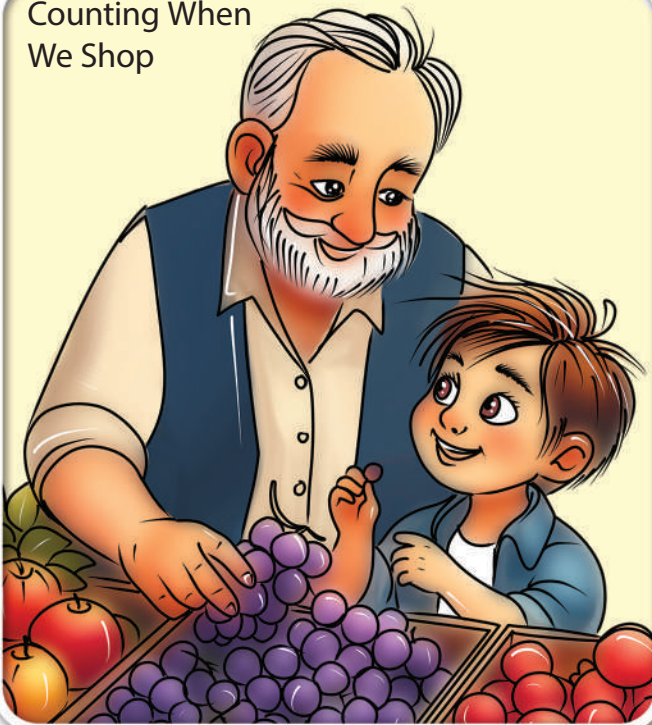


Connecting Math to Our World: Math at Play

Teacher Support

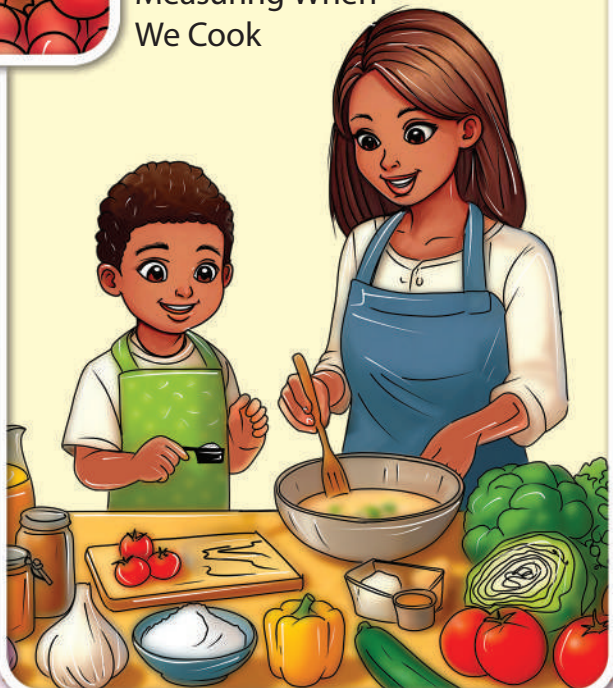
Counting When
We Shop



Using Time To Plan



Measuring When
We Cook



Adding When
We Play



Math at Play

Teacher Support



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Math at Play Teacher Support

ABOUT THIS SERIES

Everyone uses math every day, but many people don't realize it! The Core Knowledge Connecting Math to Our World series underscores the ubiquity of math and encourages learners to "find the math" in familiar situations. The instructional focus for this series is not on *practicing* math skills but on *where*, *when*, and *why* we use math.

Through both fiction and nonfiction readings, this series seeks to help learners see when and how math skills can be useful and increase their overall understanding of and interest in math. Students do not need to have achieved proficiency in specific skills to understand the importance of math. Mathematical thinking is a part of countless aspects of day-to-day life. Math appears throughout nature. Individuals, groups, and governments use math to plan and make decisions. Math is also embedded throughout creative endeavors—in poetry, music, visual art, and design. Math is integral to all sorts of discoveries. Math supports our understanding and appreciation of culture and helps us function as active and engaged citizens.

Each chapter tells a story or explores a situation in which a mathematical idea plays a role. It's important to note that these chapters are *not* intended to be a complete lesson. Instead, they can serve as a flexible resource throughout the school day and beyond.

- Because the chapters do not need to be read in order, you may wish to use a chapter to foster interest in a math idea before or after a skill is taught in your core math curriculum. Chapters are adaptable enough to be used in any situation, including enrichment or remediation, depending on the teacher's approach.
- These chapters can be used as a cross-curricular extension to support reading skills such as following lines of text as it is read aloud or making inferences about content from the engaging images on the pages.
- This series is recommended to parents looking to enhance engagement with both reading and math at home.

No matter when or how you choose to use the readings or the order in which the chapters are read, introduce learners to the Student Reader with a reading of the invitation that appears on page 1.

MAKING THE MOST OF THE STUDENT READER

Preparing to Use a Chapter.

1. **Read the chapter's Teacher Support.** Reviewing the Teacher Support will alert you to the math connections and applications being made in the chapter, allowing you to better point them out when sharing the chapter with the class.

2. **Preview the chapter.** Identify where and how math is being used in the selection.
3. **Identify vocabulary for which students may need support.** This may include reviewing math vocabulary or providing context for nonmath vocabulary.
4. **Prepare the Student Readers.** The Grade K Student Readers are spiral bound to allow the book to lie flat when students are following along. Page numbers in the Student Reader may exceed the numbers to which students can count. You may wish to open all books to the first page of a selected chapter or bookmark the selected chapter prior to distributing books to students. A bookmark template is provided at the end of these Teacher Support pages for your use. Students can also locate the chapter using the unique, color-coded border positioned at the top, bottom, or outer side edges of the pages.

Using Different Reading Routines

While some students may be able to read words on a given page, as a rule students in lower grade levels should not be expected or asked to read the text aloud. The text in the Student Reader is designed to be read by adults to students. Various reading routines can enhance the use of the Student Reader with students:

- Read aloud, allowing students to concentrate on listening and looking at the images.
- Model finger-point reading, from left to right, as you read the text.
- Talk about letters and sounds as you encounter them.
- Ask questions about the content as you read, drawing students into the text.

Activity Pacing

Depending on the depth of your question-and-answer facilitation with students during and after reading, any given chapter could take as little as 10 minutes or 30 minutes or more.

MAKING THE MOST OF THE TEACHER SUPPORT

For each chapter, the Teacher Support pages provide several sections:

1. **Prepare to read** includes a chapter summary, the math connection, and the chapter identifier.
2. **Focus student attention** provides a strategy for setting the scene with students.
3. **Read together** includes reading prompts and strategies for helping students identify the math in the selection.
4. **Emphasize the Main Idea** focuses on how the selection connects everyday life to math.

The following chart identifies which Core Knowledge Sequence Skills are covered in each chapter. You can use the chart to determine which chapters best match your curriculum throughout the year.

Chapter	Math Connection
1. The Baby Bird Mystery, page 5	Counting and Cardinality <ul style="list-style-type: none"> Count to tell the number of objects. Compare numbers.
2. Polka Dots!, page 6	Counting and Cardinality <ul style="list-style-type: none"> Know number names and the count sequence. Count to tell the number of objects.
3. The 10 Poem, page 7	Counting and Cardinality <ul style="list-style-type: none"> Know number names and the count sequence.
4. Counting Day, page 8	Counting and Cardinality <ul style="list-style-type: none"> Count to tell the number of objects. Compare numbers.
5. Numbers All Around Us, page 9	Counting and Cardinality <ul style="list-style-type: none"> Compare numbers. Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
6. On the Farm, Page 10	Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. Measurement and Data <ul style="list-style-type: none"> Describe measurable attributes.
7. Art Counts, page 11	Counting and Cardinality <ul style="list-style-type: none"> Count to tell the number of objects. Measurement and Data <ul style="list-style-type: none"> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.
8. What Is Enough?, page 12	Counting and Cardinality <ul style="list-style-type: none"> Compare numbers. Measurement and Data <ul style="list-style-type: none"> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.
9. Number Play, page 13	Counting and Cardinality <ul style="list-style-type: none"> Compare numbers. Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
10. Acrobat Rhymes, page 14	Counting and Cardinality <ul style="list-style-type: none"> Compare numbers.
11. Dino Math, page 15	Counting and Cardinality <ul style="list-style-type: none"> Count to tell the number of objects. Measurement and Data <ul style="list-style-type: none"> Describe and compare measurable attributes.

12. Hide-and-Seek to 10, page 16	Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
13. Math at Work!, page 17	Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
14. Pin Bowl!, page 18	Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. Number and Operations in Base Ten <ul style="list-style-type: none"> Work with numbers 11–19 to gain foundations for place value.
15. The Rabbits’ Garden, page 19	Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. Number and Operations in Base Ten <ul style="list-style-type: none"> Work with numbers 11–19 to gain foundations for place value.
16. Number the Sea, page 20	Operations and Algebraic Thinking <ul style="list-style-type: none"> Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. Number and Operations in Base Ten <ul style="list-style-type: none"> Work with numbers 11–19 to gain foundations for place value.
17. Little and Big, page 21	Measurement and Data <ul style="list-style-type: none"> Describe and compare measurable attributes.
18. Let’s Go Shopping, page 22	Measurement and Data <ul style="list-style-type: none"> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.
19. Shelly Beach, page 23	Measurement and Data <ul style="list-style-type: none"> Describe and compare measurable attributes.
20. Penny Packrat, page 24	Measurement and Data <ul style="list-style-type: none"> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.
21. The Art of Shapes, page 25	Geometry <ul style="list-style-type: none"> Identify and describe shapes.
22. Shape Land, page 26	Geometry <ul style="list-style-type: none"> Identify and describe shapes. Analyze, compare, create, and compose shapes.
23. What Am I?, page 27	Geometry <ul style="list-style-type: none"> Identify and describe shapes. Analyze, compare, create, and compose shapes.
24. Shapes in Our World, page 28	Geometry <ul style="list-style-type: none"> Identify and describe shapes. Analyze, compare, create, and compose shapes.

CHAPTER 1: THE BABY BIRD MYSTERY

1. Prepare to read.

Chapter Summary: In this mystery story, 4 friends see that a bird has laid 6 eggs in a nest. On subsequent days, the friends notice changes in the nest. First, the eggs hatch. But then the baby birds seem to go missing. The friends count the eggs and birds they see to make sense of what is happening. They eventually realize that the birds were learning to fly and leaving the nest.

Math Connection: Count to tell the number of objects. Subtract as birds leave the nest, and then add as the birds are found perching on a tree branch.

Chapter Identifier: This chapter begins on page 2 of the Student Reader. Point out that the borders on the pages of this chapter are all green. Chapter 1 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “The Baby Bird Mystery.” Explain that you are going to read a mystery story. Tell students to pay attention to what problem needs to be solved and any clues about what is happening. Ask them to look for how the friends solve the problem.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- On the first page of the story, friends notice 6 eggs. What else can you count on this page? (*Sample answers: You can see 4 friends and 1 bus.*)
- Does the number of eggs in the story change or stay the same? (*It changes.*)
- Does the number of birds in the story change or stay the same? (*It changes.*)
- Does the number of friends in the story change or stay the same? (*It stays the same.*)

4. Emphasize the Main Idea.

Math helps us understand changes in our world.

- How did the friends in the story solve the mystery?

CHAPTER 2: POLKA DOTS!!

1. Prepare to read.

Chapter Summary: This chapter is a poem with images that have different numbers of polka dots.

Math Connection: People can often tell how many without counting. We can also count to tell how many.

Chapter Identifier: This chapter begins on page 8 of the Student Reader. Point out that the outside edges of the pages have a light blue bar. Chapter 2 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Polka Dots!” Explain to students that you are going to read a poem. In this poem, each page has an image with dots. Ask students not to count at first but to simply guess the number of dots they see when they glance at each page. Then, they can count the dots to see if they are correct. Explain to students that with practice, they can know how many dots there are without counting. Or they can take the time and count the dots.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Before reading each page: Quickly look at the picture. Without counting, how many dots do you notice? (*Answers will vary by page.*)
- After reading each page: How many dots did you count? (*Answers will vary by page.*)
- On page 9: Where might we find more dots? How many dots would there be? (*I would look on the other shoe. I would expect two dots because it would follow the shoe pattern I can see.*)
- On page 10: imagine Charlie is trying to find his backpack but there are other backpacks just like his. Do you think he needs to count or just notice the number of dots? (*He could probably just notice because he recognizes the pattern and number of dots.*)
- On page 12: When you can only see 1 side of a ladybug and you see dots on it, what do you know about the other side? (*You expect that it will be the same pattern with the same number of dots.*)

4. Emphasize the Main Idea.

You can notice and count how many there are.

- Why can it sometimes be helpful to notice without counting? (*It is fast; it means we recognize how many.*)
- Why is it sometimes important to know how many using counting? (*It's more exact.*)

CHAPTER 3: THE 10 POEM

1. Prepare to read.

Chapter Summary: This poem about numbers takes students from number 1 to number 10. Images within the poem help students relate the written and verbal number name to things they may have experienced in their day-to-day lives. This poem helps students remember the meaning of the number name.

Math Connection: Know number names and the counting sequence.

Chapter Identifier: This chapter begins on page 14 of the Student Reader. Point out that the pages of this chapter have a red bar along the outside edge. Chapter 3 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “The 10 Poem.” Tell students that you are going to read a poem about numbers. Ask students to pay special attention as you read each page to the name of the number and something in the picture that matches the value of that number. Tell students that they will practice remembering the number names and their values by finding these matches.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with asking questions such as these after each page:

- What numbers are this page about? (*Answer should match the number mentioned in the text.*)
- The sentences have a number word that matches with things in the picture. What things do you see that match? (*Sample answer: I heard and saw the 3, and that matches with the picture of the 3 lights.*)
- Can you think of something else that goes with these numbers? (*Answers will vary. Sample answer: 2 matches with 2 eyes.*)
- How do you know how many there are if you don’t see the written number? (*I count.*)

4. Emphasize the Main Idea.

The more we see and say numbers, the better we remember them.

- Where do you see numbers? How do you know what that number means? (*Answers may include that they practice matching number words to how many and using numbers everyday.*)
- What are some things we can do to help us remember something, like how to spell your name? (*I write it down a lot or say it a lot.*)

CHAPTER 4: COUNTING DAY

1. Prepare to read.

Chapter Summary: Join Felix and Auntie Ava on their counting day through their town. As they stop at each place on their route, Felix and Auntie Ava think about the different things they can count and how counting helps them decide things. Students can join in on noticing things that can be counted and count along with them.

Math Connection: Count to tell the number of objects and compare numbers.

Chapter Identifier: This chapter begins on page 20 of the Student Reader. Point out that the pages of this chapter have a dark blue bar along the outside edge. Chapter 4 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Counting Day.” Tell students that you are going to read a story about Felix and Auntie Ava and how they use the math skill of counting as they travel around their town. Remind them to pay special attention to the different things that can be counted and to count along with the characters.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with asking questions such as these after each page:

- Why did Felix and Auntie Ava want to count these objects? (*Answers vary based on page.*)
- What might happen if they did not take time to count first (for example, if they didn’t count seats on the bus)? (*Answers vary based on page but should describe how they might not have the space they need.*)
- When Felix is in the store, why does he add 2 more apples to the basket? (*He knows he needs 6. He didn’t count at first, but when he did, he realized he needed 2 more.*)
- What other things can we count on this page? Why would we want to count them? (*Answers vary based on page.*)
- Why might it have been important for Felix to count the money Auntie Ava gave him before choosing his flowers? (*You first need to know how much money you have to know how much you can buy.*)
- On each of these pages, Felix and Auntie Ava needed to know how much or how many. How did they find out? (*They counted!*)

4. Emphasize the Main Idea.

We often need to know how much or how many.

- How does counting help you set the dinner table? (*Answers may include ideas about matching the number of plates to the number of people eating.*)
- What are some other things that are important to count? (*Answers may include counting chairs, books, cookies, pieces of paper, and people on a team.*)
- Invite students to describe something they do outside of class, such as soccer practice or playing a board game. Ask them to think about how knowing how many helps them do this activity.

CHAPTER 5: NUMBERS ALL AROUND US

1. Prepare to read.

Chapter Summary: Six realistic situations show different ways that characters use math to help them. The characters count, subtract, measure, compare, and tell time to help them in situations that students are likely to encounter in their everyday lives.

Math Connection: Being able to recognize how different math skills such as adding, subtracting, telling time, and measuring can help us throughout the day.

Chapter Identifier: This chapter begins on page 26 of the Student Reader. Point out that the pages of this chapter have a yellow bar along the outside edge. Chapter 5 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Numbers All Around Us.” Tell students that you are going to read about different ways that math can be used during any day. Remind them to pay special attention to how math is helping the characters to explore, ask questions, work, play, and more.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with asking questions such as these after each page:

- How is math being used on this page? (*Answers should describe the use of math, such as measuring.*)
- What does math help the characters do? (*Answers should identify how math is helpful to the characters; for example, Ayesha counts to make sure they have enough soup cans.*)
- What could happen if they didn’t use math? (*They would only be guessing and could be wrong.*)

4. Emphasize the Main Idea.

Math helps us answer questions, explore, work, play, and more.

- Invite students to share times when they were in similar situations and/or had to use a particular math skill to help them.
- Why is it important that we know many different math skills? (*It is important because different situations and problems need different types of math to do something or answer a question.*)

CHAPTER 6: ON THE FARM

1. Prepare to read.

Chapter Summary: This chapter is a story about a farmer and the many different situations math is used around the farm. From morning until night, the farmer uses math to help her solve everyday problems and take care of the animals and the farm.

Math Connection: Being able to recognize how different math skills such as adding, subtracting, telling time, and measuring can help farmers throughout their day.

Chapter Identifier: This chapter begins on page 32 of the Student Reader. Point out that the pages of this chapter have a purple bar along the outside edge. Chapter 6 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “On the Farm.” Tell students that you are going to read ways that a farmer uses math to complete chores on the farm for 1 day. Ask them to look for the different chores that the farmer does. Remind students to pay special attention to how the farmer uses math to complete each chore.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with asking questions such as these after each page:

- What chore is the farmer doing? (*Answers should identify the chore, for example, feeding animals.*)
- How is math being used to help do the chore on this page? (*Answers should identify the math skill being used, for example, measurement or counting.*)
- Why does the farmer use [math skill] to do the chore? (*Sample answer: She measures the milk to make sure the goat gets enough.*)
- What else might the farmer use math for on this page? Why? (*Sample answer: The farmer could measure feed for the other animals to make sure they get enough.*)
- What could happen if the farmer didn’t measure wood for the fence and just guessed at the size? (*It might not fit.*)

4. Emphasize the Main Idea.

Math helps farmers with everyday problems.

- Invite students to brainstorm ways that farmers might use math skills such as addition, subtraction, comparing, or telling time to do chores.

CHAPTER 7: ART COUNTS

1. Prepare to read.

Chapter Summary: Artists make choices while creating. From how many colors they will use to how many trees they will paint, math is involved in many of these choices. In this chapter, students explore a few famous paintings and think about how the artist made choices using math to convey ideas including emotion.

Math Connection: We find math in art.

Chapter Identifier: This chapter begins on page 38 of the Student Reader. Point out that the pages of this chapter have a dark purple bar along the outside edge. Chapter 7 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Art Counts.” Tell students that you are going to read about some famous paintings. Explain that artists make choices when painting a picture. They may use math to help make these choices, for example how many colors they will use, how many objects they will paint, and the size of the objects they paint. Encourage them to look closely at the paintings as you read and think about how the artist used math to help show their ideas. Ask them to think of art they have made and if they used math.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Why do you think the artists chose to paint a bunch or many flowers instead of just 1? (*Students might suggest that artists think more flowers are prettier.*)
- Compare Monet’s haystack paintings. How did Monet paint them differently to show distance and time of day? (*He made some haystacks look closer, and he chose colors to look like the sunset.*)
- How did Rembrandt and Edvard Munch use math in their paintings? (*Rembrandt painted different numbers of people, and Munch painted using many colors.*)

4. Emphasize the Main Idea.

Artists make choices about numbers and amounts of things.

- How does art use math? (*Artists make choices about different numbers of things to paint, distance, size, or numbers of colors to use.*)

CHAPTER 8: WHAT IS ENOUGH?

1. Prepare to read.

Chapter Summary: Four friends spend time together doing different things. In each scenario, they want to make sure there are enough items for each person so they can be fair. To do so, they need to use math to count people and items and compare these numbers to make sure they have enough.

Math Connection: We need to compare amounts to make sure that we share things evenly.

Chapter Identifier: This chapter begins on page 44 of the Student Reader. Point out that the pages of this chapter have an orange bar along the outside edge. Chapter 8 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “What Is Enough?” Tell students that you are going to read a story in which 4 friends need to compare numbers. Remind students to pay special attention to how many people there are and how many items there are. Tell students they will compare those numbers. If they are different, then 1 number will be bigger and 1 number will be smaller. In this story, we will make sure the characters have enough by comparing numbers.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with asking questions such as these after each page:

- What is being compared on this page? (*Sample answer: The number of pencils and the number of people are being compared.*)
- Are there enough [objects]? How do you know? (*Sample answer: No. I counted 3 cupcakes, but there are 4 friends.*)
- On page 49: How many students do you think are in the class? How do you know? (*There are 8. The story says the students counted to have the right amount, and there are 8 chairs in the picture.*)

4. Emphasize the Main Idea.

Math can help us know whether we have enough of something.

- Why is it important to know if there are enough [objects]? (*It’s important because if you don’t, it won’t be fair or people might not have what they need.*)
- How do you know what is enough? (*Enough is when there is 1 for everyone.*)
- How do you use math to know what is enough? (*You count the people first and then count the items. Then you compare the numbers to make sure there is 1 for everyone.*)
- What might happen if they didn’t count and compare in this situation? (*Someone might not get an item, and this wouldn’t be fair.*)
- Invite students to share times when they have had to decide if they had enough of something. Encourage them to share how they used math to decide.

CHAPTER 9: NUMBER PLAY

1. Prepare to read.

Chapter Summary: Four friends gather together and take turns telling stories, each of which demonstrates how we use numbers to describe things that happen in our everyday lives. Each friend tells a story about when something interesting happened, like missing muffins, and how they used math to help solve the problem.

Math Connection: Math can help us solve everyday problems.

Chapter Identifier: This chapter begins on page 50 of the Student Reader. Point out that the pages of this chapter have a pink bar along the bottom edge. Chapter 9 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Number Play.” Tell students that you are going to read 4 stories from 4 friends about different puzzles or mysteries that they had. Remind students to pay special attention to how each friend discovered or solved the problem using math. Follow along as they describe the mystery. How can we use math to help them solve the problem?

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with asking questions such as these after each page:

- How did the friend use math to know that there was something wrong? (*They counted to know what to expect and counted again to know that the numbers were not equal.*)
- How should the friend use math to solve their problem? (*Answers will vary based on story.*)
- Would the friends be able to tell their stories without using numbers or math? (*No, they needed numbers and math to describe the problems and solutions.*)
- How did the story help you know which type of math skill to use? (*Answers will vary but should demonstrate how the story helped them decide which skill to use.*)
- On page 51: How many bags did Gracie make? How do you know? (*She made 5 at first, then another 5. This means she made 10 bags total.*)

4. Emphasize the Main Idea.

Stories can help us understand math ideas.

- Invite students to describe times when they were in similar situations and how they used math to identify and solve these problems.
- Challenge students to come up with a puzzle or mystery story that illustrates a math idea, such as counting, comparing, subtraction, or addition. Ask students to describe how they would solve the problem.

CHAPTER 10: ACROBAT RHYMES

1. Prepare to read.

Chapter Summary: Follow along in this poem that traces acrobats as they perform their impressive tricks! Watch as they make math-based decisions that can help or hinder them as they perform.

Math Connection: Acrobats use math to make sure that their tricks work.

Chapter Identifier: This chapter begins on page 56 of the Student Reader. Point out that the pages of this chapter have a light blue bar along the bottom edge. Chapter 10 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Acrobat Rhymes.” Tell students that you are going to read a poem about acrobats. Remind students to pay special attention to how acrobats use math to help them perform tricks successfully.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement by asking questions such as these after each page

- What is being compared on this page? (*Sample answer: The number of acrobats on each side of the page are being compared.*)
- How many acrobats or objects do you see? What would happen if there were 1 more? (*Answers vary based on the page.*)
- What would happen if there were 1 less? (*Answers vary based on the page.*)
- How can changing the numbers of people or objects make these tricks easier or harder? (*Answer should include understanding that when there are more people or things, tricks tend to be harder.*)
- On page 58: The acrobats make a pyramid. Why do they have to make sure they have more along the bottom row and less the higher up they go? (*More people on the bottom help support the people on top.*)
- On page 59: Which stack would you want to be on top of? Why? (*Sample answer: I would want to be on top of the shorter stack because I would have more support under me to keep me balanced.*)

4. Emphasize the Main Idea.

Numbers are useful in many types of performances.

- What might happen if the acrobats did not think about numbers when planning their tricks? (*They may have problems with their tricks.*)
- What other performances use numbers? (*Sample answer: dancing groups, singing groups*)

CHAPTER 11: DINO MATH

1. Prepare to read.

Chapter Summary: Take a tour through a dinosaur museum, and explore the different ways that math is used to teach about prehistoric animals. View artifacts such as dinosaur eggs, footprints, bones, and teeth, and consider how math helps paleontologists teach others about dinosaurs.

Math Connection: We can learn about the past by counting, comparing numbers, measuring, and answering questions like how many.

Chapter Identifier: This chapter begins on page 62 of the Student Reader. Point out that the pages of this chapter have a red bar along the bottom edge. Chapter 11 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Dino Math.” Tell students that you are going to read about a trip to a dinosaur museum. Remind students to pay special attention to the numbers of fossils that paleontologists are showing and why the numbers of fossils might be important. Ask them to look for other ways that math is used in the dinosaur museum.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- On page 63: The dinosaur nest has more cracked than uncracked eggs. What questions might you ask after seeing this? (*Sample answers: Why didn't the other eggs crack? Did all dinosaur nests have more eggs hatch than not?*)
- On page 64: If you were making an exhibit of fossilized human and bird footprints, what kinds of math would you use? (*I would show the footprints next to each other so they could be compared. I could count the toes and feet of each to show the differences. I could compare the size of the footprints.*)
- On page 65: How does the paleontologist use math to help her in her work? How many bones is she missing? (*She knows she should have 9 bones, but she only has 6. She does subtraction to know she is missing 3 bones.*)
- Why might it be helpful to compare the size of a banana to the size of a tooth? (*It would help you picture how big the tooth is.*)
- On page 67: What other things can you use math to describe? (*Sample answers: Math is used to know the number of ribs, the number of legs, and the height of something.*)

4. Emphasize the Main Idea.

We can use math to learn about many things, even dinosaurs from long ago.

- Have students develop an exhibit for their favorite animal. Challenge them to think about the different ways they can use math (counting, comparing, adding, or subtracting) to teach about the animal.

CHAPTER 12: HIDE-AND-SEEK TO 10

1. Prepare to read.

Chapter Summary: In this chapter, students have fun looking through hidden-picture illustrations. In each picture, there are 10 of something, some in plain sight and some hidden. Students are challenged to keep track of the items they find and talk about how many more they need to find all 10.

Math Connection: Count to tell the number of objects and understand that addition is putting together amounts.

Chapter Identifier: This chapter begins on page 68 of the Student Reader. Point out that the pages of this chapter have a dark blue bar along the bottom edge. Chapter 12 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: "Hide-and-Seek to 10." Tell students that they are going to play a fun game where they need to find 10 hidden objects. Remind students to pay special attention to how many objects they have found as they find them and how many more they need to find to make 10.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- You have found [number of] items. How can you find out how many you still need to find? (*I can count how many more up to 10 or use subtraction.*)
- How did you use math to keep track of how many you had? (*I counted.*)
- When you are trying to figure out how many more you need, what is the first piece of information you need to know? (*I need to know how many I already have.*)
- Would you be able to keep track or know how many items you still need to find without doing math? (*No, I need to do math like counting and subtraction to know.*)

4. Emphasize the Main Idea.

Putting smaller numbers of things together makes bigger numbers of things.

- Ask students to share other instances in which they had to count up to something. For example, a student may have needed 6 dinner plates but only grabbed 2 at first. How did they figure out how many more they needed?

CHAPTER 13: MATH AT WORK!

1. Prepare to read.

Chapter Summary: Follow a farmer as she uses math to make decisions and choices about her work on the farm. She begins by using math to keep track of eggs so she knows how many to sell, and she thinks about how to get more chickens. Next, she uses math to count her cows and piglets and notices what might happen if she got more of the animals. The farmer uses math throughout her day in lots of different ways!

Math Connection: Farmers use addition and subtraction to make decisions every day.

Chapter Identifier: This chapter begins on page 74 of the Student Reader. Point out that the pages of this chapter have a yellow bar along the bottom edge. Chapter 13 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Math at Work!” Tell students that you are going to read about a farmer and her work on her farm. Remind them to pay special attention to how numbers and math are useful for the farmer. Ask students to think about the things farmers need to count and how farmers use addition or subtraction to help them make decisions.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Why does the farmer need to keep track of how many animals she has? (*Sample answer: The farmer needs to know how much feed to buy for the animals.*)
- How does the farmer use math to find out how many eggs she has to sell? (*She counts and does addition.*)
- On page 77: The farmer uses math to count her cows. What are some other ways that she could use math when working with her cows? (*Sample answers: She could measure the milk, count money, or count how much milk she has to sell.*)
- The farmer doesn’t always think about math, but she uses it. Can you think of any times you may not think about math when you are using it? (*Sample answer: I use math to make sure I find both my shoes.*)

4. Emphasize the Main Idea.

Farmers use math to keep track.

- What might happen if the farmer did not use math to keep track of how many animals she has? (*Sample answers: She might not know how much to feed them or how much space she needs for them.*)

CHAPTER 14: PIN BOWL!

1. Prepare to read.

Chapter Summary: Two friends, Liza and Ari, are bowling. Images and text help students follow along and keep track of how many pins have been knocked down—and who the winner is!

Math Connection: We use addition to find our score when we bowl.

Chapter Identifier: This chapter begins on page 80 of the Student Reader. Point out that the pages of this chapter have a purple bar along the bottom edge. Chapter 14 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Pin Bowl!” Tell students that you are going to read a story about 2 friends who are bowling. Remind them to pay special attention to the way that they use math to decide how they did and who won. If the word *pin* is unfamiliar for some students, clarify that it refers to the object that they are trying to knock over with their bowling balls. Ask students if they have ever been bowling before. Invite them to describe how to play and how to win.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Why is it important for Liza and Ari to know how many pins the game starts with? (*They need to know the possible total that they can knock down to get the best score possible.*)
- How do they figure out how many pins they knocked down? (*They can count the pins that are still up and subtract from the original number or count the number that are down.*)
- On page 84: Liza and Ari use math in a couple of different ways. Describe the ways they use math and why. (*They compare numbers to see who won. They add to see how many pins were knocked down all together.*)
- How are numbers and math useful in games and sports? (*We use them to keep track of scores, to know who won, to keep time, etc.*)
- On pages 84–85: How is the way Liza and Ari use math different from the other pages? (*They saw that they could arrange the pins differently to count the total.*)

4. Emphasize the Main Idea.

We use math in games and sports.

- What games have you played that use numbers and math? How did the games use them? (*Answers will vary.*)

CHAPTER 15: THE RABBITS' GARDEN

1. Prepare to read.

Chapter Summary: Young rabbits help their mother in their vegetable garden, using their knowledge of 10s and 1s to plant the seeds and seedlings. Watch the bunnies plant their veggies in rows, using different combinations of numbers.

Math Connection: Planting a garden uses math such as adding and putting things in rows.

Chapter Identifier: This chapter begins on page 86 of the Student Reader. Point out that the pages of this chapter have a dark purple bar along the bottom edge. Chapter 15 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: "The Rabbits' Garden." Tell students that you are going to read a story about a mother rabbit and her 3 bunnies planting a garden. Remind students to pay special attention to the number of seeds or plants each bunny is given.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Barley and Bella each get 15 carrot seeds. Can you think of any other ways that the bunnies can plant their seeds? (*Answers should be any combination that equals 15.*)
- Why might it be important to use math to plant the seeds in rows instead of just dropping the seeds randomly or in a pile? (*It is important so that you can keep track of the plants and know where they are.*)
- Mama Rabbit gave everyone the same number of radish seeds but wanted them to be planted in different ways. How are the bunnies using math to help them figure out how to arrange their seeds? (*They are considering rows with different numbers of plants in them.*)
- Mama Rabbit gave the bunnies all the same number of radish seeds. How would the story change if she gave them each a different number of seeds or gave them fewer or more seeds? Would the math skill they used change? (*No, the math skill wouldn't change, but the numbers would change because they would have different combinations of groups.*)

4. Emphasize the Main Idea.

Putting amounts of things together in a story uses the same thinking as putting numbers together in math.

- Invite students to come up with a story about a time when a certain number of things were handed out and the items had to be distributed in different ways, similar to the story they just read. Ask students to describe the math that was involved in their story, emphasizing how putting things together in their story used the same thinking as putting numbers together in math.

CHAPTER 16: NUMBER THE SEA

1. Prepare to read.

Chapter Summary: A parade is always fun, but a sea animal parade is filled with a distinctive amount of fun! Students will join Tony Turtle and his papa as they watch the sea animal parade. Seahorses, stingrays, dolphins, blue marlins, parrotfish, and squids all swim by, giving us a chance to count their numbers and learn a few interesting facts.

Math Connection: It is easier to add 2 numbers together than to count.

Chapter Identifier: This chapter begins on page 92 of the Student Reader. Point out that the pages of this chapter have an orange bar along the bottom edge. Chapter 16 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Number the Sea.” Tell students that you are going to read about a parade in the sea. Remind students to pay special attention to the numbers of things that they see. Encourage students to notice the 2 groups on each page and how the number 10 helps know how many animals there are.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- What kinds of things did Papa and Tony Turtle talk about and notice on this page? (*They noticed and talked about the number of [animal] and interesting facts about them.*)
- Would you rather count every animal on the page or add the groups? Why? (*It is easier and faster to add the 2 groups together.*)
- Why do you think Tony and Papa always start by noticing the group of 10 first? (*Once you see the group of 10, you can add the other number to it quickly.*)
- Would it be easier or harder if they started by noticing and counting the group with the smaller number first? (*It might be harder.*)

4. Emphasize the Main Idea.

We can notice numbers of things in nature.

- Think about the statement “We can notice numbers of things in nature.” Look at the pages of this chapter. What are some numbers of things you see? (*Sample answers: I see 4 rocks. I see 2 turtles. I see 1 crab with 6 legs and 2 claws.*)
- Show students pictures of natural landscapes with both living and nonliving things. Challenge them to describe the things they see using numbers.

CHAPTER 17: LITTLE AND BIG

1. Prepare to read.

Chapter Summary: In this chapter, students are asked to compare animals to each other. Some are small, some are big, some are longer, and some are heavier. As students read, they compare the characteristics of different animals to think about how math terms (*taller, shorter, longer, lighter*, etc.) can be used to describe the world.

Math Connection: We can describe and compare measurable attributes to see differences.

Chapter Identifier: This chapter begins on page 98 of the Student Reader. Point out that the pages of this chapter have a pink bar along the top edge. Chapter 17 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Little and Big.” Tell students that you are going to read about different animals and how they are different from each other. Remind them to pay special attention to how the animals are different. Ask students to consider why noticing these differences in animals is helpful.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Which would need to be the biggest when you compare the barn to the cow and mouse? (*The barn needs to be bigger than the cow and the mouse.*)
- Which animal is the lightest/heaviest/tallest/shortest/longest? (*Answer varies based on the page.*)
- Which do you think is easier for a hawk to pick up—a snake or a skunk? Why? (*Accept reasonable answers. Sample answer: I think the snake is easier to pick up because it is lighter.*)
- The duck is bigger and heavier than the frog. What can it do that the frog can’t? (*A duck can fly.*)
- Look at the animals on this page again. What are some other ways you can use numbers to compare them? (*Depending on the page, you can compare the sizes of beaks and the numbers of eyes, legs, wings.*)
- How is noticing the differences and comparing the animals on this page helpful? (*Example answers: You need to know how much to feed them, which animal is easier to find, etc.*)

4. Emphasize the Main Idea.

We use numbers to measure and compare things.

- What is the difference between comparing by looking at things and comparing by measuring things? (*When we measure things, we know more exactly about their differences or similarities.*)
- Invite students on a classroom or schoolyard scavenger hunt to find objects that they can compare using words like *heavier, lighter, taller, shorter, longer*, and so on.

CHAPTER 18: LET'S GO SHOPPING!

1. Prepare to read.

Chapter Summary: In this story, a boy and his grandpa go shopping for ingredients for their lunch. As they shop for items, they must make decisions about what to buy. To do so, they compare sizes and amounts of items and think about which is better for them.

Math Connection: When we go shopping, we count and compare items.

Chapter Identifier: This chapter begins on page 104 of the Student Reader. Point out that the pages of this chapter have a light blue bar along the top edge. Chapter 18 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: "Let's Go Shopping!" Tell students that you are going to read a story about a boy and his grandpa going to the grocery store for lunch items. Remind students to look for steps they use to make their decisions on what to buy.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- What feature did the boy and grandpa use to decide which loaf of bread they would buy? (*They chose the loaf of bread because of its shape.*)
- Why did they choose the bigger jar of peanut butter? (*The bigger jar has more peanut butter, and they need a lot of peanut butter because they both like it a lot.*)
- Why didn't they choose the bigger bunch of grapes? (*They didn't need that many.*)
- What does it mean that the milk jug is heavier than another? (*It means it probably has more milk in it.*)
- On each page, what things are they comparing? (*They compare sizes and amounts of the items. Then they compare that to what they need.*)

4. Emphasize the Main Idea.

We can compare sizes and amounts to decide what to buy.

- Have you gone to the grocery store? What kinds of decisions did you and your family have to make about buying things? (*Answers may include thinking about if you need something, price, how much of something you need, and if they have the brand you like.*)
- Have students write a menu for a meal that they enjoy. For each item, they should show options (*bigger, smaller, heavier, lighter*) that a person could possibly choose from. Encourage them to share their menus with classmates, and have classmates make decisions about what they would want.

CHAPTER 19: SHELLY BEACH

1. Prepare to read.

Chapter Summary: In this chapter, 4 friends collect seashells during a visit to the beach. Each friend sorts the shells that they have collected, each in a different way based on size, weight, and shape.

Math Connection: We can organize and group items together that are similar by comparing their features.

Chapter Identifier: This chapter begins on page 110 of the Student Reader. Point out that the pages of this chapter have a red bar along the top edge. Chapter 19 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Shelly Beach.” Tell students that you are going to read a story about 4 friends who collect shells on a beach. Ask students to pay special attention to the different ways the friends sort the shells. As you read, have them look closely at the shells and think about how the friends are comparing their shells and using this information to sort them.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Before you sort, what do you have to do first? (*You decide how the things are the same and how they are different. You compare the objects.*)
- What differences did the friends on this page use to sort their shells? (*Answer varies based on page.*)
- Can you think of any other ways that the friends could sort their shells on each page? (*They could sort by texture, color, type of seashell, etc.*)

4. Emphasize the Main Idea.

Comparing and sorting helps us to group things.

- What things have you sorted? Why did you need to sort them? (*Responses will vary.*)
- Give objects to each student, and ask them to sort them. Then challenge a classmate to identify how the objects have been sorted.

CHAPTER 20: PENNY PACKRAT

1. Prepare to read.

Chapter Summary: Penny Packrat loves collecting items and sorting them into groups. In this chapter, Penny thinks about how she might organize her different collections of twigs, feathers, branches, and rocks. She thinks about how she can sort the items within these collections based on future needs or uses.

Math Connection: We can sort items by similar features as well as how we use them.

Chapter Identifier: This chapter begins on page 116 of the Student Reader. Point out that the pages of this chapter have a dark blue bar along the top edge. Chapter 20 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Penny Packrat.” Tell students that you are going to read a story about Penny Packrat. Pack rats are little rodents that love to collect things. Tell them they will hear about the items Penny collects. Remind students to pay special attention to the different ways that Penny sorts her items.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- Why does Penny choose to sort her twigs based on length? *(She sorts the twigs by length because short and long twigs have different uses.)*
- Penny thinks about the color of her feathers and how many she has of each. How could this help her make decisions about a hat she might make? *(Penny might want to make a hat of all 1 color or only use a certain number of feathers.)*
- Compare the things that Penny found on her walk. *(The button is the lightest, then the pine cone. The rock is the heaviest.)*
- What are the 2 steps Penny takes while sorting her items? *(She decides how to sort them, then she compares them based on this decision.)*
- Why was it helpful for Penny to sort the items in her collections? *(She sorts the items because it helps her organize and make decisions on how to use the items.)*
- Look around Penny’s kitchen. How could she sort the things there? *(She could sort based on color, use—like forks, spoons, knives—lids of things, size, shape, etc.)*

4. Emphasize the Main Idea.

Size and weight are 2 ways to sort and group objects.

- Ask students to draw another page for the story that shows Penny making new collections. Invite them to share their ideas and how Penny might sort her new items using size and weight.

CHAPTER 21: THE ART OF SHAPES

1. Prepare to read.

Chapter Summary: A trip to an art museum has students thinking about the different ways that artists use shapes. They examine examples of art, such as paintings and sculptures, and notice the different shapes that the artists chose to use—squares, triangles, rectangles, cones, spheres, cubes, circles, and ovals.

Math Connection: Artists can use shapes.

Chapter Identifier: This chapter begins on page 122 of the Student Reader. Point out that the pages of this chapter have a yellow bar along the top edge. Chapter 21 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “The Art of Shapes.” Tell students that they are going to read about how artists use shapes to create art. Remind them to pay special attention to the shapes that the artists use. As you read, ask students to find the shapes used in each image.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement by asking questions such as these after each page:

- Why do you think the artist chose this shape and not a different one? (*Sample answer: They chose this shape because it is the same shape as the object they are drawing.*)
- Some of the artworks are placed on stands. Why did the artist choose these stands? (*Sample answer: The artist might have chosen that stand because it provides support or helps draw the eye to the artwork.*)
- On page 126: Look at the picture of students about to create their own paintings. Examine the different tools and objects in the class. What shapes do you see in this image? (*In this image, the desk is a circle, the seats are cylinders, the papers are rectangles, etc.*)
- Which 1 of these pieces of art do you like the best? Why? (*Answers will vary.*)

4. Emphasize the Main Idea.

Artists use shapes in the works they create.

- Ask students to create art that uses shapes. Conduct a class gallery walk to view their work.

CHAPTER 22: SHAPE LAND

1. Prepare to read.

Chapter Summary: Trey is a triangle that has just moved to Shape Land and wants to make new friends. While at the park, Trey sees many different shapes and makes friends with Sal, a square. Trey and Sal play together with Sal's pet Cecil, a circle, who can do many things because of his special features.

Math Connection: To determine what shape something is, look at its features.

Chapter Identifier: This chapter begins on page 128 of the Student Reader. Point out that the pages of this chapter have a purple bar along the top edge. Chapter 22 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: "Shape Land." Tell students that you are going to read about Trey, a triangle, who has just moved to a new place called Shape Land where everyone is a different shape. Ask them to pay special attention to the different shapes and how they are similar and different. Have students look for the special features that each shape has.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement by asking questions such as these after each page:

- What shapes do you see on this page? (*Answer varies based on page.*)
- You saw that many of the shapes on this page are the same. How are they different from each other? (*Sample answer: There are 3 triangles on this page, but they are different sizes.*)
- On page 129: Point to the different shapes. How many corners does each have? Is there anything else different or similar about them? (*Answers will vary. Some shapes have straight lines, some have more or less corners, and some have longer lines.*)
- On page 131: What are some other features that are similar and different between Sal, Trey, and Cecil? (*Two have straight lines. One has 4 corners, 1 has 3, and 1 has none. They are all different colors. Trey is the tallest, then Sal, then Cecil.*)

4. Emphasize the Main Idea.

Shapes have different features.

- Play a game based on 20 Questions. Assign different shapes to each student. After each student draws the shape, classmates ask questions about that shape's features. Classmates will try to determine the shape that was drawn.

CHAPTER 23: WHAT AM I?

1. Prepare to read.

Chapter Summary: This chapter is a collection of riddles. These riddles are designed to help students practice identifying shapes based on their descriptions. Students are provided with descriptions and shown images of 9 shapes from which to choose.

Math Connection: Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres). Analyze, compare, create, and compose shapes.

Chapter Identifier: This chapter begins on page 134 of the Student Reader. Point out that the pages of this chapter have a dark purple bar along the top edge. Chapter 23 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “What Am I?” Tell students that you are going to read a chapter about shapes. Remind them to pay special attention to words that refer to shapes. Tell students to use the images on the page to help figure out which shape the riddle is about.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with asking questions such as these after each page:

- Could any other shapes on the page be the answer to the riddle? Why? (*No, they have different features and descriptions.*)
- Which description helped you the most to figure out the riddle? (*Answers will vary.*)
- After students name the shape, ask if they can name another object that has the same shape. Ask how they would describe it. (*Answers will vary.*)
- How else could you describe this shape? (*Sample answer: I could say you could use a cube as a die for a game.*)
- Do any of the other shapes on the page match a part of the description? (*Answers vary based on the page. Sample answer: Yes, you can also play a game with other shapes like a triangle, cylinder, and cube.*)

4. Emphasize the Main Idea.

We can identify shapes by their features.

- Challenge students to come up with their own riddles about shapes and trade them with a partner. Partners try to guess each other’s shapes.

CHAPTER 24: SHAPES IN OUR WORLD

1. Prepare to read.

Chapter Summary: Join 4 friends on a shape scavenger hunt around their school. Throughout the day, these friends look for shapes used throughout their school and realize that shapes are all around them. They see prisms, cylinders, spheres, cones, and cubes. They think about how these objects are useful because of their shape.

Math Connection: We can identify and describe shapes.

Chapter Identifier: This chapter begins on page 140 of the Student Reader. Point out that the pages of this chapter have an orange bar along the top edge. Chapter 24 is the only chapter with this design.

2. Focus student attention.

Before You Read: Point out the chapter title: “Shapes in Our World.” Tell students that you are going to read a story about friends going on a shape scavenger hunt. Direct students to pay special attention to the objects the characters find in the story and their shapes.

3. Read together.

Read Aloud: Ask students to follow along as you read aloud. Facilitate student engagement with questions such as these:

- What is a scavenger hunt? What are the students looking for? (*A scavenger hunt is a game in which you look for specific things, in this case, real objects that have the shape they have on their papers.*)
- What shapes are the students trying to find? (*sphere, cylinder, cube, cone*)

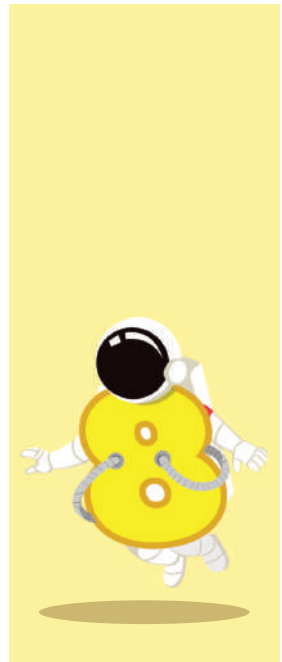
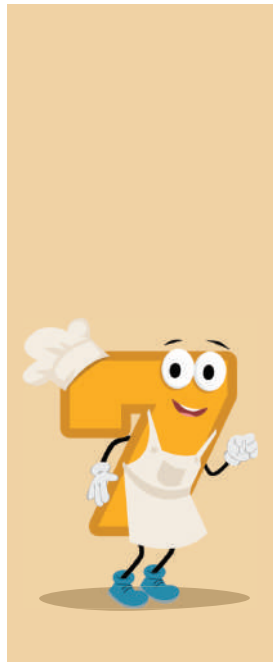
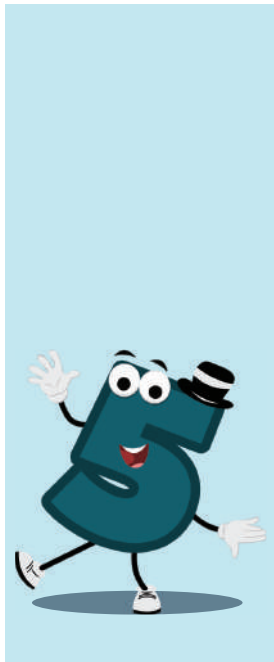
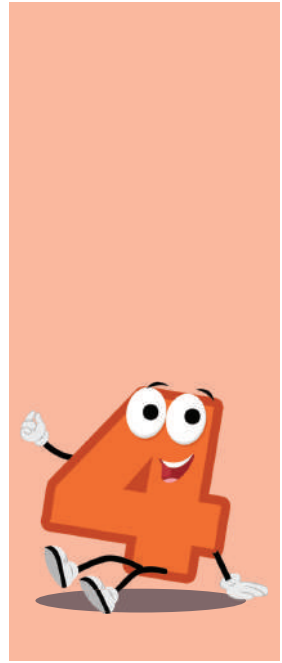
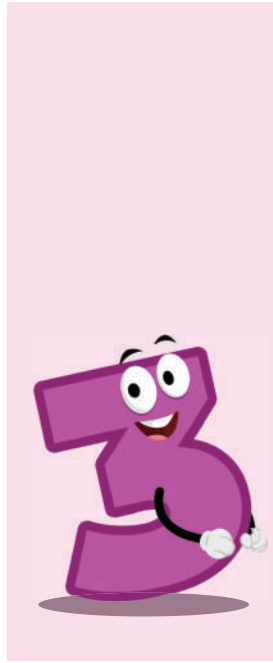
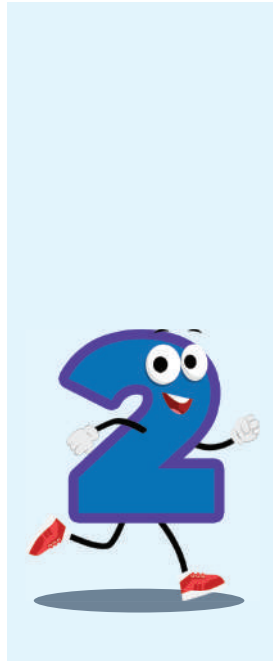
After each page ask:

- What other shapes that aren’t in the scavenger hunt do you see on this page? (*Answer varies based on page.*)
- Would this object be useful if it were a different shape? Why? (*Answers should reveal that the object has its specific shape to serve its purpose best.*)
- Why is this shape the most useful one for the object? (*Answers will vary but should describe how the shape helps the object perform its function, like a ball to bounce.*)
- Could we use different shapes for the objects the students identified on this page? Why? For example, could the ball on page 142 be a different shape? (*Sample answer: We probably could, but they wouldn’t work as well.*)

4. Emphasize the Main Idea.

Shapes make objects useful for different purposes.

- Go on a school or classroom scavenger hunt like in the story. Encourage students to describe the object and why its shape is important.





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CONNECTING MATH TO OUR WORLD

KINDERGARTEN - MATH AT PLAY

Math is found in almost every aspect of our lives. This series encourages learners to *find the math* in familiar situations, where they can benefit from seeing real-world connections to math. The instructional focus for this series is not on *practicing* math skills but on *where, when, and why* we use math. Through both fiction and nonfiction readings, learners see how math skills are useful. The readings increase an overall understanding of and interest in math and demonstrate the importance of learning math skills.



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