have determined the rule, have them look for other features that they notice about the pattern. If necessary, prompt them to look for the pattern of even and odd numbers, or doubling. Students can extend the patterns further to prove that their explanation will work throughout the pattern.

– To apply writing and evaluating expressions using symbols, show students a page from any monthly calendar. One student should pick any four dates

that form a rectangle (as shown by the shaded area below), keeping the choice secret. The student should find the total when the four dates are added together. Using the example below, the student's total would be 10 + 11 + 17 + 18 = 56. The student will read just the total out loud. On a small sheet of paper, quickly divide the total by 4 and then subtract 4. Impress the student by revealing the first of the four dates he or she chose. Reveal to students that using algebra is the secret to the trick. Represent the first unknown value with the symbol △. Through questioning, students will understand the relationships of the other three numbers to the first unknown value. They should discover that they may represent the other unknown dates using the same symbol: the second unknown will be △ + 1; the third will be △ + 7; and the fourth will be △ + 8. Students will write an expression to show the relationship between the four unknowns and the sum of the chosen dates: △ + (△ + 1) + (△ + 7) + (△ + 8) = Sum of the Chosen Dates. Fill in the total and solve for △. The result is the value of the first date. Students should use different blocks of dates.

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

- Students will use symbols to represent unknowns by matching the correct number sentence to a given situation. Write a number sentence for each operation: addition, subtraction, multiplication, and division. Think of a few real-life situations to match each number sentence. Keep the fixed numbers consistent in each number sentence so that students will not be able to match on that basis alone. Here are some examples:

- Expression: △ = 12 ÷ 4
  - Situation: *4 students share 12 pieces of pizza equally. How many pieces of pizza does each student get?*
  - Situation: *A coach has each of 4 basketball players run the same number of laps. The total number of laps they run is 12. How many laps does each basketball player run?*
  - Situation: *Alicia rents 4 videos each costing the same amount. She spends a total of $12. How much does each video rental cost?*

- Expression: 12 = 4 + □
  - Situation: *Jon has 12 marbles. 4 of them are red and the rest are blue. How many marbles are blue?*

— Situation: *Marcus is 12 years old. Tonya is 4 years younger than Marcus. How old is Tonya?*
— Situation: *Arturo looks at his watch and sees that it is 12:00 p.m. He started work four hours ago. What time did he start work?*

Write copies of each number sentence on three or four strips of paper and tape them up on the board. Divide students into teams. Read one of the real-life situations out loud. Once a team is ready, select a member of the team to come to the board and choose the matching number sentence. Students should explain how the number sentence matches the situation. Students can remove correct matches from the board. Continue until all situations have been matched.

— In this activity, students will create codes to practice using symbols in mathematical equations.

Distribute work paper to each student. Explain that they will be creating a code.

On one sheet of paper, students will write four numbers, and will create a simple symbol for each of the numbers.

2	3	1	5
●	♥	♦	▲

On a separate sheet of paper, students will write equations using the symbols they created. Students will write at least one equation for each symbol, using the symbols to represent code values, in the following manner:

— The symbols were assigned the following values: ● = 2, ♥ = 3, ♦ = 1, and ▲ = 5.
— Possible equations for the key are
  — $2 + ● = 4$
  — $10 − ♥ = 7$
  — $3 × ♦ = 3$
  — $▲ × 4 = 20$

Next, students will exchange their sheets of paper (the equations) with classmates. The challenge for students is to break the other students' codes by finding the number that each symbol represents.

Practice Quiz

1   **Which statement could be true about the number sentence 20 × 4 = 80?**
   A   It is the area of a square with 20 cm sides.
   B   It is the area of a square with 80 cm sides.
   C   It is the area of a rectangle with length 20 cm and width 4 cm.
   D   It is the area of a rectangle with length 80 cm and width 4 cm.

2   **Randy has 47 CDs and his sister has 21 CDs.**

   About how many CDs do they have in all?
   A   50
   B   60
   C   70
   D   80

3   **Jamal stores his toy cars in a case. The case has 7 rows, with 6 cars in each row.**

   Which number sentence shows the total number of cars Jamal's case can hold?
   A   7 × 6 = 35
   B   7 × 6 = 42
   C   7 × 6 = 49
   D   7 × 6 = 56

4   **Ms. Jenkins must put ALL twelve of the crabs she found at the beach into buckets.**
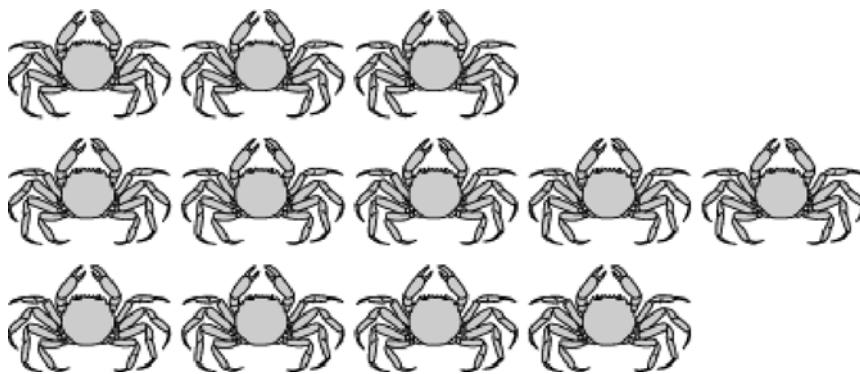
   Which of these describes how each bucket can have an equal number of crabs?
   A   2 buckets with 4 crabs each
   B   3 buckets with 3 crabs each
   C   3 buckets with 4 crabs each
   D   4 buckets with 4 crabs each

5   **Look at the number sentence.**

$\triangle + \square = 25$

Which numbers belong in the $\triangle$ and the $\square$ to make this number sentence true?

A $\triangle = 20; \square = 5$

B $\triangle = 2; \square = 5$

C $\triangle = 5; \square = 5$

D $\triangle = 30; \square = 5$

6   **Ricky's mom dropped him off at the library at the time shown. She picked him up a half-hour later.**
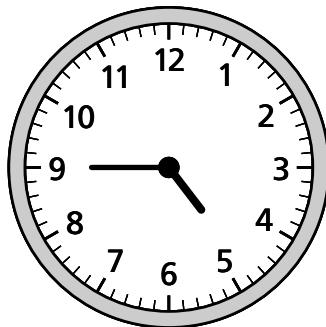
What time did Ricky's mom pick him up?

A   5:00

B   5:15

C   5:30

D   5:45

7   **Pleasant Hill Elementary School has an outdoor picnic space for students to use on warm days. This year the principal wants to put a fence around the space.**

20 ft

8 ft
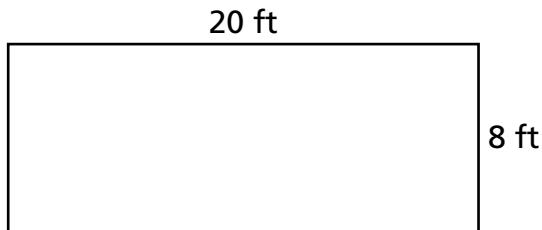
How many feet of fencing does the principal need?
A   28 ft
B   56 ft
C   160 ft
D   320 ft

8   **Look at a rectangle divided into pieces as shown.**
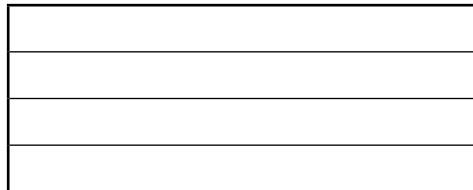
What fraction of this rectangle does each piece represent?

A $\frac{1}{2}$

B $\frac{1}{3}$

C $\frac{1}{4}$

D $\frac{4}{4}$

9   **Connie planted 4 rows of 16 tulip bulbs.**

   How many tulip bulbs did Connie plant?
   A   20
   B   44
   C   62
   D   64

10   **Mike's number would be 340 if rounded to the nearest ten.**

   Which of these could be Mike's number?
   A   329
   B   332
   C   344
   D   346

Solutions

| Number	Correct Answer	Explanation
1	**C**	*Relate area to the operations of multiplication and addition. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. (MCC3.MD.7)*
		The correct answer is **Choice** (**C**) **It is the area of a rectangle with length 20 cm and width 4 cm.** The area of a rectangle is found by multiplying the length by the width. Choice (A) is incorrect because the number sentence for the area of a square with 20 cm sides would be $20 \times 20 = 400$. Choice (B) is incorrect because the number sentence for the area of a square with 80 cm sides would be $80 \times 80 = 6400$. Choice (D) is incorrect because the number sentence for the area of a rectangle with 80 cm and 4 cm sides would be $80 \times 4 = 320$.
2	**C**	*Use place value understanding to round whole numbers to the nearest 10 or 100, and fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (MCC3.NBT.1 and MCC3.NBT.2)*
		The correct answer is **Choice** (**C**) **70.** The phrase *About how many...in all?* is a cue to *estimate* the sum. 47 is close to 50 and 21 is close to 20, so $50 + 20 = 70$ is a good estimate. Choice (A) is incorrect because 50 is close to the number of CDs Randy has, but ignores those his sister has. Choices (B) and (D) are incorrect because they are significantly smaller and larger, respectively, than the estimated sum.
3	**B**	*Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. (MCC3.OA.1)*
		The correct answer is **Choice** (**B**) $7 \times 6 = 42.$ The number of cars in each row must be added seven times to get the total ($6+6+6+6+6+6+6=42$). This can also be expressed as $7 \times 6 = 42$. Choices (A), (C), and (D) are incorrect because they do not represent the total number of cars in Jamal's case (7×6 does not equal any of the products given).

Number	Correct Answer	Explanation
4	**C**	*Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. (MCC3.OA.2)* The correct answer is **Choice (C) 3 buckets with 4 crabs each.** There are 12 crabs in total. There is more than one way to divide the crabs evenly among buckets with none left over (e.g., 6 buckets with 2 crabs each, 2 buckets with 6 crabs each). But Choice (C) is the only option given that equals exactly 12 crabs with no crabs left over. Choice (A) is incorrect because the total is only 8 crabs. Choice (B) is incorrect because the total is only 9 crabs. Choice (D) is incorrect because the total is 16 crabs.
5	**A**	*Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations, $8 \times \square = 48$, $5 = \square \div 3$, $6 \times 6 = \square$. (MCC3.OA.4)* The correct answer is **Choice (A) $\triangle = 20; \square = 5$** because $20 + 5 = 25$. Choice (B) is incorrect because $2 + 5$ does not equal 25. Choice (C) is incorrect because the student uses multiplication (5×5) rather than addition. Choice (D) is incorrect for the student uses subtraction rather than addition.
6	**B**	*Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. (MCC3.MD.1)* The correct answer is **Choice (B) 5:15.** The clock shows 4:45. A half-hour later is 30 minutes more. Choice (A) is incorrect because 5:00 is only 15 minutes later than shown. Choice (C) is incorrect because 5:30 is 45 minutes later than shown. Choice (D) is incorrect because 5:45 is one hour later than shown.

Number	Correct Answer	Explanation
7	**B**	*Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. (MCC3.MD.8)*
		The correct answer is **Choice** (**B**) **56 ft.** The perimeter is the sum of the sides of the rectangle: 20 ft + 8 ft + 20 ft + 8 ft = 56 ft. Choice (A) is incorrect because 28 feet is the sum of only two sides labeled on the figure. Choice (C) is incorrect because 160 feet is the result when 20 feet is multiplied by 8 feet, which gives the *area* of the rectangle, rather than the perimeter. Choice (D) is incorrect because 320 feet is twice the area of the rectangle.
8	**C**	*Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. (MCC3.G.2)*
		The correct answer is **Choice** (**C**) $\frac{1}{4}$**.** Choice (A) is incorrect because 1 piece is interpreted as $\frac{1}{2}$. Choice (B) is incorrect because 1 piece is interpreted as $\frac{1}{3}$. Choice (D) is incorrect because all the pieces are added.
9	**D**	*Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (MCC3.OA.3)*
		The correct answer is **Choice** (**D**) **64.** It is the product of an array of 4 rows of 16. The product is found by multiplying the number of rows by the number of items in each row. Choice (A) is incorrect because it is the sum of 4 and 16 instead of the product. Choice (B) is incorrect because it does not regroup the two tens from 4 and 6 when multiplying 4 times 10. Choice (C) is incorrect because the product of 4 times 6 is not 22.

Number	Correct Answer	Explanation
10	**C**	*Use place value understanding to round whole numbers to the nearest 10 or 100. (MCC3.NBT.1)*
		The correct answer is **Choice** (**C**) **344.** It rounds to 340 when rounded to the nearest 10. Choice (A) is incorrect because 329 rounds up to 330. Choice (B) is incorrect because 332 rounds down to 330. Choice (D) is incorrect because 346 rounds up to 350.

Science
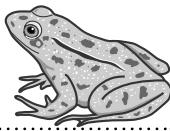
Science

Students in Grade 3 will use inquiry to focus on questions about the world around them. They will observe, construct, and measure objects using ordinary hand tools. They will represent objects in the real world with geometric figures, number sequences, graphs, diagrams, maps, and stories. Grade 3 students will be able to explain how heat is produced and the effects of heating and cooling; describe the effect of magnets on common objects and on other magnets; describe the ways in which the parts of an object influence or interact with one another; recognize the effects of pollution and humans on the environment; and differentiate between regions in Georgia and the organisms that live in our state. In Grade 3, students will use information about the relationship between the form and shape of an object, and that object's use, operation, or function, to explain fossils, rock cycles, and features of plants and animals.

The Science activities focus on some of the concepts that are assessed on the Grade 3 CRCT Science domains. These domains are as follows:

❶ **Earth Science**

❷ **Physical Science**

❸ **Life Science**

The *Characteristics of Science* standards are integrated throughout the domains. These standards are co-requisites for understanding the content of each Science domain.

The *Characteristics of Science* standards refer to the understanding of the process skills used in the learning and practice of science. These skills include testing a hypothesis, record keeping, using correct safety procedures, using appropriate tools and instruments, applying math and technology, analyzing data, interpreting results, and communicating scientific information. The *Characteristics of Science* standards also refer to understanding how science knowledge grows and changes, and the processes that drive those changes.

Activities
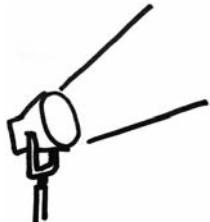
❶ Earth Science

Georgia Performance Standards S3E1 and S3E2

Within the Earth Science domain, students are expected to understand the differences between rocks and minerals and identify the physical characteristics of each. Students will use tools and instruments to observe, compare and contrast types of topsoil and recognize how wind and water cause rock and soil to change over time. They will investigate fossils as evidence of organisms that lived long ago by observing authentic fossils or using information resources and will describe how fossils form.

The following activities develop skills in this domain:

–   Characterizing and comparing the texture, particle size, color, and absorption of soils is essential to understanding how soil types differ. Provide students with 3 cups of labeled topsoil to test (clay, loam potting soil, and sand). Students will compare soils using readily available materials (e.g., coffee filters, strainers/sieves, jars, water). Students may add water to soil and filter it through a coffee filter, recording how long it takes the water to drain; use strainers or sieves to separate soils into different-sized particles; and/or add soil to water in a jar, shake it thoroughly, and record the different soil layers that settle out over 24 hours. Each student will develop a procedure for classifying soils and write a lab report describing the method so that others can reproduce it. Students' reports should also include the results of their methods for each soil type tested.

–   An identification activity can help students learn the distinguishing characteristics of rocks and minerals. With students, research ways to identify rocks and minerals using readily available equipment (e.g., a penny, coarse grit sandpaper, a hand lens, a piece of quartz). Set up "stations" around the room, each with a rock or mineral, an identification question (e.g., *Is this mineral harder than a penny? Will this mineral sink or float in water? Is this an example of a rock or a mineral? Which of these rocks contains quartz? How is this rock containing fluorite different from a sample of fluorite?*), and the tools needed to answer it (including simple descriptions of different rocks). Students will bring their notebooks to each station to record their answers to each question.

–   To help students understand how some fossils were created, create plaster casts of organisms. Explain to students that a fossil can be created when an organism leaves its imprint behind in soft mud, either from its remains or by touching the ground. Pour out some plaster of Paris (or another hardening mixture, such as flour and water) onto paper plates. Students will create imprints by pressing items such as shells, leaves, twigs, seeds, and rubber insects into the plaster and lifting them quickly, then letting the plaster dry.

Ask students, *How is your fossil different from the organism you used to make it?* Discuss with students famous fossils created in this way (such as the Laetoli hominid footprints or dinosaur tracks) and then compare and contrast natural fossil formation with the casts the students made.

Activities
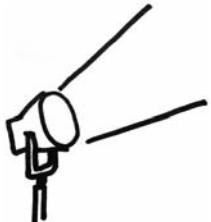
❷ Physical Science

Georgia Performance Standards S3P1 and S3P2

Within the Physical Science domain, students are expected to categorize ways in which heat is produced (burning, friction, and mixing certain compounds together). Students will understand that temperature reflects heat and explain how heat can be transferred. They will use thermometers to measure the changes in temperature of water samples (hot, warm, cold) over time. Students will investigate transfer of heat from the Sun to various materials. They will investigate the effects of insulation on heating and cooling. Students will identify common objects that are attracted by magnets and describe how magnets repel and attract one another.

The following activities develop skills in this domain:

– To explain conductivity, demonstrate the transfer of heat through different materials. Place a wooden spoon and a similar-sized metal spoon in water heated to below the boiling point. Students should predict which spoon will become hotter the fastest. (Do not allow students to handle the water or equipment.) Measure the temperature of the spoons and discuss whether students' predictions were accurate. Explain that heat moved through the metal spoon faster than the wooden spoon. Tell students to touch a metal object, such as a desk leg, and a wooden object, such as a desktop. Ask, *Which feels colder?* Relate this experience to heat conduction. Next, heat two metal spoons to different temperatures and place each into a beaker of room-temperature water. Measure the change in the water's temperature. Students should conclude that thermal energy from the spoons moved into the water, causing its temperature to rise. Students will understand the term *conductor of heat* and distinguish poor conductors from good conductors.

– Students will use magnets (such as refrigerator magnets) and simple objects made of various materials (pennies, nails, paper clips, teaspoons, rubber bands, chalk, rubber combs, plastic pen caps, glass marbles, etc.) to investigate magnetism in a real-life context. Hold up each item and ask, *Do you think this will be attracted to a magnet?* Students will record their predictions on a sheet of paper. They will then manipulate the objects to determine which are magnetic. Students should classify the objects according to their magnetic properties and describe characteristics that they have in common. At the end of the exercise, students should explain whether their predictions were correct and if any results were surprising.

– A *Mystery Magnet Challenge* will allow students to apply their understanding of how magnetic poles behave. Provide students with three to five bar magnets with unlabeled poles (if needed, cover pole labels with electrical tape). Students will manipulate the magnets to determine which poles are the same and which are different. Set up a station with a single bar magnet with

labeled poles. Students will take *one* of their mystery magnets to the station and determine how it attracts and repels the labeled magnet. They should then return to their mystery magnets and use the information to correctly label all the poles.

– The following investigation will help students understand the factors affecting heat transfer. Students should perform an experiment to determine how container color and container material affect the cooling of a heated cup of water. For each experiment, students will use three to four containers, heated water (100 mL per container), a thermometer, and a watch or clock. (If testing color of container, the cups should be placed in direct sunlight.) Students should record the temperature of the water at the beginning of the experiment and then at one-minute intervals. They will enter these data in a pre-formatted table and (optionally) graph it.

Example of pre-formatted table:

Temperature of Water Over Time

Time:	0 min	1 min	2 min	3 min	4 min	5 min	6 min	...
Cup 1								
Cup 2								
Cup 3								

Activities
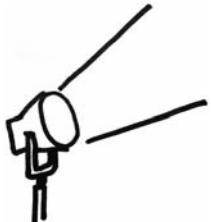
❸ Life Science
Georgia Performance Standards S3L1 and S3L2

Within the Life Science domain, students will investigate the habitats of different organisms and the ways organisms depend on their habitat. They will differentiate between the regions of Georgia (mountains, marsh/swamp, coast, Piedmont, Atlantic Ocean) and the organisms that live there. Students will identify features of green plants and animals that allow organisms to live and thrive in different regions of Georgia. They will explain what will happen to an organism if its habitat is changed and recognize the effects of pollution and human beings on the environment. Students will explain the effects of pollution on habitats and identify ways to protect the environment (e.g., conservation, recycling).

The following activities develop skills in this domain:

– Studying the physical components of a habitat is important for understanding how that habitat supports living things. Students will create and play a quiz show game using 5 × 8 inch index cards. On one side of each card, students will write the name of one of Georgia's major regions (mountains, marsh/swamp, coast, Piedmont, Atlantic Ocean). Supply students with books or Internet sites that have relevant information, such as relative elevation, soil type, landscape features, temperature, rainfall, and seasonal changes. On the other side of each card, students will write or draw a physical characteristic of the region. Play by placing the cards at random on a board or table, turned to their informational sides. Students will name the correct region.

– To understand that pollution comes from many sources, students will investigate the components of daily household trash. Students will record in their journals which items are thrown away in the kitchen, office, or family room garbage (being careful only to look at and not touch the garbage). They should answer the following questions about the trash items:

  – *What is it made of (paper, plastic, metal, food, etc.)?*
  – *Can it be recycled?*
  – *Will it break down naturally in a landfill? (Is it biodegradable?)*
  – *Could it have been reused instead of discarded?*
  – *How could we do without this item?*

  Students will discuss the major sources of household garbage and research how long it takes plastic materials to break down. They should come up with ways to reduce and reuse non-recyclable materials.

– To understand that plants and animals are adapted to their habitats, students will explore one plant and one animal native to a Georgia region. With teacher guidance, students will research each organism's characteristics and habitat using library and/or Internet resources. They should write a

description of each organism's traits and explain how these traits help it survive in its habitat. The following thought questions will help students organize their writing:

– *What does the animal eat? How does the plant get energy and nutrients?* (Remember that plants' nutrients come from the soil or water.)
– *Which predators eat the animal? Which consumers eat the plant?*
– *How does the habitat of the organism help it to thrive?* (For example, an area with few large trees may help smaller plants that require a lot of sunlight. Fish may lay eggs among plants to keep them hidden. Other animals may hide in burrows they dig in the soil.)

Students should produce a written description and a diagram or illustration of each organism.

– Exploring the relationships between pollution, habitat, and organism will help students recognize the harmful effects of pollution. Create a short list of endangered or threatened Georgia wildlife. Discuss with students how various types of pollution affect Georgia's air, rivers, marshes, swamps, soil, and coastal waters. (Pollution can include the effects of development.) Students will research the effects of pollution on a Georgia region and the resulting effect on an endangered organism. Students will then write letters to their state or congressional representatives explaining the harmful effects of pollution and suggesting appropriate action.

Practice Quiz

1 **Michelle places four gym bags of different colors in the Sun. She then puts a can of cold soda at the same temperature into each gym bag.**

Which color gym bag will MOST LIKELY keep the soda the coldest?
A   black
B   blue
C   white
D   yellow

2 **A student tested four objects to find out whether each was attracted to a magnet. She recorded her findings in the table.**

Object	Attracted to Magnet
P	no
Q	yes
R	no
S	no

What is MOST LIKELY true based on the student's observations?
A   Object P is magnetic because it is made of glass.
B   Object Q is magnetic because it is made of iron.
C   Object R is magnetic because it is made of paper.
D   Object S is magnetic because it is made of rubber.

3 **The gopher tortoise burrows underground in dry areas of Georgia.**

Which of these BEST helps the gopher tortoise live in this habitat?
A   long legs for climbing
B   sharp teeth for eating
C   beaver-like tail for swimming
D   shovel-shaped front legs for digging

4 **The brown thrasher is a bird that lives in shrubs and fields in Georgia. Scientists recently discovered that the brown thrasher population is decreasing.**

What is MOST LIKELY causing the brown thrasher population to decrease?
A   The brown thrashers stopped growing.
B   Other birds left the brown thrasher's habitat.
C   The brown thrashers changed what they eat.
D   New buildings were built on the brown thrasher's habitat.

5 **Which of these would MOST LIKELY happen if plastic bags are dumped in Georgia's forests?**
   A   The bags would provide food for plants.
   B   The bags would break down dead plants.
   C   Animals would be hurt by trying to eat the bags.
   D   Animals would make better homes with the bags.

6 **A class finds that cups made of foam keep water cold longer than cups made of glass.**

   Why do foam cups insulate better than glass cups?
   A   Foam gets cold faster than glass.
   B   Foam keeps heat away from the water.
   C   Foam lets extra cold air reach the water.
   D   Foam allows more heat through than glass.

7 **A student made a poster that shows ways people protect the environment.**

   Which of these activities would MOST LIKELY be on the student's poster?

   A

   B

   C

   D

8 **A student is at a museum and sees a trace fossil of a fern leaf on the side of a rock.**

   Which of these BEST describes how the trace fossil of the fern leaf was made?
   A   The Sun created the leaf pattern on the rock.
   B   Rainwater created a stain of the leaf pattern on the rock.
   C   Minerals in the ground replaced the fern leaf as the leaf broke down.
   D   Animals pressed the fern leaf into the ground as the leaf broke down.

9 **A student is looking at a sample of soil. He concludes the soil sample is sand.**

   Which of these features would support the student's conclusion?
   A   small particle size and water flows through slowly
   B   small particle size and water flows through quickly
   C   large particle size and water flows through slowly
   D   large particle size and water flows through quickly

10 **A large, rough rock sits at the edge of a river.**

   Over a period of many years, how will the rock MOST LIKELY change?
   A   It will become larger and less smooth.
   B   It will become larger and smoother.
   C   It will become smaller and less smooth.
   D   It will become smaller and smoother.

Solutions

Number	Correct Answer	Explanation
1	**C**	*Investigate the transfer of heat from the sun to various materials. (S3P1c)*
		The correct answer is **Choice** (**C**) **white.** White objects reflect more light than other colors, and therefore heat up the slowest. Choices (A) *black*, (B) *blue*, and (D) *yellow* are all darker colors, and therefore absorb more light than white. This absorbed light causes the bags to heat up more quickly.
2	**B**	*Investigate to find common objects that are attracted to magnets. (S3P2a)*
		The correct answer is **Choice** (**B**) **Object R is magnetic because it is made of metal**. A magnet will attract objects made of iron or steel. Choices (A), (C), and (D) are not attracted to the magnet in the experiment because they are made of materials that are not magnetic.
3	**D**	*Identify features of animals that allow them to live and thrive in different regions of Georgia. (S3L1c)*
		The correct answer is **Choice (D) shovel-shaped front legs for digging.** This trait would best help the gopher tortoise dig burrows in dry areas of Georgia. Choices (A) long legs for climbing, (B) sharp teeth for eating, and (C) beaver-like tail for swimming describe traits that are not shared by the gopher tortoise.
4	**D**	*Explain what will happen to an organism if the habitat is changed. (S3L1d)*
		The correct answer is **Choice** (**D**) **New buildings were built on the brown thrasher's habitat.** Development often destroys natural habitats, which leads to animal population declines. Choices (A) and (C) are unlikely to occur. Choice (B) is unlikely to cause a decrease in the population of brown thrashers.

Number	Correct Answer	Explanation
5	**C**	*Explain the effects of pollution (such as littering) on the habitats of plants and animals. (S3L2a)*
		The correct answer is **Choice** (**C**) **Animals would be hurt by trying to eat the bags.** Plastic does not break down and is likely to harm organisms when it is dumped in natural settings. Plastic does not (A) *provide food for plants*, nor (B) *break down dead plants.* Choice (D) *Animals would make better homes with the bags* is very unlikely.
6	**B**	*Investigate how insulation affects heating and cooling. (S3P1b)*
		The correct answer is **Choice** (**B**) **Foam keeps heat away from the water.** Foam is a good insulator, which helps keep outside temperatures from affecting the liquid inside the cup. Choices (A), (C), and (D) are incorrect because they describe features of poor insulators rather than good insulators, and foam is a good insulator.
7	**C**	*Identify ways to protect the environment. (S3L2b)* • *Conservation of resources* • *Recycling of materials*
		The correct answer is **Choice** (**C**) (**The image depicting planting a tree.**) Planting trees helps protect the environment. Choice (A), which depicts littering, and (D), which depicts wasting water, are both harmful to the environment. Choice (B), which depicts building a snowman, is neither harmful nor protective.
8	**C**	*Describe how a fossil is formed. (S3E2b)*
		The correct answer is **Choice** (**C**) **Minerals in the ground replaced the fern leaf as the leaf broke down.** As the material that makes up an organism is slowly replaced by minerals, a fossil of the organism forms. Choice (A) is incorrect because the Sun is not involved in the formation of fossils. Choice (B) is incorrect because rainwater would likely break apart a leaf before it became a fossil. Choice (D) is incorrect because it is unlikely that pressing a decomposing leaf into the ground would lead to the formation of a fossil.

Number	Correct Answer	Explanation
9	**D**	*Use observation to compare the similarities and differences of texture, particle size, and color in topsoil (such as clay, loam, potting soil, and sand). (S3E1c)*
		The correct answer is **Choice** (**D**) **large particle size and water flows through quickly.** Sand is made of large particles, which allows water to easily move through the sand. Choices (A) and (B) are incorrect because they include small particle size, which is a characteristic of clay soils. Choices (A) and (C) are incorrect because they include that water flows through slowly, a characteristic of absorbent, loamy soils.
10	**D**	*Determine how water and wind can change rocks and soil over time, using observation and research. (S3E1d)*
		The correct answer is **Choice** (**D**) **It will become smaller and smoother.** Moving water wears away at rock, causing it to become smaller and smoother over a period of time. It does not cause rocks to become larger, as in choices (A) and (B). It does not result in rock becoming less smooth, as in choices (A) and (C).

Social Studies

Social Studies

In Grade 3, students conclude their introduction to United States history by studying the origins of American democracy. The History domain compares ancient Greek democracy in Athens with that of the United States and introduces selected Americans who have been important in ensuring our rights. The Geography domain relates primarily to the people discussed in the History domain. In the Government/Civics domain, students begin the study of the foundations of a republican form of government. The Economics domain continues the introduction of basic economics concepts.

The Social Studies activities focus on some of the topics that are assessed on the Grade 3 CRCT Social Studies domains. These domains are as follows:

❶ **History**

❷ **Geography**

❸ **Government/Civics**

❹ **Economics**

Activities
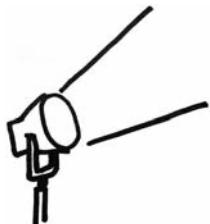
❶ History

Georgia Performance Standards SS3H1 and SS3H2

Grade 3 introduces students to an understanding of the United States by describing how ancient Greek democracy in Athens influenced democracy in the United States. The History domain examines the influence of Greek architecture, law, and the Olympic Games on the present. Students will explain the ancient Athenians' concept that communities should choose their own leaders and compare and contrast the direct democracy of Athens with the representative democracy of the United States. The History domain also examines the lives of important Americans who helped expand people's rights and freedoms in a democracy and explains some of the social barriers, restrictions, and obstacles that these people had to overcome in order to achieve their goals.

The following activities develop skills in this domain:

– To help students understand the influence of Greek architecture, they will identify similarities between the Parthenon and the U.S. Supreme Court building. First, distribute reproduced images of the Parthenon and the U.S. Supreme Court building to each student. Without further explanation of what or where the buildings are, students will analyze the images and list similarities they see. Guide the list of similarities toward an observation of the columns from both buildings. The class will discuss these similarities. List the students' examples on poster paper. Briefly explain that the buildings are similar in many ways because the designers of the Supreme Court building borrowed ideas from the designers of the ancient Athenian Parthenon. Finally, students will create their own designs for a building and share with the class how the elements of their designs represent ideas they want the building to express to those who see it.

– Students will learn more about the social barriers, restrictions, and obstacles of nine important figures in U.S. history by playing an informational card game. Group students into teams of three and provide each student with nine 3 × 5 index cards. Each student in a team will create a different deck of cards using the information from the following table.

Deck 1 American's name	Deck 2 Contribution	Deck 3 Social barriers, restrictions, or obstacles
Paul Revere	independence	was a patriot during the time of the American Revolution who lived in a city where many British soldiers were quartered
Frederick Douglass	civil rights	was a former African American slave who lived during the Civil War era
Susan B. Anthony	women's rights	lived during a time period when women did not have the same rights as men
Mary McLeod Bethune	education	lived during a time when children of a specific background did not receive the same quality of education as other children
Franklin D. Roosevelt	the New Deal and World War II	lived during the time of the Great Depression when many people were homeless and out of work; also lived during a time when much of the world was at war
Eleanor Roosevelt	United Nations and human rights	lived during a time when many people in countries around the world did not have basic rights and freedoms
Thurgood Marshall	civil rights	was an African American who lived during a time of discrimination and prejudice
Lyndon B. Johnson	Great Society and voting rights	lived during a time when people were denied civil and voting rights based on their backgrounds
César Chávez	workers' rights	lived in an area where many immigrants worked on farms with unfair and poor working conditions

The student with Deck 1 will pull a card from his or her deck and read it to the other two students. They will look through their cards from Decks 2 and 3 to find the match for this historical figure. Students will use the preceding table to check their answers. They will then set aside the matching three cards. Students continue playing until all the matches have been found. (For alternative versions of the game, the student with either Deck 2 or Deck 3 can select a card first.) Conclude the activity with a class review of all the information from the table. Shuffle together the cards from one of each deck. Randomly select a card, reading it to the class. Students will provide the other two correct pieces of information that go along with the selected card.

....

– Students will better understand the similarities and differences between the direct democracy of Athens and the representative democracy of the United States by creating a graphic organizer. First, students will make a two-column facts chart with one column labeled "Direct Democracy of Athens" and the other labeled "Representative Democracy of the United States." The class will discuss direct democracy as practiced in ancient Athens, with students recording key information on the left-hand side of the chart. Next, the class will discuss representative democracy as practiced in the United States, with students recording key information on the right-hand side of the chart. Distribute a graphic organizer like the one below:

Only in Athens

In Both Athens and the United States

Only in the United States
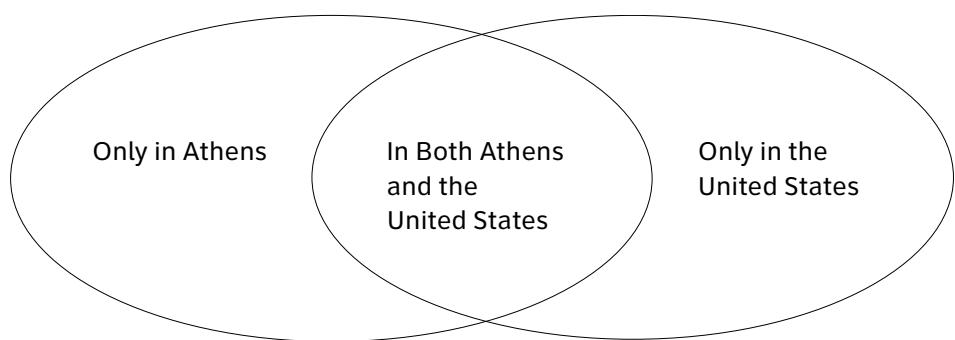
Working in pairs, students will complete the graphic organizer as a Venn diagram, filling in each part of the diagram using the chart they created during the class discussion. The area of overlap in the center of the graphic organizer should contain characteristics common to both forms of government. Students will write a brief essay explaining one important example of how the democracy of Athens influenced our own.

– Students will gain a better understanding of specific contributions made by nine important figures in U.S. history by conducting group research and presenting their findings to the class in an oral report. Assign each group one of the following Americans along with his or her corresponding contribution: Paul Revere (independence), Frederick Douglass (civil rights), Susan B. Anthony (women's rights), Mary McLeod Bethune (education), Franklin D. Roosevelt (the New Deal and World War II), Eleanor Roosevelt (United Nations and human rights), Thurgood Marshall (civil rights), Lyndon B. Johnson (Great Society and voting rights), or César Chávez (workers' rights). Explain that each of these Americans made many contributions to our country. However, students will focus only on the parenthetical information. Groups will research encyclopedias, grade-appropriate reading materials, and websites (.edu, .gov, or .org) to find information about their assigned person and his or her specific contribution. Students will create a poster that illustrates their historical American's contributions to people's rights and freedoms. Finally, the groups will explain their posters and research to the class in oral reports.

Activities
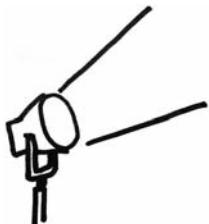
❷ Geography

Georgia Performance Standards SS3G1 and SS3G2

The Geography domain of Grade 3 Social Studies introduces students to the cultural and geographic systems associated with individuals discussed in the History domain. Students will learn to identify major rivers and mountain ranges in the United States, locate the equator and prime meridian, and find Greece on a world map. Students will also be able to identify the important locations in the lives and times of famous historical figures studied in the History domain and discuss the impact of place and environment on their lives and cultural identification.

The following activities develop skills in this domain:

– To help students gain a better understanding of the location of the equator, prime meridian, and lines of latitude and longitude, model the globe with an orange or other sphere. First, take an orange and stick two pushpins into the fruit, one in the top and one in the bottom. Ask students what these pins represent. Guide the discussion toward naming the North and South Poles. Then take a marker and draw a circle around the center of the orange, equidistant between the poles, to represent the equator. Students will suggest the location of this circle. Guide the discussion to the conclusion that the equator separates the earth into two halves. Then draw a circle to connect the poles. Give the definition of the prime meridian and state that it also separates the earth into two halves. Explain that there are more imaginary circles around the earth to the north and south of the equator (latitude) and to the east and west of the prime meridian (longitude). Mark some of these on the orange. Then compare the orange to the globe. Students will indicate the equator and prime meridian. Then they will indicate the lines of latitude and how the circles go above and below the equator. Finally, students will indicate the prime meridian's east and west lines. Explain to the students that these lines are used to help people find locations on the earth. Students will use a world map to locate Greece and the lines of latitude and longitude that run through it.

– Students will practice locating lines of latitude and longitude by playing a scavenger hunt game with a map of the Four Corners region. Reproduce the following map and provide each student with a copy.
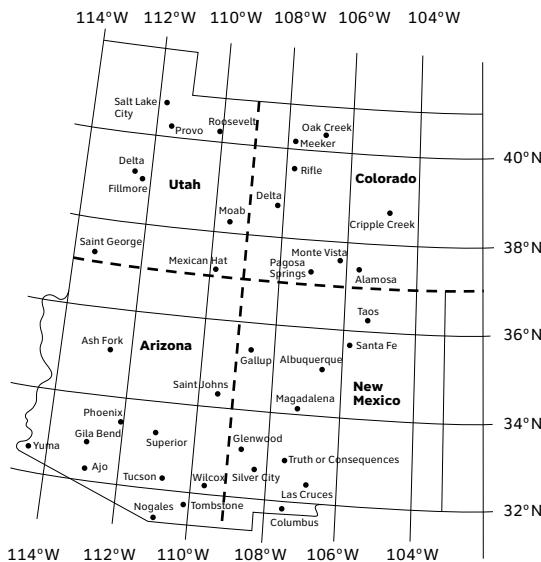
Review which are lines of latitude and which are lines of longitude. Divide the class into an appropriate number of teams. Randomly call out a line of longitude or latitude. Teams will find cities on or closest to the line. The team that provides the correct answer gains a point. Play to a predetermined number of points. Expand the activity by calling out a line of latitude and a line of longitude. Teams will now find the city closest to that intersection. This scavenger hunt can be reversed by providing the teams with the name of a city and having them correctly identify the nearest line of latitude and/or longitude.

– To help students identify major topographical features of the United States, they will locate important rivers and mountain ranges on a map. First, distribute reproductions of a physical features map. Model how students should trace the Mississippi, Ohio, Colorado, and Hudson Rivers and the Rio Grande, in each case using a different shade of blue or a different style of dashed or dotted line. Students will also identify the Rocky and Appalachian Mountains with different shades of brown. Students will then create a key to indicate each river and mountain range. Students will identify states that include these major topographical features with the following color coding:

– *A red dot in any state containing one of the identified rivers*
– *An orange dot in any state containing one of the identified mountain ranges*
– *A yellow dot in any state that contains none of the identified features*

Finally, students will determine how many of the states on the map contain at least one of the major features.

– Students will identify locations on a political map and draw conclusions as to the effect these places had on specific people in history. First, distribute political maps of the United States to each student. List on the board the following American figures who played a significant role in United States democracy: Paul Revere (independence), Frederick Douglass (civil rights), Susan B. Anthony (women's rights), Mary McLeod Bethune (education), Franklin D. Roosevelt (the New Deal and World War II), Eleanor Roosevelt (United Nations and human rights), Thurgood Marshall (civil rights), Lyndon B. Johnson (Great Society and voting rights), or César Chávez (workers' rights). State the significant locations where each person was living when he or she made these contributions. Students will plot these locations on their individual maps. Discuss, as a class, each location to ensure that students plotted correctly. Once finished, discuss, as a class, the effect these places likely had on these people's contributions. For example:

– *How might history have been different if Frederick Douglass had not lived as a slave in the South?*
– *How might César Chávez's contributions been different if he had worked as an employee in a big city instead of as a migrant farm worker?*
– *What might have been different for Paul Revere if he hadn't lived in Boston, where the British army was stationed, but instead lived in the South?*

Activities
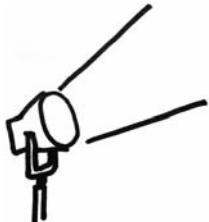
❸ Government/Civics
Georgia Performance Standards SS3CG1 and SS3CG2

Throughout the Government/Civics domain of Grade 3 Social Studies, students will focus on explaining the foundations of a republican form of government, describing the structure of the U.S. government, and determining how the people discussed in the History domain exhibited positive character traits. The Government/Civics domain will explore the three levels of government, the three branches in each level of government, and the separation of power between the branches. Students will be able to cite examples of the responsibilities of each branch at each level of government. Students will also be able to describe how historic figures studied in the History domain display positive character traits.

The following activities develop skills in this domain:

– To help students learn about positive character traits, they will examine the lives of nine important historical figures. Write the definitions of the following traits and values on the board: cooperation, diligence, courage, leadership, liberty, justice, tolerance, freedom of conscience and expression, and respect for and acceptance of authority. Provide the class with a chart of the names of these nine people along with their specific contributions: Paul Revere (independence), Frederick Douglass (civil rights), Susan B. Anthony (women's rights), Mary McLeod Bethune (education), Franklin D. Roosevelt (the New Deal and World War II), Eleanor Roosevelt (United Nations and human rights), Thurgood Marshall (civil rights), Lyndon B. Johnson (Great Society and voting rights), and César Chávez (workers' rights). Distribute the following table to each student.

The character trait of _____

Historical Figure	Examples of Trait
Paul Revere	
Frederick Douglass	
Susan B. Anthony	
Mary McLeod Bethune	
Franklin D. Roosevelt	
Eleanor Roosevelt	
Thurgood Marshall	

The character trait of _____

Historical Figure	Examples of Trait
Lyndon B. Johnson	
César Chávez	

Review each figure and his or her contributions. Then, for each character trait, ask the students:

– *Did any of these Americans show this trait in what they did for our country?*
– *If so, how?*

Based upon the class discussion, students will complete their tables.

– Students will be able to identify the various branches of government at the national, state, and local levels after creating and playing an informational card game. Pairs of students will research titles of the three branches of government at each of the three levels of government (national, state, and local). They should record the results of their research on an informational chart similar to the example below:

Level	Branches	Title
National	Executive	President
	Legislative	Congress
	Judicial	Supreme Court
State	Executive	Governor
	Legislative	General Assembly
	Judicial	State Courts
Local	Executive	Mayor
	Legislative	City council
	Judicial	Local judges

Give each pair of students eighteen 3 × 5 index cards to create the playing cards. For the first group of nine cards, students will write a level on one side of each card (three national cards, three state cards, and three local cards). For the second group of nine cards, students will write a branch/title on one side of each card. Students will randomly place all cards face down. Students will take turns turning over two cards. If a student correctly matches level to branch/title, he or she keeps the card. If he or she is incorrect, the student

places the cards back face down. When all cards have been matched, each student will count the number of cards he or she is holding in order to determine the winner.

- Students will have a better understanding of the duties and responsibilities of each branch of government at the local level by writing letters to town or city officials. The class will research the names and addresses of officials for each branch of local government and compile a series of questions concerning each official's duties and responsibilities. Write these questions on chart paper for students to reference. Assign an official to each student or pair of students. Following the form of a friendly letter, and referring to the chart of questions, students will request information from their assigned official. Students will then share responses and discuss with the class any information they receive. The class will create a display of the response letters and any included materials, dividing the display by executive branch, legislative branch, and judicial branch.

- Students will gain a better understanding of the responsibilities of government by creating a list of governmental services and determining what level of government provides each service. Have students make two columns on a sheet of paper—label the left column "service" and the right column "level of government." Students will work with a partner to complete the left column, creating a list of services they see in their own community that they think are provided by the government. Help students get started by stating some possible services (such as streets, national parks, and water supply). Discuss, as a class, everyone's suggestions. Students will add any new suggestions to their left column. The lists will include county roads, state highways, interstate highways, street and road signs, speed limit signs, sidewalks, street lights, public parks, state parks, fire departments and vehicles, and local police departments. Then partners will make educated guesses as to which level of government (local, state, national) is responsible for providing each service. Remind the students that local governments take care of things that are close to a community, state governments take care of things that are used by many people in the state, and national governments take care of things that are used by most people across the nation. Conclude the activity with a discussion of the completed charts. Discuss the services and why a particular branch of government would or would not be in charge of providing it.

Activities
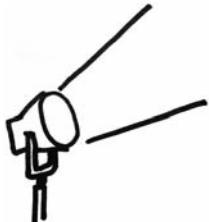
❹ Economics

Georgia Performance Standards SS3E1, SS3E2, SS3E3, and SS3E4

The Economics domain of Grade 3 Social Studies refers to analyzing basic economic concepts followed by individuals, local companies, agencies, and communities, as well as countries. In order to accomplish this, students will learn to describe natural and human resources and capital and entrepreneurial resources. They will also learn to identify and describe how the government collects the money necessary to provide various services to the public. Students will study the interdependence of consumers and producers and how this relationship influences how goods and services are allocated. They will begin to learn about production, that goods may be produced locally, nationally, and internationally, and tie in the economic lessons previously learned by expanding the concepts from the local level to national and international levels. Students will also begin to study the benefits and costs of personal spending and savings choices.

The following activities develop skills in this domain:

– Students will have a better understanding of the four types of productive resources by organizing a class business. Explain that the students will become entrepreneurs by organizing a peach pie baking company. Using cookbooks from the library or recipes from the Internet, each student will find a recipe for peach pie that their company could produce. Distribute to each student an organizational chart similar to the one below:

Entrepreneurship	Natural Resources (from the land)	Human Resources (labor)	Capital Resources (capital goods)
We have a great idea to start our own peach pie baking business.			

Students will examine their recipes and list all the necessary ingredients in the natural resources column. Some students' recipes may include prepared ingredients. Assist students in understanding that some ingredients are made from several resources, such as pie shells made from eggs, milk, and flour. Next, students will list the human resources necessary for pie production. These include ingredient purchasers, package openers, ingredient mixers,

bakers, and taste testers. Students will complete the capital resources column by including all the capital goods needed for pie production. These include bowls, spoons, pie plates, stoves, pots, and peach peelers. Students will then create newspaper articles announcing their new company and their peach pie.

– Students will gain a better understanding of interdependence by examining product labels of things they use in their daily lives. First, distribute an item to each student such as canned food, clothing, toys, electronics, and food packaging. Make a two-columned chart on the board—one column for the name of the product and the other for location of production. Each student will tell what item he or she has and where it was made. Record this information in the chart. Then have each student write on a sticky note their product and the place of origin for their product. Have him or her place the sticky note in its appropriate location on a United States or world map. Examine the locations of all the sticky notes and compare the distribution with the class.

Discuss:
– *Why are some goods made locally and others are made in other parts of the world?*

Help the students think about such answers as:
– *It depends on what natural resources are available.*
– *It depends on what type of workforce is available.*
– *It depends on whether they have farms or factories.*

Define and explain the term "interdependence." Explain that one region may make items while another region may have the natural resources needed to make the products. Use peanut butter as an example. Georgia grows the peanuts and nearby Arkansas produces peanut butter.

– Students will have a better understanding of one of the economic functions of governments by explaining how and why taxes are collected. Provide students with copies of one or more of the following:

– *A sales receipt showing sales tax*
– *A gasoline station price sign indicating taxes*
– *A property tax bill*
– *A pay stub showing income tax*

Indicate the location of the tax amount. Students will make suggestions regarding what they believe tax is, how and when it is paid, and what the money is used for. Record students' suggestions.

Distribute a chart similar to the one below:

Type of Tax	What is it?	How is it collected?	What is it used for?
sales tax			
gas tax			
property tax			
income tax			

As a class, discuss the correct information for each field of the chart. Conclude the activity with students providing examples of the use of tax dollars in their community.

– Students will have a better understanding of costs and benefits by role playing a scenario of making personal spending and savings choices. Students will examine a newspaper, magazine, or store circular and select five things they would like to buy. They will cut out the items and prices and glue their choices to a chart titled *Wish List Record Sheet*, similar to the example below. Next, the teacher will announce that each student has earned $5. Each student will decide what to do with the money and explain his or her decision to the class. If a student purchases an item or items, he or she will cross it off the record sheet, making sure to record any change in the savings column. If a student decides to save the $5, he or she will record the amount in the savings column of the record sheet. The teacher will announce earnings nine more times in $5 increments, and each time, students will make decisions about the use of their money. After $50 has been earned, students will give reasons for their decisions. In a short essay, students will explain whether they believe it is better to save, spend, or do a combination of both.

Wish List Record Sheet

My item choices	savings

Practice Quiz

1 **How were the Olympic Games in ancient Greece the same as today's Olympic Games?**
A   They included ice skating and skiing.
B   They took place in countries around the world.
C   They brought people together in the spirit of peace.
D   They allowed men and women to take part in activities together.

2 **Who chose the leaders in ancient Athens?**
A   the king
B   the president
C   the citizens of the community
D   the soldiers of the community

3 **Susan B. Anthony was known for her work in helping to achieve which of these rights?**
A   the right to vote
B   the right to work
C   the right to own land
D   the right to go to school

4 **Which letter on the map marks the location of the Ohio River?**

A   A
B   B
C   C
D   D

5   **Why did Frederick Douglass move to the northern part of the United States?**
   A   to go to school
   B   to become a senator
   C   to be with his family
   D   to escape from slavery

6   **Which is the MAIN reason the United States has three branches of government?**
   A   to provide more jobs for people
   B   to allow more people to help the president
   C   to allow decisions to be made faster
   D   to keep any one branch from having too much power

7   **Which of these is the MAIN responsibility of the legislative branch?**
   A   to make laws
   B   to choose judges
   C   to elect governors
   D   to settle arguments

8   **Which event in the life of Paul Revere showed his belief in liberty?**
   A   He worked as a silversmith in Boston.
   B   He supported the American Revolution.
   C   He paid taxes to the British government.
   D   He served in the French and Indian War.

9   **Which is a natural resource in this picture?**
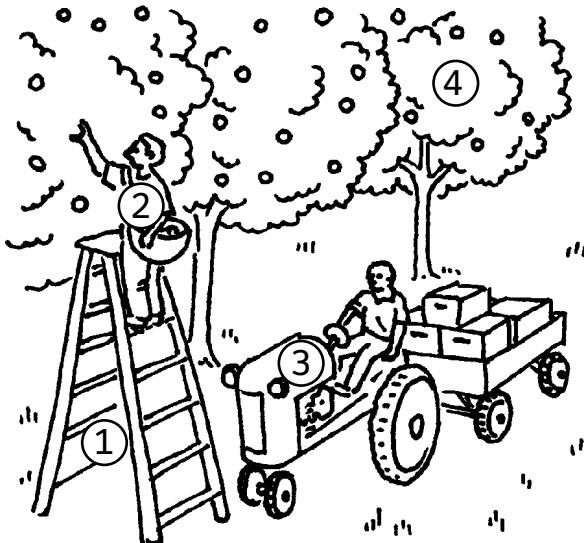
A   1
B   2
C   3
D   4

10   **What will MOST LIKELY happen if a store lowers the price of a popular toy?**
A   More people will buy the toy.
B   The toy will cost more to make.
C   The toy will be made of lower quality parts.
D   Fewer people will be interested in the toy.

Solutions

Number	Correct Answer	Explanation
1	**C**	*Identify the influence of Greek architecture (columns on the Parthenon, U.S. Supreme Court building), law, and the Olympic Games on the present. (SS3H1a)*
		The correct answer is **Choice** (**C**) **They brought people together in the spirit of peace.** Male athletes from every corner of the Greek world participated in the ancient Olympic Games. The modern games include thousands of athletes from over 200 countries. Choice (A) is incorrect because winter sports did not become part of the Olympics until the year 1924 of the modern era. Choice (B) is incorrect because the ancient Olympics were always held at Olympia. Choice (D) is incorrect because only male citizens of the various city-states were allowed to participate in the games.
2	**C**	*Explain the ancient Athenians' idea that a community should choose its own leaders. (SS3H1b)*
		The correct answer is **Choice** (**C**) **the citizens of the community.** All men with citizens' rights could go to the assembly, where they could speak freely and vote. Choices (A) and (B) are incorrect because Athens had neither a king nor a president. Choice (D) is incorrect because eligibility to choose a leader continued after the completion of military obligations.
3	**A**	*The student will discuss the lives of Americans who expanded people's rights and freedoms in a democracy. Paul Revere (independence), Frederick Douglass (civil rights), Susan B. Anthony (women's rights), Mary McLeod Bethune (education), Franklin D. Roosevelt (New Deal and World War II), Eleanor Roosevelt (United Nations and human rights), Thurgood Marshall (civil rights), Lyndon B. Johnson (Great Society and voting rights), and César Chávez (workers' rights). (SS3H2a)*
		The correct answer is **Choice** (**A**) **the right to vote.** Susan B. Anthony played an important role in the fight to obtain the vote for women in the United States. Choices (B), (C), and (D) are incorrect because, although citizens are entitled to many rights, Anthony concentrated on the singular cause of women's suffrage, gaining the vote.

Number	Correct Answer	Explanation
4	**C**	*Identify major rivers of the United States of America: Mississippi, Ohio, Rio Grande, Colorado, and Hudson. (SS3G1a)* The correct answer is **Choice** (**C**) (**which marks the location of the Ohio River on the map**)**.** Choice (A) is incorrect because it identifies the Columbia River. Choice (B) is incorrect because it identifies the Rio Grande. Choice (D) is incorrect because it identifies the Hudson River.
5	**D**	*Describe how place (physical and human characteristics) had an impact on the lives of these historical figures. (SS3G2b)* The correct answer is **Choice** (**D**) **to escape from slavery.** Frederick Douglass was born into slavery and escaped to the North and freedom in 1838. Choice (A) is incorrect because Douglass had learned to read while in captivity. Choice (B) is incorrect because in the North as well as in the South, African Americans did not yet have legal status as citizens or the right to run for political office. Choice (C) is incorrect because his mother had died when he was only seven years old, and he did not know for certain the identity of his father. He had been separated from his grandmother, and she remained a slave in the South.
6	**D**	*Explain why in the United States there is a separation of power between branches of the government and levels of government. (SS3CG1a)* The correct answer is **Choice** (**D**) **to keep any one branch from having too much power.** The Framers of the Constitution wanted to prevent any chance of tyranny, similar to that of the British king, by limiting the powers of the three branches of government. Choices (A), (B), and (C) are incorrect because the separation of powers is about maintaining the rights of the people rather than creating jobs, providing help for the president, or allowing decisions to be made faster.

Number	Correct Answer	Explanation
7	**A**	*State an example of the responsibilities of each level and branch of government. (SS3CG1c)*
		The correct answer is **Choice** (**A**) **to make laws.** The primary responsibility of the legislative branch is to introduce and pass bills, which become law. Choice (B) is incorrect because it is the responsibility of the executive branch (the president) to select judges. Choice (C) is incorrect because the people of each state elect their governors. Choice (D) is incorrect because it is the responsibility of the judicial branch to settle arguments in a court of law.
8	**B**	*Explain how the historical figures in SS3H2a used positive character traits to support their beliefs in liberty, justice, tolerance, and freedom of conscience and expression. (SS3CG2b)*
		The correct answer is **Choice** (**B**) **He supported the American Revolution.** Paul Revere was a member of the Sons of Liberty and gained fame in the revolutionary era by riding across the countryside warning the citizens of the approach of the British army. Choice (A) is incorrect because, while Revere was famous for his work as a silversmith, it did not demonstrate his belief in liberty. Choice (C) is incorrect because paying taxes to the British monarchy did not reinforce a dedication to the cause of liberty. In fact, the Sons of Liberty fought against taxation without representation by the British. Choice (D) is incorrect because Revere fought briefly alongside the British during the French Indian War, which occurred before the American Revolution. This showed bravery and courage but not necessarily his belief in liberty.

Number	Correct Answer	Explanation
9	**D**	*The student will describe the four types of productive resources: (a) Natural (land). (SS3E1a)*
		The correct answer is **Choice** (**D**) **4.** Choice (D) represents a fruit tree which would be considered a natural resource. Choice (A) is incorrect because it represents a ladder which is considered a capital good. Choice (B) is incorrect because it represents the human resource (labor). Choice (C) is incorrect because it represents either a capital good (tractor) or entrepreneurship (creating goods and services) by highlighting a man driving a tractor pulling a wagon loaded with crates of fruit.
10	**A**	*Describe how goods and services are allocated by price in the marketplace. (SS3E3b)*
		The correct answer is **Choice** (**A**) **More people will buy the toy.** Lowering the price will make it affordable for more people who might not be able to afford the item at a higher price. Choices (B) and (C) are incorrect because lowering the price will not affect how much it costs to make the toy or what parts the toy is made of. Choice (D) is incorrect because lowering the price would most likely make more people interested in the toy.