

# Grade 1

# CRCT



# Study



# Guide



Reading  
English/Language Arts  
Mathematics



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# 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/](http://www.gadoe.org/) to find further information about and support for the CRCT.



Use the following section of this guide, *About the CRCT*, for an overview of the CRCT and for test-taking strategies to review with your students.

- The content tested on the CRCT is based on the Georgia Performance 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.

# Overview of the CRCT

## What is the CRCT?

The CRCT is a series of state-mandated achievement tests for students in Grades 1 through 8. In Grades 1 and 2, the subject areas of Reading, English/Language Arts, and Mathematics are covered.

## What does the CRCT measure?

The CRCT measures how well students have learned the knowledge and skills outlined by the state curriculum for their grade level. A new statewide curriculum, known as the Georgia Performance Standards (GPS), sets academic standards and expectations for all students in Georgia's public schools. The CRCT corresponds to the new 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.
- Measure accountability, including Adequate Yearly Progress (AYP) as measured by the federal No Child Left Behind Act.

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. In Grades 1 and 2, there are three choices for each question, labeled A, B, and C.

Students are not compared to each other. Each student is measured on his or her 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, visit [www.gadoe.org/ci\\_testing.aspx?PageReq=CI\\_TESTING\\_CRCT](http://www.gadoe.org/ci_testing.aspx?PageReq=CI_TESTING_CRCT) and click the link for "2008 CRCT Interpretive Guide."

## About the CRCT

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Since the spring of 2006, performance on the reading portion of the CRCT has been linked to the Lexile scale. Visit [www.gadoe.org/lexile.aspx](http://www.gadoe.org/lexile.aspx) for more information on this national reading measure.

### **What steps were taken to ensure the age-appropriateness of the CRCT?**

To ensure that test results from younger students are reliable and accurate, the state reviewed educational research and surveyed how other states tested students in the early grades. Key factors in age-appropriate testing include the number of answer choices, breaks during testing, and having sections of the test read aloud by teachers.

# Preparing for the CRCT

## Test-Taking Strategies

**Weeks Before the Test** Tell students about the test they will be taking. Make sure students know what to expect on the day of the test.

Give students a chance to practice filling in bubbles before the test day.

Help students develop strategies for matching questions to the correct set of bubbles on the answer grid.

**Day Before the Test** Remind students to get a good night's rest.

Give students a chance to talk about how they are feeling about the test.

Remind students that this test is only one way for them to show what they know.



**During  
the Test**

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

Relax by taking slow, deep breaths.

Listen carefully to the teacher's instructions.

Look at each question carefully.

Look at each answer choice for a question, then choose the one you think is best.

Fill in the whole circle next to your choice.

Don't try to find a pattern in the circles you fill in. There isn't one!

Leave a question blank if you are unsure of the answer, then go back to it at the end.

Don't spend too much time on one question.

Only change an answer if you are sure you picked the wrong one before. Then erase the old answer completely.

Answer all of the questions, even if you aren't sure every answer is correct.

## **Related Links**

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

Georgia Performance Standards:

**[www.georgiastandards.org/](http://www.georgiastandards.org/)**

CRCT Content Descriptions:

**[www.gadoe.org/ci\\_testing.aspx?PageReq=CI\\_TESTING\\_CRCT](http://www.gadoe.org/ci_testing.aspx?PageReq=CI_TESTING_CRCT)**

GPS Frameworks:

**[www.georgiastandards.org/](http://www.georgiastandards.org/)**

Lexile Framework for Reading:

**[www.gadoe.org/lexile.aspx](http://www.gadoe.org/lexile.aspx)**

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Best practices in education indicate that teachers should first model new skills for students. Next, teachers should provide opportunities for guided practice. Only then should teachers expect students to successfully complete an activity independently.

The activities in this guide are no exception. They are designed to be used by teachers and parents to help students with the skills on the Georgia CRCT.

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.





## Chapter 1

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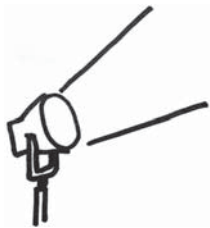
# Reading

Students who enter Grade 1 from kindergarten continue phonological development, making major growth in learning to read. They develop more advanced phonics skills and begin to build a bank of sight words. Grade 1 students continue to learn as their ability to read grows. They read, listen to, and discuss more complex stories, and they begin to make connections between what they read and hear and the experiences of their lives. Students in Grade 1 begin to monitor and self-correct their reading, and they expand their listening and speaking vocabularies by reading and hearing a wide variety of texts.

The Reading activities focus on some of the concepts that are assessed on the Grade 1 CRCT Reading domains. These domains are as follows:

- 1 Vocabulary**
- 2 Comprehension**

## Activities



### 1 Vocabulary

Georgia Performance Standards ELA1R5 and ELA1R6

Within the Vocabulary domain, Grade 1 students will learn the skills necessary to read, interpret, and acquire new vocabulary in a variety of texts. They will recognize grade-level words with multiple meanings, and identify both antonyms (opposites) and synonyms (words that have similar meanings). To understand the meanings of words, students in Grade 1 will identify the component parts of compound words, as well as word parts such as roots, suffixes (e.g., *-er*, *-est*, *-y*), and inflectional endings (e.g., *-s*, *-es*, *-ed*, *-ing*).

The following activities develop skills in this domain:

- To increase students’ understanding of words with multiple meanings, play *Talking Dictionary*. Prepare ten sentences that use ten grade-level words with multiple meanings. Underline each target word. Next, prepare definition cards that list the multiple meanings of each underlined word. For each sentence, call on two students to come to the front of the class. One student will role-play the dictionary, and the other will role-play the student who is unsure of a word’s meaning. The latter will read one of the sentences and ask the “dictionary” what the underlined word means. The student role-playing the dictionary will look at the word’s definition card and read the meaning he or she thinks is used in the sentence. If the student role-playing the dictionary reads the correct definition, he or she can take on the dictionary role for the next sentence. If he or she gets it wrong, a new student will play the dictionary until the correct definition is identified.
- To help students identify antonyms and synonyms, play *Make a Match*. Write antonyms and synonyms on index cards, one word per card (see tables below). Scramble the cards and place them face up in front of the students. First, students should look for antonyms. Students who correctly identify a pair of opposites will get to keep both words. Only one pair can be earned per turn. Next, students should look for synonyms. Students who correctly identify words with similar meanings will get to keep both words. The student who has collected the most pairs by the end of the game wins. For variation, cards may also be arranged face-down, like in the game *Concentration*.

#### Antonyms

big/small	heavy/light	short/tall
black/white	high/low	slow/fast
false/true	hot/cold	stop/go
fat/thin	left/right	strong/weak
flat/round	night/day	up/down
give/take	old/new	work/play

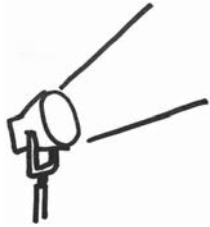


good/bad	out/in	wrong/right
happy/sad	real/fake	young/old
<b>Synonyms</b>		
angry/mad	fresh/new	quick/speedy
beautiful/pretty	happy/content	scared/afraid
begin/start	hard/difficult	seek/search
child/kid	hide/cover	shout/yell
chilly/cold	huge/gigantic	soft/low
correct/right	hurry/rush	speak/talk
fake/pretend	laugh/chuckle	tag/tap
finish/end	look/see	try/attempt

- To develop students’ understanding of how suffixes affect the meanings of root words, students should practice adding suffixes to roots. For this activity, create three-part posters. Think of words with the suffixes *–er* and *–est*, and write their roots on strips of paper (e.g., *big*, *small*, *tall*, *long*, *deep*). Give each student one word and explain how to fold a piece of paper into three vertical sections. Students should write their words at the bottom-left sections of their papers. Next, they should add the suffixes *–er* and *–est* to their words and write the newly formed words (e.g., *longer*, *longest*) at the bottom of the middle and right sections of their papers. Students with short vowel words that end in single consonants will double the final consonants before adding the suffixes (e.g., *bigger*, *biggest*). Students with words that end in *y* will change the *y* to an *i* before adding the suffixes (e.g., *funnier*, *funniest*). Above each word, students should draw pictures that show the relative meaning of their words. Students should then present their work to the class.
  
- To introduce students to inflectional endings, reread a book you have read together and hunt for plural nouns. (A plural noun is more than one person, place, thing, or idea.) Students should raise their hands when they see or hear a plural noun (e.g., *ducks* or *boxes*). List the words they find on the board and explain that the words are plurals. Students should look at the list and see if they notice a common spelling pattern. Prompt students to look at word endings by saying, *Do any of these words end with the same letters?* Students should notice that some of the words end in *–s* and some of the words end in *–es*. Create a chart to group all the plurals ending in *–s* and all the plurals ending in *–es*. Students should choose one of the words from either list, write it on a piece of paper, underline the inflectional ending, and draw a picture of what the word means. A student who writes the word *foxes*, for example, would draw a picture of more than one fox.



## Activities



### 2 Comprehension

Georgia Performance Standard ELA1R6

The Comprehension domain addresses students' abilities to read, recall, comprehend, and explore literary texts (e.g., narratives, stories, poems, fables) and a wide variety of informational articles. Students in Grade 1 will make predictions using prior knowledge, distinguish fact from fiction, and recognize cause-and-effect relationships in texts. They will recognize the plot, setting, and characters within a literary text and compare these elements among texts they have read or heard. They will ask and answer questions about these and other narrative elements (e.g., beginning-middle-end, story events, problem/resolution). Grade 1 students will retell stories read independently or with a partner. They will identify the main idea and supporting details of informational articles, and they will recognize and use graphic features (e.g., menus, charts, diagrams, calendars, maps) to understand informational text.

The following activities develop skills in this domain:

- To help students analyze characters and predict their feelings in the context of a story, create and use two-sided emotion puppets. Students should cut out two large circles from a piece of heavy paper. On one circle, they should draw a happy face. On the other, they should draw a sad face. Give each student a popsicle stick. Students should glue the two circles together with the popsicle stick in the middle. When the emotion puppets are dry, read a story together and stop when (or just before) something happens that would affect the way a character feels (e.g., when Cinderella finds out she can't go to the ball). Students should use their puppets to show whether they think characters would feel good or bad. Students should explain their choices and relate the event to the context of the whole story. For example: *Cinderella will feel bad when her stepsisters go to the ball. She will imagine being stuck doing housework while her stepsisters enjoy themselves.*
- To develop students' abilities to put events in the correct sequence and tell a story, students should practice ordering events of stories. Photocopy illustrations that represent the main events of a text. Glue each one to a separate piece of cardstock and present them to students in random order. Students should put the pictures in the order that they occurred in the text. Once all of the pictures are in order, students should retell the events of the story in their own words.
- To help students analyze story elements and recognize that all stories have basic structures, create story maps(see the example on page 13). After reading a story, give each student a copy of the story map. First, each student should draw a picture of the setting. Next, they should name the characters. Finally, students should draw pictures to show the main events that happened in the beginning, middle, and end of the story. Students should compare their story maps with those of other students.



Name _____ Date _____		
<p><b>Setting</b> Draw a picture of where the story takes place.</p>    		
<p><b>Characters</b> Write the names of the characters.</p> 1 ..... 2 ..... 3 ..... 4 ..... 5 .....		
<p><b>Beginning</b></p>	<p style="text-align: center;"> <b>Middle</b>            main problem         </p>	<p style="text-align: center;"> <b>End</b>            resolution         </p>

- To build students' understanding of graphic features in informational texts, students should practice interpreting charts, diagrams, and graphs. Read an informational article with an accompanying diagram. For example, a science article about the muscles of the human body may contain a diagram of the muscular system. Pose questions that challenge students to interpret the text and diagram together, such as *Which muscle in the human body is the strongest? Which muscle is the longest? How do muscles attach to bone? What would the human body look like if people didn't have muscles? What could people do without muscles?* Students should explain their answers and use the diagram to show what they mean. Finally, ask students questions that pertain to the usefulness of the diagram, such as *Is this diagram helpful in teaching about the human body? Why or why not? Is there anything you learned from the diagram that you didn't learn from the text?*





## Practice Quiz



Read the poem below and answer the questions that follow.

### Rain, Rain, Rain

My name is Juan, and I like rain.  
Want to know why? Let me explain.

The rain makes a funny sound.  
I hear it falling on the ground.

I like to play in the rain with friends,  
We hope and wish the rain never ends.

I wear a raincoat and a hat,  
I jump in puddles: splish, splash, splat!

I do my best to stay nice and dry,  
But I get wet, no matter how I try.

Rain taps my head, my toes, my feet,  
It drips and drops all over the street.

My mom wants the rain to go away,  
She wishes today were a sunny day.

But, I am glad the rain is here,  
I sing a song and give a cheer.

Rain helps plants grow big and strong,  
Sometimes rain falls the whole day long.

When the rain ends, I won't cry.  
I'll find a puddle and make mud pie!



- 1 **What is Juan doing FIRST in the poem?**
  - A laughing
  - B singing a song
  - C listening to the rain
  
- 2 **On the next rainy day, what will Juan MOST LIKELY do?**
  - A go outside and play
  - B stay nice and dry
  - C eat a snack
  
- 3 **According to the poem, which sentence is correct?**
  - A Juan is good at sports.
  - B Juan has a garden.
  - C Juan likes rain.
  
- 4 **What will Juan do when the rain stops?**
  - A Put on a coat.
  - B Make mud pie.
  - C Go into the house.
  
- 5 **According to the poem, which sentence is correct?**
  - A Juan's mother likes sunny days.
  - B Juan's mother cheers for the rain.
  - C Juan's mother wants to plant flowers.
  
- 6 **Which sentence describes Juan?**
  - A He needs a new coat.
  - B He plays in the rain.
  - C He likes to swim.
  
- 7 **What is the main idea of the poem?**
  - A Plants need rain to grow.
  - B Rain falls all day long.
  - C Juan loves rain.
  
- 8 **Why does Juan sing a song and give a cheer?**
  - A He is glad the rain is here.
  - B He wants to see the plants grow.
  - C He thinks the rain will never end.



- 9 **Which word means the OPPOSITE of glad?**

But, I am glad the rain is here,  
I sing a song and give a cheer.

- A unhappy
  - B funny
  - C nice
- 10 **Which of these words is made from two words?**
- A explain
  - B puddles
  - C raincoat



## Solutions

Number	Correct Answer	Explanation
1	<b>C</b>	<p><i>Asks and answers questions about essential narrative elements (e.g., beginning-middle-end, setting, characters, problems, events, resolution) of a read-aloud or independently read text. (ELA1R6c)</i></p> <p>The correct answer is <b>Choice (C) listening to the rain.</b> In the second two sentences, Juan thinks “the rain makes a funny sound” and hears “it falling on the ground.” Choices (A) and (B) are incorrect because the poem says nothing about <i>laughing</i> or <i>singing a song</i>.</p>
2	<b>A</b>	<p><i>Makes predictions using prior knowledge. (ELA1R6b)</i></p> <p>The correct answer is <b>Choice (A) go outside and play.</b> Throughout the poem, Juan tells readers that he enjoys playing in the rain. Choice (B) is incorrect because the poem says that Juan gets wet no matter how hard he tries to stay dry. Choice (C) is incorrect because the poem says nothing about <i>eating a snack</i>.</p>
3	<b>C</b>	<p><i>Asks and answers questions about essential narrative elements (e.g., beginning-middle-end, setting, characters, problems, events, resolution) of a read-aloud or independently read text. (ELA1R6c)</i></p> <p>The correct answer is <b>Choice (C) Juan likes rain.</b> Throughout the poem, Juan tells readers that he likes rain—its sound, the puddles, the mud, etc. Choice (A) is incorrect because the poem says nothing about Juan’s <i>sports skills</i>. Choice (B) is incorrect because the poem says nothing about Juan having <i>a garden</i>.</p>
4	<b>B</b>	<p><i>Asks and answers questions about essential narrative elements (e.g., beginning-middle-end, setting, characters, problems, events, resolution) of a read-aloud or independently read text. (ELA1R6c)</i></p> <p>The correct answer is <b>Choice (B) Make mud pie.</b> At the end of the poem, Juan says, “When the rain ends, I won’t cry. / I’ll find a puddle and make mud pie!” Choice (A) is incorrect because, according to the poem, Juan will “wear a raincoat” <i>in the rain</i>, not after the rain ends. Choice (C) is incorrect because the poem says nothing about <i>going into the house</i>.</p>



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Number	Correct Answer	Explanation
5	A	<p><i>Asks and answers questions about essential narrative elements (e.g., beginning-middle-end, setting, characters, problems, events, resolution) of a read-aloud or independently read text. (ELA1R6c)</i></p> <p>The correct answer is <b>Choice (A) Juan’s mother likes sunny days.</b> According to the poem, Juan’s mother “wants the rain to go away, / She wishes today were a sunny day.” Choice (B) is incorrect because only Juan <i>cheers for the rain</i>. Choice (C) is incorrect because the poem says nothing about Juan’s mother’s desire to <i>plant flowers</i>.</p>
6	B	<p><i>Retells stories read independently or with a partner. (ELA1R6d)</i></p> <p>The correct answer is <b>Choice (B) He plays in the rain.</b> In the poem, Juan says that he plays in the rain: “I jump in puddles: splish, splash, splat!” Choice (A) is incorrect because the poem says nothing about Juan <i>needing a new coat</i>. Choice (C) is incorrect because the poem doesn’t say <i>he likes to swim</i>.</p>
7	C	<p><i>Identifies the main idea and supporting details of informational text read or heard. (ELA1R6g)</i></p> <p>The correct answer is <b>Choice (C) Juan loves rain.</b> In the poem, Juan shows that he loves the rain. He says, “I like to play in the rain,” “We hope and wish the rain never ends,” and “I am glad the rain is here, / I sing a song and give a cheer.” Choice (A) is incorrect because the poem focuses mainly on Juan’s <i>feelings</i> about rain; it does not focus on <i>plants</i>. Choice (B) is incorrect because the poem is mostly about Juan; it doesn’t focus on the rain falling <i>all day long</i>.</p>
8	A	<p><i>Recognizes cause-and-effect relationships in text. (ELA1R6i)</i></p> <p>The correct answer is <b>Choice (A) He is glad the rain is here.</b> In the poem, Juan says, “I am glad the rain is here.” Choice (B) is incorrect. Juan seems pleased that “Rain helps plants grow big and strong.” However, he says nothing about <i>seeing the plants grow</i>. Choice (C) is also incorrect. Juan “hope[s] and wish[es]” that the <i>rain will never end</i>, but he does not think that will happen.</p>

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<b>Number</b>	<b>Correct Answer</b>	<b>Explanation</b>
9	<b>A</b>	<i>Identifies words that are opposites (antonyms) or have similar meanings (synonyms). (ELA1R5c)</i>  The correct answer is <b>Choice (A) unhappy</b> . Choice (B) is incorrect because the opposite of the word <i>funny</i> is <i>serious</i> . Choice (C) is incorrect because the opposite of the word <i>nice</i> is <i>mean, uncomfortable, or unfriendly</i> .
10	<b>C</b>	<i>Identifies word parts to determine meanings. (ELA1R6j)</i>  The correct answer is <b>Choice (C) raincoat</b> . The word <i>raincoat</i> is made up of two words: <i>rain</i> and <i>coat</i> . Choices (A) and (B) are incorrect because neither <i>explain</i> nor <i>puddles</i> can be divided into two words.

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# English/Language Arts

Given the importance of reading and writing in every aspect of our society, students in Grade 1 must begin to build strong literacy skills. In Grade 1, students continue to produce text through speaking and writing. They make major advances in learning to write a story that shows focus and organization. The conventions of language gain importance to students as they develop a desire for neatness and correctness. They learn to expand sentences and recognize paragraphs, and they begin to learn the rules of language and spelling. They are moving toward mastery of language use in order to read and write both for information and pleasure. When writing, students can create complete sentences with subject-verb agreement and use different types of sentences (simple/compound). Students can correctly spell most words at the Grade 1 level, understand basic writing conventions (capitalization and punctuation), and correctly use nouns and pronouns. When gathering information, students can use a variety of resources to read and write about a topic.

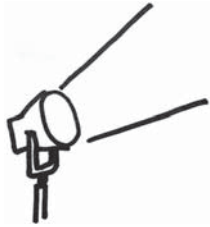
The English/Language Arts activities are focused on some of the concepts that are assessed on the Grade 1 CRCT English/Language Arts domains. These domains are as follows:

- 1 Grammar/Phonological Awareness/Phonics**
- 2 Sentence Construction**
- 3 Research**





## Activities



### 1 Grammar/Phonological Awareness/ Phonics

*Georgia Performance Standards ELA1W1 and ELA1R2*

Within this domain, students should begin to demonstrate competency in the writing process by working with words in sentences, especially singular and plural nouns, as well as personal and singular-possessive pronouns. Students should begin to apply the conventions of Standard English by using common rules of spelling, punctuation, and capitalization. In addition, students should demonstrate the ability to pull out and change individual sounds within words. Finally, students should distinguish between long and short vowel sounds.

The following activities develop skills in this domain:

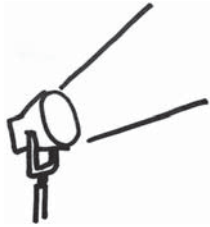
- In order to help students learn to use correct spelling, capitalization, and punctuation, create “morning messages.” Write messages (or parts of messages) on the board or on a family calendar. Whenever possible, students should dictate, or say aloud, the messages to be posted. Students should also help write the words and correct mistakes. For example, students can work with the following morning message:

Good Morning! Today is [day of the week], [month and day], [year].  
[Name] has a birthday soon (can be a celebrity or a relative).  
Today we will be working on [list the activities of the day].

- Understanding vowel sounds is an important concept for students who are learning how to spell. Play with words using word-cards and letter-tiles. These should be made ahead of time using index cards or cut-up construction paper. Students will sort word-cards into categories, such as rhyming words, words with the same initial letter, words with the same vowel sound, or nouns. Students will use letter-tiles to create words of different types (new words, rhyming words, etc.).
- In order to help students understand and use long and short vowel sounds, students will create a “word ladder.” Students should say aloud the first word on the ladder. Then they should change, add, or remove one letter to create a new word, and have another student pronounce the new word. Conduct this activity in small groups, or simply trade words back and forth with the student. Make the longest ladder possible. For example: start with the word *map*; change *p* to *t* to make *mat*; change *m* to *b* to make *bat*; change *a* to *e* to make *bet*; change *t* to *g* to make *beg*; change *b* to *l* to make *leg*; change *e* to *o* to make *log*.



## Activities



### 2 Sentence Construction

Georgia Performance Standard ELA1W1

Within the Sentence Construction domain, students should begin to demonstrate competency in using, writing, and recognizing the parts of sentences. Students should use nouns (singular and plural) correctly and begin to use personal pronouns (*I, me, we*) in place of nouns. Students can identify and write complete sentences with correct subject-verb agreement, and they can begin to write different types of sentences. These include simple sentences and compound sentences, as well as *telling* and *asking* sentences.

The following activities develop skills in this domain:

- To help students identify correctly written sentences, play *Circle It!* Write groups of three sentences on the board or on a piece of paper. Two of the sentences should be incorrect, with mistakes in subject-verb agreement or spelling. Students should take turns circling the sentence with no errors. Students should also explain their choices and correct the errors.
- In order to help students use nouns, personal pronouns, and sentence structure correctly, use the following interactive writing exercise. Students should choose a topic and receive as much or as little help as required to dictate a short piece of text. If needed, provide students with a prompt, such as, *Tell about something that happened in the park.* Then talk with students about the words and sentences of the text. Identify nouns and pronouns, and look for subject-verb agreement. Tack the text on a wall, the bulletin board, or the refrigerator.
- Identifying and creating different types of sentences is an important part of becoming a good writer. Create two sentence stations in the room by placing signs on opposite walls that say *telling sentence* and *asking sentence*. Be sure to move desks or other obstructions out of the way. Explain that you will write a sentence on the board (or on a poster) while you say it aloud. The students will move to the correct sentence station to show what kind of sentence it is. (Examples of *telling* and *asking* sentences include: *We're having pizza for lunch. What should we have for lunch?*) Play this game again using stations for simple sentences (Example: *The cat ran away.*) and complex sentences (Example: *While doing his homework, James drank cocoa.*).
- In order to help students learn subject-verb agreement, create two piles of index cards or small sheets of blank paper. One pile will include a variety of subject words, and the other pile will feature verbs. Students will pick one card from the subject pile and find a verb card that agrees with it to create a sentence. For example, if a student selects a card from the pile that says *Jasper and Sonya*, he or she will need to locate an agreeing verb such as the

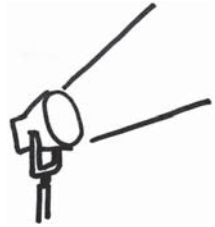


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plural verb *watch*. Then the student will complete the sentence and say it aloud. Similarly, if a student selects a singular subject, such as *Mrs. Wendell*, he or she will need an agreeing verb, such as the singular verb *sleeps*. If a subject is singular, its verb must also be singular and will generally have an *s* at the end. If a subject is plural, its verb must also be plural and will generally not have an *s* at the end.



## Activities



### 3 Research

Georgia Performance Standard ELA1W1

Students should decide which reference source to use when presented with a variety of choices. Examples of these choices include picture dictionaries, the Internet, and books, as well as other sources of information. Students should start to think about how to use the information they find. In addition, students should be able to use a dictionary or glossary to find word meanings.

The following activities develop skills in this domain:

- To help students choose the right dictionary definition for multiple-meaning words, students will play *Pick One!* Choose a one-page reading selection and underline three words in the selection with multiple meanings. Next, copy simple dictionary entries (containing definitions for all meanings) for each of the three words, either on the board or on a piece of paper. After reading the selection, students will mark the appropriate definitions for each word as it is used in the text. Students should discuss their choices with each other before marking the correct definitions.
- To help students use dictionaries and glossaries, students will make a definition chart. Use a simple, two-column chart with a list of four words from students' reading materials. (See the sample below.) Once students have selected words for the first column, help them use a dictionary to find a definition for each word to place in the second column. Assist students by showing them how the guide words at the top of each dictionary page help locate words. The first guide word is the first defined word on the page; the second is the last defined word on the page. All other words located on the page are found alphabetically between the two guide words. Point students to the correct word on the page. Provide as much or as little help as students need to complete the chart. A picture dictionary is ideal for this activity. When students are successful at this task, they should include a second definition for words that have more than one meaning.

Word	Short definition	Second definition
1.		
2.		
3.		
4.		

- Using a variety of resources to conduct research is an important step in understanding persuasive writing. Each student will write a postcard to a friend on a topic of his or her choice. (Some examples include *an unusual animal, a famous athlete, a place they would like to visit, or an ancient civilization.*) With guidance, each student should use available reference



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books, preferably in the student section of a library, and find a fact to include in the postcard. To help students choose the correct reference books for their purposes, put sentences like the following on the board. Students should offer suggestions to answer the questions:

- *Which book will help us find information about where a koala bear lives?* (encyclopedia)
- *Which book will name the capital of Mexico?* (atlas, encyclopedia)
  
- To help students think about finding information from reference resources, students will imagine that they are reporters for a local newspaper. Tell students to imagine that they need to gather information for a big story about the mayor or a local celebrity. Students should think about and discuss how they might do the research. Ask guiding questions such as, *Would you try to interview someone who knows the mayor?* or *Would a dictionary help? Why or why not?* The important part of this exercise is to get the students thinking about good research options and resources.



## Practice Quiz



- 1 **Which word BEST completes the sentence?**

\_\_\_\_\_ bike is new.

- A My
- B Hers
- C Mine

- 2 **Which sentence uses commas correctly?**

- A Keesha saw a duck, a goat, and a cow.
- B Keesha, saw a duck, a goat and a cow.
- C Keesha saw, a duck a goat, and a cow.

- 3 **Which word in the sentence needs a capital letter?**

I will visit my friend in november.

- A my
- B friend
- C november

- 4 **What is the correct spelling of the word that completes the sentence?**

I \_\_\_\_\_ my book bag!

- A fuond
- B found
- C fownd

- 5 **What is the plural noun in the sentence?**

Chris has two shells.

- A Chris
- B has
- C shells

- 6 **Which word can BEST be used in place of the underlined words in the sentence?**

Ben gave hugs to my mom and me.

- A them
- B us
- C we



7 **Which sentence tells something?**

- A Malik smiles at me.
- B Why are you sad?
- C How is your brother?

8 **Which word BEST completes the sentence?**

My shirt \_\_\_\_\_ five buttons.

- A has
- B have
- C having

9 **Which page has information about baby eagles?**

Table of Contents	
Chapter 1: What Eagles Eat.....	2
Chapter 2: Building Nests .....	11
Chapter 3: Young Eagles.....	18
Chapter 4: How Eagles Fly .....	23

- A page 2
- B page 11
- C page 18

10 **Use the information in the box to answer the question.**

**bright:**  
1. smart  
2. shiny  
3. cheerful

**Which definition of *bright* is used in the sentence?**

The sun is very bright today.

- A definition 1
- B definition 2
- C definition 3



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## Solutions

Number	Correct Answer	Explanation
1	A	<p><i>Use singular-possessive pronouns. (ELA1W1h)</i></p> <p>The correct answer is <b>Choice (A) My</b>. This word properly completes the sentence with the correct singular-possessive pronoun. Choices (B) and (C) are incorrect because the pronouns <i>mine</i> and <i>hers</i> are used to modify the noun <i>bike</i>.</p>
2	A	<p><i>Use commas in a series of items. (ELA1W1m)</i></p> <p>The correct answer is <b>Choice (A) Keesha saw a duck, a goat, and a cow</b>. This sentence properly uses commas in a series. Choice (B) is incorrect because there is an unnecessary comma between <i>Keesha</i> and the verb <i>saw</i>. In addition, the sentence is missing a comma after the second item in the series. Choice (C) is incorrect because there is an unnecessary comma after the verb <i>saw</i>. Also, the sentence is missing a comma after the first word in the series.</p>
3	C	<p><i>Use appropriate end punctuation (period and question mark) and correct capitalization of initial words and common proper nouns (e.g., personal names, months). (ELA1W1l)</i></p> <p>The correct answer is <b>Choice (C) november</b>. This word names a month and therefore requires a capital letter. Choice (A) is incorrect because <i>my</i> does not require capitalization in this sentence because it is not a proper noun. Choice (B) is incorrect because <i>friend</i> does not require a capital letter. It is not the first word in the sentence or a proper noun.</p>
4	B	<p><i>Begin to use common rules of spelling. (ELA1W1j)</i></p> <p>The correct answer is <b>Choice (B) found</b>. This is the correct spelling of the word. Choice (A) is incorrect because the two vowels are reversed. Choice (C) is incorrect. Students may choose this answer because the “ow” in this spelling does have the same sound as the vowels in the word.</p>






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Number	Correct Answer	Explanation
5	<b>C</b>	<p><i>Use nouns (singular and plural) correctly. (ELA1W1f)</i></p> <p>The correct answer is <b>Choice (C) shells</b>. <i>Shells</i> is the only plural noun in the sentence. Choice (A) is incorrect because <i>Chris</i> is a proper singular noun. Choice (B) is incorrect because <i>has</i> is a singular verb, not a noun.</p>
6	<b>B</b>	<p><i>Begin to use personal pronouns (e.g., I, me, we, us) in place of nouns. (ELA1W1g)</i></p> <p>The correct answer is <b>Choice (B) us</b>. This personal pronoun is an indirect object in the sentence. Choice (A) is incorrect because the pronoun <i>them</i> would not include the person saying or writing the sentence. Choice (C) is incorrect because the subjective <i>we</i> should only be used when the pronoun is the subject of a sentence, as in <i>We received hugs</i>.</p>
7	<b>A</b>	<p><i>Begin to write different types of sentences (e.g., simple/compound and declarative/interrogative). (ELA1W1i)</i></p> <p>The correct answer is <b>Choice (A) Malik smiles at me</b>. This sentence provides information rather than asks for information. Choices (B) and (C) are both incorrect because they ask questions.</p>
8	<b>A</b>	<p><i>Write in complete sentences with correct subject-verb agreement. (ELA1W1e)</i></p> <p>The correct answer is <b>Choice (A) has</b>. This verb completes the sentence with the correct subject-verb agreement. Choice (B) is incorrect because the subject <i>my shirt</i> is singular but the verb <i>have</i> is plural. Choice (C) is incorrect because <i>having</i> is linked to time, and this form of the verb doesn't make sense.</p>
9	<b>C</b>	<p><i>Begin to use a variety of resources (picture dictionaries, the Internet, books) and strategies to gather information to write about a topic. (ELA1W1k)</i></p> <p>The correct answer is <b>Choice (C) page 18</b>. The chart shows a table of contents. The title of Chapter 3, <i>Young Eagles</i>, would include baby eagles. Choice (A) is incorrect because the chapter beginning on <i>page 2</i> is about what eagles eat. Choice (B) is incorrect because the chapter beginning on <i>page 11</i> is about building nests.</p>

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<b>Number</b>	<b>Correct Answer</b>	<b>Explanation</b>
10	<b>B</b>	<i>Begin to use dictionary and glossary skills to determine word meanings. (ELA1R6k)</i>  The correct answer is <b>Choice (B) definition 2</b> . <i>Shiny</i> is the most accurate definition of <i>bright</i> when referring to the sun. Choices (A) and (C) are incorrect because in this context, neither <i>smart</i> nor <i>cheerful</i> makes sense.

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## Chapter 3

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# Mathematics

By the end of Grade 1, students will understand and use the concept of *ones* and *tens* in the place value number system. They will add and subtract small numbers with ease. Students will represent quantity with numbers, models, diagrams, and number sentences. They will begin to use tools for measuring; observe, create, and decompose (break apart) geometric shapes; and solve simple problems including those involving spatial relationships. Students will pose questions, record data, and interpret simple charts and picture graphs.

The Mathematics activities focus on some of the concepts that are assessed on the Grade 1 CRCT Mathematics domains. These domains are as follows:

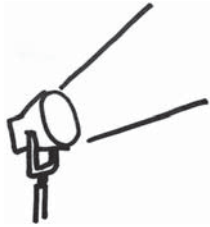
- 1 Number and Operations**
- 2 Measurement**
- 3 Geometry**
- 4 Data Analysis and Probability**

The *Mathematical Process Skills* are integrated throughout the domains. These are skills used to acquire and apply content knowledge.

*Mathematical Process Skills* refer to students' dexterity in applying concepts and skills in the context of authentic problems, and understanding concepts rather than merely following a sequence of procedures. Process skills are used to acquire and apply content knowledge. These skills include solving problems that arise in Mathematics and other contexts; reasoning and evaluating mathematical arguments; communicating mathematically; making connections among mathematical ideas and to other content areas; and representing mathematical ideas in multiple ways.



## Activities



### 1 Number and Operations

*Georgia Performance Standards M1N1, M1N2, M1N3, and M1N4*

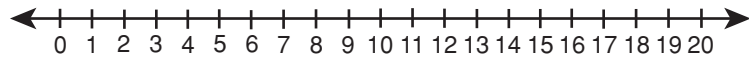
Within the Number and Operations domain, students will understand numbers in multiple representations and compare and order numbers using symbols, sequences, a number line, and a hundreds chart. Students will demonstrate an understanding of equivalent quantities and working with coins and bills. Students will demonstrate understanding of addition and subtraction, and apply those skills in problem-solving situations. Therefore, students will cultivate an understanding of how addition and subtraction affect quantities and are related to each other. They will estimate, model, compare, order, and represent whole numbers up to 100. Students will use concrete representations to build number patterns. Students will solve and create word problems involving addition and subtraction to 100 without regrouping. Students will divide groups into equal parts and relate fractions as equal parts of a whole. In addition, they will be introduced to multiplication and division situations and operations.

The following activities develop skills in this domain:

- Students will use collections of small objects to identify one more/less than and ten more/less than a given amount. Gather several collections of small objects and assign each collection a name or letter. Show one collection to students, who will count the objects and write down the number for later comparison. Provide a visual representation of the amounts by recording each on a number line. This activity will also reinforce *counting on* and *counting back*. Repeat this with each collection. Students should then determine which collections have one more/one less than other collections. Repeat the exercise with larger collections of objects so students can identify which collections of objects have ten more/ten less than others.
- To develop students' skills with *skip counting* by 2s, 5s, and 10s, both forward and backward, use number lines and a hundreds chart. Skip counting is an important step in creating the foundation for understanding multiplication. Students who can recite sequences such as 2, 4, 6, 8... may not make the connection that each number is consistently greater than the one before it. Students will use a number line or a hundreds chart (see examples on the next page) to practice skip counting, which offers a concrete visual connection to the concepts. Students should describe the patterns they see on the number line or hundreds chart; patterns derived by skip counting are more obvious when colored on a hundreds chart. Students should count forward and backward from one number to the next to understand that the patterns are the same in either direction. Students should try to identify numbers that show up in more than one skip-counting pattern (e.g., students will count the number 6 when they are skip counting by 2 and by 3).



**Number Line**



**Hundreds Chart**

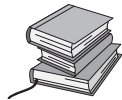
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- Students can reinforce concepts of *even* and *odd*, as well as develop strategies to share objects evenly in groups of 2 to 5, by playing the *Groups Game*. Start with a full group of students. Play music and have the students walk around the classroom. Stop the music suddenly and call out *Even!* or *Odd!* Students should break up into groups accordingly. Any group that doesn't have the appropriate number of members (whether even or odd) will sit out until the next round. Continue until only a few students remain. For a variation, create stations numbered 2, 3, 4, and 5, indicating the number of students who will work at each station. Place a number of small objects at each station so that the objects can be divided evenly by the number of the students at the station. For example, a station numbered 3 could have 6 items (2 per student) or 12 items (4 per student) but not 13 items (since 3 doesn't divide evenly into 13). Repeat stations as needed so that there are enough stations for all students. For instance, 22 students could be split among 2 stations of 2 students, 3 stations of 3 students, 1 station of 4 students, and 1 station of 5 students. Play in the same fashion, but when the music stops, students must find a place at a station. The students at each station must then divide the objects up evenly among themselves.

- To practice counting up to 100, students will compare amounts using the terms “*greater than*,” “*less than*,” and “*equal to*,” and ordering values on a number line. Prepare (ahead of time) five different stations around the classroom. At each station, place a different set of objects. Each station should have a different number of objects (up to 100). For example, you may have a box of crayons at one station, a stack of books at another station, a basket of toy animals at a third station, a container of blocks at the fourth station, etc. Next, give each student a worksheet (similar to the example that follows) that lists or has drawings of the objects from each of the stations.



Crayons \_\_\_\_\_



Books \_\_\_\_\_



Animals \_\_\_\_\_



Blocks \_\_\_\_\_

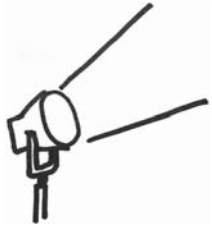
The students will 1) visit each station; 2) count the number of objects at each station; and 3) record the total number of objects per station on their worksheets. Once all students have completed the activity, work together as a class to check their results. Post a copy of the blank worksheet on the board or chart paper. Have one student from each station gather all the objects for his or her station and count them aloud to the class, then record the total on the posted worksheet. After the objects at all stations have been counted, students will check their answers on their own worksheets. Next, compare the sets of objects using the terms “*greater than*,” “*less than*,” and “*equal to*.” For example, say, “The number of crayons is *greater than* the number of books.” (Allow student volunteers to provide additional examples. Make sure they use the terms correctly and that their numbers are correct and correspond to the numbers on the posted worksheet.) Conclude this activity by representing each station’s total number of objects on a hundreds chart for the entire class. If you do not have a hundreds chart, you can make one by dividing a poster board into a 10 x 10 grid and writing the numbers 1 – 100 in the squares. Have student volunteers



point out where each total appears on the hundreds chart, marking the locations with removable stickers. This gives students a visual reference for understanding the relative size of different quantities.



## Activities



## ② Measurement

*Georgia Performance Standards M1M1 and M1M2*

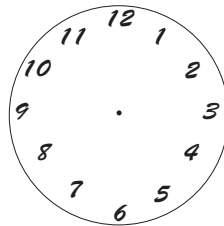
Within the Measurement domain, students measure the basic physical attributes of concrete objects. Students create and use a “ruled” stick, tape, or container and demonstrate an understanding of the comparison and ordering of length, weight, or capacity of two or more objects by using direct comparison or a nonstandard unit. Students will develop an understanding of the measurement of time to the nearest half-hour and calendar time (days, weeks, and months), including duration (length) and sequence (order) of events.

The following activities develop skills in this domain:

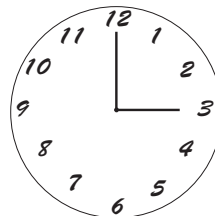
- Students will improve the ability to estimate and measure using a nonstandard unit smaller than the object to be measured by practicing with common objects and images. Students should measure common objects using their hands, feet, or bodies as nonstandard units of measurement. Students can use a place holder to keep track of where to start the next unit. For example, if measuring in hand lengths, students may hold a pencil at their fingertips while moving the heel of their hand to that point, repeating each time they move their hand. Record all the measurements and compare results. Discuss why the measurement results vary for different people, even though the same object was measured. For an extension, find images in magazines that can be cut up and use them to perform measurements in nonstandard units. For example, if a picture shows a bicycle next to a garage, students should cut out the bicycle and use it as a nonstandard measure to find the width and height of the garage.
- To compare and order the duration or sequence of events, students will record a daily schedule with the start and end times of various events. Students may use a daily calendar with half-hour increments and estimate the duration of events by counting the number of increments used. Students should identify the longest and shortest event on a given day or in a given week. They should compare the lengths of various events and identify which are longer or shorter than others. Students will discuss how they know which events came before or after a given event.



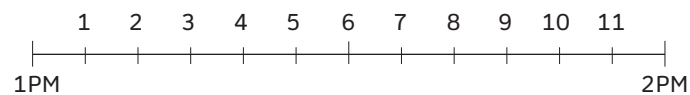
- Students will begin to understand the relationship of calendar time (days in a week and months in a year) by participating in the *March of the Months*. Find a space with enough room for students to march in unison, and have them line up against one wall. March with your students in formation, playing the part of leader by ensuring that students match your pace with their backs straight and arms swinging neatly at their sides. Then, say the months in order, with students repeating you in unison. Say, *Stop!* and all students should stop immediately, keeping in one line. Next, choose a holiday or birthday month with students. Resume marching, saying the months in order. When students reach the chosen month, they should all stop marching. Student volunteers can choose subsequent months. The same game can be played using days of the week.
- Students will discuss their school day schedule and practice telling time to the nearest hour and half-hour by seeing and showing how the hands of the clock are related. Begin by asking students to list different activities they participate in during the school day, such as lunchtime, arrival time, or math time. Write these activities on the board or chart paper as they are mentioned. Then choose an activity from the list. On a commercial teaching clock, a free-hand drawing, or a template similar to the following example, indicate what time the activity takes place by moving, placing, or drawing hands in the appropriate position. (Do not tell what time you are indicating on the clock.)



Select a student volunteer to tell the class what time is shown on the clock to the nearest hour or half-hour, depending upon the time you have shown. (This can be repeated for as many activities on the list as you have time for.) As an alternative activity, give students four choices of possible times, and have them choose the correct one for a given activity from the list. For example, if the school day ends at 3:00, indicate the time on the clock as shown in the following image.

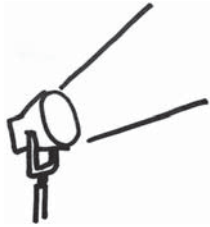


Then, show the class the clock and four possible times, such as 3:30, 12:00, 3:00, and 9:00. Ask students to select the time that is on the clock. Have a student volunteer make a selection and explain why he or she believes he or she is correct. Conclude the activity by working with a number line. A number line will also help students visualize the relationship between minutes and hours. On the board, draw a number line similar to the one shown below. Have the line span one full hour. Divide the number line into 12 equal segments. Each of the segments should represent 5-minute intervals (each interval is one number of a clock). You can also further divide each 5-minute interval into 5 individual minutes. Explain to students that in order to get from one hour to the next, the minute hand must go through all sixty minutes. (The number line will help students see how minutes “fit into” one hour, and how the minute hand must pass through all the individual minutes to complete the hour.)





## Activities



### 3 Geometry

Georgia Performance Standards M1G1, M1G2, and M1G3

Within the Geometry domain, students demonstrate an understanding of two- and three-dimensional figures and spatial relationships of concrete objects. Students will build, represent, name, and describe various two- and three-dimensional figures (e.g., pentagons, hexagons, cylinders, cones, rectangular prisms) and identify basic figures (e.g., squares, circles, triangles, rectangles) within them. Students will compare, contrast, and/or classify geometric shapes by the common attributes of position, shape, size, number of sides, and number of corners. Students will arrange and describe objects in space by proximity (nearness), position, and direction.

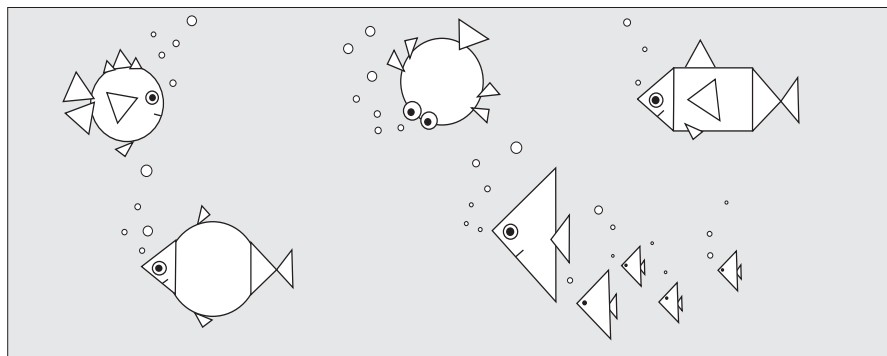
The following activities develop skills in this domain:

- Playing a bean bag toss game will develop students' skills comparing, contrasting, and classifying geometric shapes by common attributes of shape, size, number of sides, and number of corners. Use a large sheet of construction paper or posterboard to make a grid. Draw a variety of different shapes, one in each box of the grid. Students should toss a bean bag on the grid and write down the name of the shape the bean bag lands on. Repeat with a second toss. Students should compare and contrast the two shapes using the common attributes of each. As they name and describe the shapes, students should explain the number of sides and corners of each and explore the relationships among various shapes.
- Students can practice naming and describing basic figures as they play a drawing game. Gather some notebook paper and write down the name of one shape on each sheet, such as *square*, *rectangle*, *triangle*, *circle*, *pentagon*, *hexagon*, *cylinder*, *cone*, or *rectangular prism*. Divide students into two teams. Call one student from each team to come up to the board (or a flip chart), and give each student a piece of chalk or a marker. Show each seated team the name of a different shape, but keep each name secret from the other team and both students doing the drawing. The team members should give clues to their teammates (at the board) using attributes of their shapes, but *not* using the names of the shapes. The first student to draw the correct shape for his or her team earns a point. The students then hand off the chalk or marker to a teammate who then goes to the board.
- To help students improve their understanding of the arrangement and description of objects in space, play a scavenger hunt game. Hide an object and give students clues about its position and proximity or distance from other locations or objects. A helpful list of words and phrases to use is *near/far*, *below/above*, *up/down*, *behind/in front of*, *next to*, *to the left of/to the right of*. Prompt students by saying, *You're getting warmer* or *You're getting*



*colder*, so they understand whether they are narrowing in on the correct location. This will also help reinforce—in context—the meanings of the position, proximity, and direction words you are using. A variation of this activity involves a student hiding an object. (That student should use the same list of position and proximity words to guide other students as they try to find the location.)

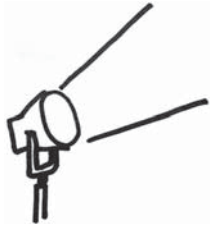
- Students will name and understand the characteristics of basic geometric shapes by creating picture collages similar to the one shown below.



Students can create picture collages that relate to their studies/schoolwork in other subjects, or come up with their own concepts. For example, if students are studying flowers in science, they can be asked to use geometric shapes to create picture collages of flowers. Explain that students may only use squares, triangles, circles, and rectangles to make their picture collages. Next, provide students with scissors, glue, and several sheets of colored paper. Students should 1) draw different geometric shapes on colored paper; 2) cut out the shapes; and 3) create a picture collage by gluing the shapes onto a separate piece of paper. (Encourage students to use shapes of different sizes and a variety of different shapes and colors. You may provide them with stencils or objects to trace, such as round or square lids and rectangular blocks, to help students draw the shapes before cutting them out.) Conclude the activity by asking students to name the characteristics of the geometric shapes used in their picture collages. Then display the colorful picture collages around the room for all to enjoy.



## Activities



### 4 Data Analysis and Probability

*Georgia Performance Standard M1D1*

Within the Data Analysis and Probability domain, students pose questions, collect, organize, and interpret data about themselves and their surroundings. Students will organize, record, and interpret data using objects, pictures, tally marks, bar graphs, and picture graphs.

The following activities develop skills in this domain:

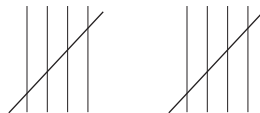
- To better understand the importance of organization in the collection and display of data, show students two groups of toothpicks: one disorganized pile and another organized into sets like tally marks. Students should discuss why determining the number of toothpicks in a pile is more difficult than determining the number of toothpicks that have been organized into sets of tally marks. Students should develop methods for effectively and efficiently displaying the data they collect. For instance, if students choose to collect data about classmates' shoes, students should develop effective categories such as *Sneakers*, *Boots*, *Sandals*, and *Other*. Students will compare the data categories and develop more than one way to organize the same set of data.
- Students should practice recording data as they perform a fun activity. Students may participate individually, in pairs, or in groups. Choose an activity that students can do for a set period of time and record their results. For example, students can play *Paper Football* or *Trash Can Basketball* and try to score as many points as possible in 60 seconds. Students could also pair up and keep track of how many jumping jacks a partner can do in 30 seconds. Students should record the data gathered using a tally chart. They can then create one large data display for the entire group and compare results, determining the greatest and least values as well as the most common results.
- Use daily opportunities for students to collect and record meaningful data from their surroundings. For example, students can record the weather each day during the month and make cutouts to represent sunny, cloudy, and rainy weather. Provide data collection sheets that students can use when gathering information to avoid the loss of data. Students should choose the type of data they would like to work with. They will use tally marks or picture graphs to record their data over the course of a day, a week, or a month.

- Students will collect, organize, and sort data to better understand how to create a table or graph and interpret the data represented. Students will collect information about the favorite ice cream flavors of all students in the class, tally the information, and make a graph representing the data. Create a chart on the board or on chart paper (ahead of time) to record the number of students who prefer each flavor using tally marks (like the following example). Each column in the chart should represent a different favorite ice cream flavor. (The column titles should be determined by students before they mark their choices.)

**Favorite Ice Cream Flavors**

<b>Vanilla</b>	<b>Chocolate</b>	<b>Berry- flavored</b>	<b>Peanut- flavored</b>	<b>Other</b>

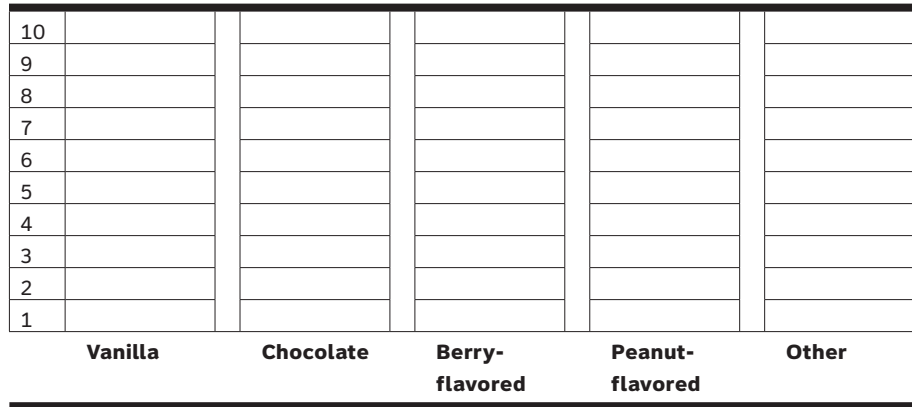
Next, describe how to make tally marks on the chart. Show the students how to indicate a group of five. For example, if there are 10 students whose favorite ice cream flavor is chocolate, the tally marks in the chocolate column should look like this:



One by one, students will record their favorite flavors on the tally chart by placing tally marks in the columns for their favorite flavors. Next, class volunteers will interpret the marks by reading aloud the totals for each ice cream flavor. Next, explain to students that they will create a bar graph using the information in the tally chart. Draw the grid shown on page 48 on the board or on chart paper (ahead of time) to create the bar graph. List the favorite flavors (determined by the tally chart) on the horizontal axis (bottom row) and the range of the number of students who preferred the different flavors on the vertical axis (left column).

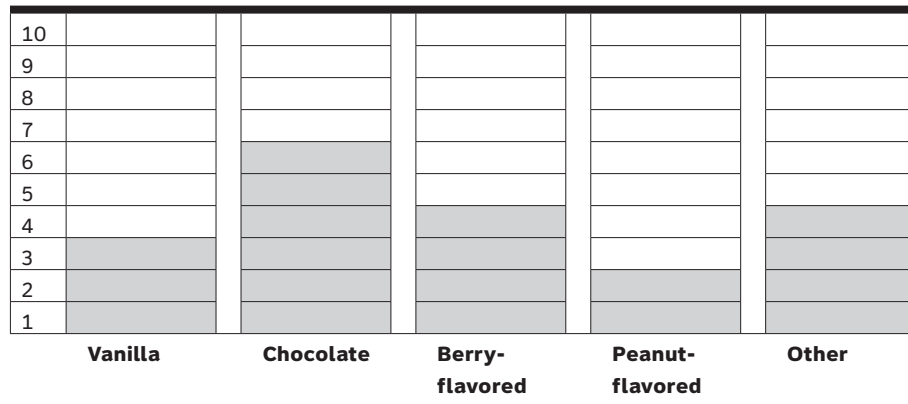


**FAVORITE ICE CREAM FLAVORS**



Starting with the bottom box and working up, each student will go to the board and color in one box in the column that represents his/her favorite flavor. (Pre-cut squares/rectangles can be provided for the students to tape onto the graph instead of coloring in boxes. Assist students with choosing the correct box so that the bars grow upward from the bottom.) The completed bar graph will be similar to the following:

**FAVORITE ICE CREAM FLAVORS**



Conclude this activity by having class volunteers interpret the information shown on the bar graph. For example, ask questions such as:

- Which ice cream flavor is preferred by the greatest number of students? Which flavor is preferred by the fewest students? How did you use the graph to find this information?
- How many students' favorite flavor is \_\_\_\_\_?





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- *Were any flavors chosen by the same number of students? Which ones?*
  - *How many more students preferred \_\_\_\_\_ than \_\_\_\_\_?  
How did you get this information (adding, subtracting, multiplying)?*
  - *What does the information from this graph tell us about the students in our class?*

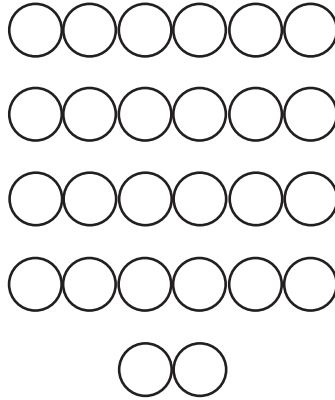
Extend the activity by having groups of students make another tally chart and/or graph for different data. (Students can create a bar graph or picture graph, depending on their understanding of the differences between the types of graphs.) Then, allow each group to present their tally charts and/or graphs to the class.



# Practice Quiz



1 Look at these shapes.



How many shapes are there in all?

- A 22
- B 24
- C 26

2 Which group of coins is equal to 95¢?



3 Jasmine has 2 cats. Each cat has 4 legs.

Which number sentence shows how to find the total number of legs of both cats?

- A  $2 + 4 = 6$
- B  $4 + 4 = 8$
- C  $8 + 4 = 12$

- 4 **Lucas has a notebook with 25 pages in it. He writes on 14 of the pages.**

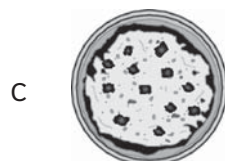
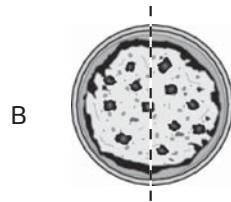
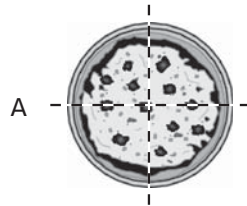


**Which of these shows how many blank pages are in his notebook?**

- A  $25 + 14$
- B  $25 - 14$
- C  $25 = 14$

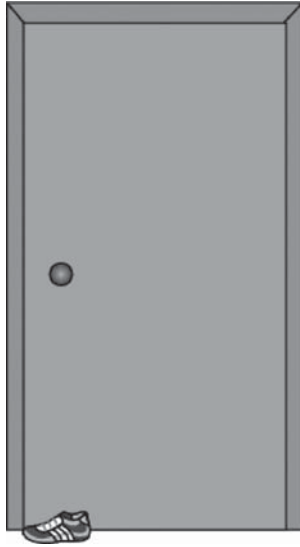
- 5 **Rachel and Sam want to share a pizza equally. They cut the pizza in half.**

**Which picture shows how they shared the pizza?**





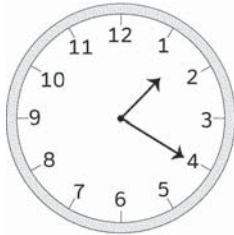
- 6 **Brian measures the width of this door using his shoe.**



**About how many shoes long is the width of the door?**

- A 1
- B 4
- C 8

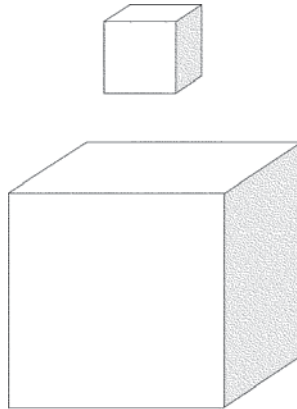
- 7 **Look at the clock.**



**Which time is nearest to the time shown on this clock?**

- A 1:00
- B 1:30
- C 2:30

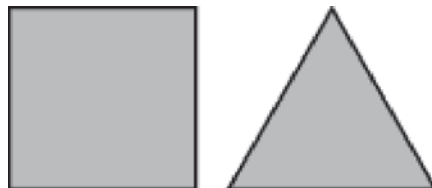
8 **Look at the cubes.**



**What is the location of the small cube in relation to the big cube?**

- A above the big cube
- B below the big cube
- C to the left of the big cube

9 **Look at the shapes.**



**How many MORE sides does a square have than a triangle?**

- A 1
- B 3
- C 4



10 **William has 10 red cars, 7 blue cars, and 3 silver cars.**

**Which chart shows the correct numbers of William's cars?**

**William's Cars**

A

<b>Color of Car</b>	<b>Number of Cars</b>
Red	
Blue	
Silver	

**William's Cars**

B

<b>Color of Car</b>	<b>Number of Cars</b>
Red	
Blue	
Silver	

**William's Cars**

C

<b>Color of Car</b>	<b>Number of Cars</b>
Red	
Blue	
Silver	

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## Solutions

Number	Correct Answer	Explanation
1	<b>C</b>	<p><i>Correctly count and represent the number of objects in a set using numerals. (M1N1b)</i></p> <p>The correct answer is <b>Choice (C) 26</b>. There are 4 rows of 6 shapes and 1 row with 2 shapes for a total of 26 shapes. Choice (A) is incorrect because each of the top 4 rows has 6 shapes rather than 5 shapes. Choice (B) counts the 24 shapes in the main block only and ignores the 2 shapes in the last row.</p>
2	<b>A</b>	<p><i>Exchange equivalent quantities of coins by making fair trades involving combinations of pennies, nickels, dimes, and quarters up to one dollar, count out a combination needed to purchase items up to one dollar. (M1N1e)</i></p> <p>The correct answer is <b>Choice (A)</b>. This group of coins contains two quarters worth 25 cents each, four dimes worth 10 cents each, and one nickel worth 5 cents (<math>25\text{¢} + 25\text{¢} + 10\text{¢} + 10\text{¢} + 10\text{¢} + 10\text{¢} + 5\text{¢} = 95\text{¢}</math>). Choice (B) is incorrect because two quarters and four dimes total 90¢. Choice (C) is incorrect because one quarter and three dimes total 55¢.</p>
3	<b>B</b>	<p><i>Understand addition and subtraction number combinations using strategies such as counting on, counting back, doubles, and making tens. (M1N3e)</i></p> <p>The correct answer is <b>Choice (B) <math>4 + 4 = 8</math></b>. One cat has 4 legs, so 2 cats would have <math>4 + 4</math>, or 8, legs. The number sentence <math>4 + 4 = 8</math> represents the total number of legs of both cats. Choices (A) and (C) are incorrect because each of the two cats has 4 legs, so the correct number sentence must show the addition of <math>4 + 4</math>.</p>



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Number	Correct Answer	Explanation
4	<b>B</b>	<p><i>Solve and create word problems involving addition and subtraction to 100 without regrouping. Use words, pictures, and concrete models to interpret story problems and reflect the combining sets as addition and taking away or comparing sets as subtraction. (M1N3h)</i></p> <p>The correct answer is <b>Choice (B) 25 – 14</b>. The diagram shows the total number of pages in Lucas' notebook (25) and the number that he has written on (14). The number of blank pages is found by subtracting 14 from 25, which is represented by the number sentence <math>25 - 14</math>. Choice (A) is incorrect because <math>25 + 14</math> is a number sentence representing the total number of pages added to the number of filled pages. Choice (C) is incorrect because <math>25 = 14</math> is an invalid number sentence that does not describe the number of blank pages.</p>
5	<b>B</b>	<p><i>Identify, label, and relate fractions (halves, fourths) as equal parts of a collection of objects or a whole using pictures and models. (M1N4c)</i></p> <p>The correct answer is <b>Choice (B)</b>. This image shows a pizza divided into two equal fractions with one half of the pizza for each person. Choice (A) is incorrect because two dividing lines divide/cut a circle into four equal fractions (fourths). Choice (C) is incorrect because it is a whole pizza that has not been cut.</p>
6	<b>B</b>	<p><i>Estimate and measure using a nonstandard unit that is smaller than the object to be measured. (M1M1b)</i></p> <p>The correct answer is <b>Choice (B) 4</b>. Students can use a nonstandard measure that is approximately the same length as the shoe to estimate. Repeating that length four times is an estimate of the width of the door. Choice (A) is incorrect because one shoe is already shown and does not measure the entire width of the door. Choice (C) is incorrect because eight shoe lengths is much wider than the width of the door. However, it is an estimate of the height of the door.</p>

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Number	Correct Answer	Explanation
7	<b>B</b>	<p><i>Tell time to the nearest hour and half-hour, and understand the movement of the minute hand and how it relates to the hour hand. (M1M2a)</i></p> <p>The correct answer is <b>Choice (B) 1:30</b>. The clock shows 1:20, which is closer to 1:30 than to 1:00 or 2:30. Choice (A) 1:00 is not closer to 1:20 than to 1:30. Choice (C) is incorrect because at 2:30, the hour hand points half-way between the 2 and the 3, rather than between the 1 and the 2.</p>
8	<b>A</b>	<p><i>Arrange and describe objects in space by proximity, position, and direction (near, far, below, above, up, down, behind, in front of, next to, and left or right of). (M1G3)</i></p> <p>The correct answer is <b>Choice (A) above the big cube</b>. The small cube is situated higher than, or above, the big cube. Choices (B) and (C) are incorrect because the small cube is not situated either under or to one side of the big cube.</p>
9	<b>A</b>	<p><i>Students will compare, contrast, and/or classify geometric shapes by the common attributes of position, shape, size, number of sides, and number of corners. (M1G2)</i></p> <p>The correct answer is <b>Choice (A) 1</b>. Count the number of sides each shape has. The square has 4 sides and the triangle has 3 sides. Since 4 is one more than 3, the square has 1 more side than the triangle. Choice (B) is incorrect because the triangle has 3 sides, but that doesn't represent how many <i>more</i> sides the square has than the triangle. Choice (C) is incorrect because the square has 4 sides, but that doesn't represent how many <i>more</i> sides the square has than the triangle.</p>
10	<b>B</b>	<p><i>Interpret tally marks, picture graphs, and bar graphs. (M1D1a)</i></p> <p>The correct answer is <b>Choice (B)</b>. Four vertical tally marks crossed by a diagonal tally mark represents 5 cars. Therefore, the tally marks on the chart show that William has 10 red cars, 7 blue cars, and 3 silver cars. Choice (A) is incorrect because the chart shows 8 red cars, 6 blue cars, and 3 silver cars. Choice (C) is incorrect because there are only <i>three</i> vertical tally marks crossed by a fourth diagonal tally mark in the first two groups.</p>

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