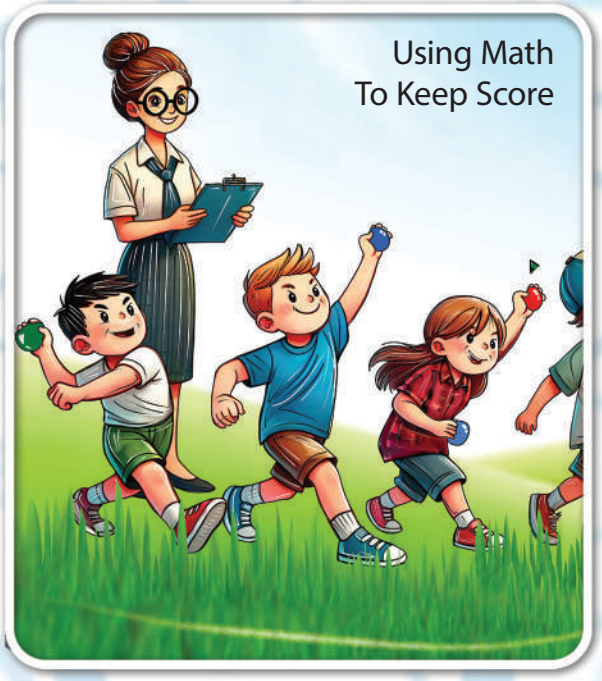
Core Knowledge® MATHEMATICS

Connecting Math to Our World:

Using Math Every Day

Teacher Support



Using Math Every Day

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GRADE 2

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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. Note that the chapters are *not* intended to be a complete lesson, but 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 unfamiliar nonmath vocabulary.
4. ***Prepare the Student Readers.*** The Student Readers are spiral bound to allow the book to lie flat when students are following along. You may wish to 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.

Using Different Reading Routines

While some students may be able to read words on a given page, as a rule students should not be expected or asked to read the text aloud. The text 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 words that students may be unfamiliar with as you encounter them.
- Ask questions about the content as you read, drawing students into the text.
- Create a vocabulary journal where students write down words they learn and their definition.

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. Math Is Everywhere!, page 5	**Operations and Algebraic Thinking** • Represent and solve problems involving addition and subtraction. **Measurement and Data** • Work with time and money.
2. Puzzled, page 6	**Operations and Algebraic Thinking** • Represent and solve problems involving addition and subtraction. **Geometry** • Reason with shapes and their attributes.
3. Placing the Bases, page 7	**Measurement and Data** • Measure and estimate lengths in standard units.
4. Finding Math Outdoors, page 8	**Geometry** • Reason with shapes and their attributes.
5. Paper Art, page 9	**Geometry** • Reason with shapes and their attributes.
6. An Ocean Forest, page 10	**Measurement and Data** • Represent and interpret data.
7. Beach Heroes, page 11	**Operations and Algebraic Thinking** • Represent and solve problems involving addition and subtraction. **Measurement and Data** • Represent and interpret data.
8. Mr. Bixby Bakes, page 12	**Operations and Algebraic Thinking** • Work with equal groups of objects to gain foundations for multiplication. **Measurement and Data** • Work with time and money. • Represent and interpret data.
9. Virtual Bike Adventures, page 13	**Operations and Algebraic Thinking** • Represent and solve problems involving addition and subtraction. **Number and Operations in Base Ten** • Use place value understanding and properties of operations to add and subtract. **Measurement and Data** • Relate addition and subtraction to length.
10. Beads and Bracelets, page 14	**Operations and Algebraic Thinking** • Work with equal groups of objects to gain foundations for multiplication. **Number and Operations in Base Ten** • Use place value understanding and properties of operations to add and subtract.
11. Planning on a Budget, page 15	**Measurement and Data** • Work with time and money.
12. Hundreds of Nuts, page 16	**Number and Operations in Base Ten** • Use place value understanding and properties of operations to add and subtract. **Measurement and Data** • Work with time and money.

13. Is It an Insect?, page 17	**Measurement and Data** • Measure and estimate lengths in standard units. • Represent and interpret data.
14. The Lesson Inside the Story, page 18	**Measurement and Data** • Measure and estimate lengths in standard units. • Work with time and money.
15. A Precious Gift, page 19	**Measurement and Data** • Work with time and money.
16. Science Investigation, page 20	**Measurement and Data** • Measure and estimate lengths in standard units. • Relate addition and subtraction to length. • Represent and interpret data.
17. The Coziest Shapes, page 21	**Geometry** • Reason with shapes and their attributes.
18. Blankets for Pets, page 22	**Geometry** • Reason with shapes and their attributes.
19. Packing Up, page 23	**Measurement and Data** • Measure and estimate lengths in standard units. **Geometry** • Reason with shapes and their attributes.
20. Blocks Stacked to Last, page 24	**Geometry** • Reason with shapes and their attributes.
21. Are We There Yet?, page 25	**Measurement and Data** • Measure and estimate lengths in standard units. • Relate addition and subtraction to length.
22. Time for Soccer, page 26	**Measurement and Data** • Work with time and money.
23. Making Music, page 27	**Measurement and Data** • Work with time and money.
24. Field Day, page 28	**Operations and Algebraic Thinking** • Represent and solve problems involving addition and subtraction. **Measurement and Data** • Measure and estimate lengths in standard units. • Represent and interpret data.

Chapter 1: Math Is Everywhere!, Student Reader page 2

1. Prepare to read.

Chapter Summary: In this story, Michael doesn't want to do his math homework. His sister, Sasha, shows him that math is important by recounting different fun situations such as playing games, buying a toy train, and making cookies. She explains to Michael how math is used in each situation. Math is everywhere, and it helps us have fun!

Math Connection: This chapter emphasizes situations in which second graders use math skills and points out how using these math skills is helpful.

2. Focus student attention.

Before You Read: Point out the chapter title: "Math Is Everywhere!" Explain to students that you are going to read a story about Michael, who doesn't want to do his math homework. Sasha sets out to prove to Michael that math is important. Ask students to focus on the examples that Sasha uses to convince Michael and to look for the math skills.

3. Read together.

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

- On page 3: Whom do you agree with, Sasha or Michael? Why? (*Answers will vary.*)
- On pages 3–5: What activity is Michael doing on this page? What math skills does he use? (*Answers will vary based on page.*)
- On pages 3–5: What would happen if Michael couldn't do the math? (*Sample answer: They wouldn't know who won the game.*)
- Do you think Sasha is convincing? (*Answers will vary. Accept supported answers.*)
- On page 7: What does Michael think about math now? Why? (*He thinks math is fun. He noticed that he uses it everywhere and in lots of fun situations.*)

4. Emphasize the Main Idea.

We use math every day

- Invite students to share situations from the past day or week in which they needed math.

Chapter 2: Puzzled, Student Reader page 8

1. Prepare to read.

Chapter Summary: This informational text explores the history of puzzles. There are many different types of puzzles, including jigsaw and crossword puzzles. Students are introduced to puzzles that involve different kinds of shapes or use numbers and think about the different ways math is used in the puzzles.

Math Connection: This lesson emphasizes how the skills taught in core math instruction are used in many ways, even if we don't realize it, like when solving puzzles.

2. Focus student attention.

Before You Read: Point out the chapter title: "Puzzled." Explain to students that you are going to read a factual chapter. Tell students that chapters like this share information about a certain topic. In this case, the topic is the history of puzzles. These puzzles all use math skills. Remind students to look for which math skills are used in each puzzle.

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 kinds of math skills do you think this puzzle requires? (*Accept reasonable answers. Answers can include making predictions, trying ideas, noticing the colors and images on the pieces, looking for shapes, matching lines, counting spaces, and looking for patterns.*)
- What steps do you think you would take to solve this puzzle? How would you use math? (*Sample answers: I think I would start by finding straight lines and corners for the outside. I would make a guess and try things out. I would notice the different shapes and see which one fits with the others best.*)

4. Emphasize the Main Idea.

Looking for patterns can help you solve puzzles.

- Have students discuss similarities and differences between the different types of puzzles in the chapter. Use questions to emphasize math skills such as identifying shapes, problem-solving, identifying angles, and looking for patterns.
- Invite students to share examples of puzzles they are familiar with that use math skills.

Chapter 3: Placing the Bases, Student Reader page 14

1. Prepare to read.

Chapter Summary: Three friends are helping to build a baseball field! They first start by reviewing the plan and identifying where the bases are located within the diamond. They work together to measure and do various calculations to place the bases correctly.

Math Connection: Baseball has long been known as America's pastime. Often overlooked is that the game relies heavily on math skills such as measuring, geometry, and addition and subtraction.

2. Focus student attention.

Before You Read: Point out the chapter title: "Placing the Bases." Tell students that you are going to read a fictional story about a group of friends helping to build a baseball diamond. Remind them to pay special attention to when math is mentioned. Ask students to describe what they know about playing baseball and what a baseball field looks like. What do you think has to be done to build a baseball diamond?

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 is it important to start by looking at a drawing of a baseball diamond? (*It helps them plan.*)
- What things did they notice in the drawing? (*They saw the shape of the diamond. They saw how far parts of the diamonds were from each other.*)
- How will they know where 85 feet away is? (*They need to measure.*)
- What could happen if they put first base down before second base? (*The bases might not line up correctly.*)
- Why wouldn't their ideas for measuring, such as using a ruler, their feet, or a tape measure, work? (*They were too short and wouldn't be exact.*)

4. Emphasize the Main Idea.

We plan and measure to build playing fields for sports such as baseball.

Have students research to find the dimensions of other types of playing fields. If possible, use the schoolyard to mark off some of the measurements to show students what these fields look like.

Chapter 4: Finding Math Outdoors, Student Reader page 20

1. Prepare to read.

Chapter Summary: In this chapter, a class engages in a digital scrapbooking project. The students' job is to find examples of shapes and patterns outdoors. They begin their planning by brainstorming different shapes and patterns that they might find. They then look for pictures that show these shapes and patterns to add to their digital scrapbook. Math is all around us!

Math Connection: This chapter encourages students to recognize that shapes and patterns are found all around us, especially in nature.

2. Focus student attention.

Before You Read: Point out the chapter title: "Finding Math Outdoors." Tell students that you are going to read a story about students making a digital scrapbook containing images of shapes and patterns that they find outdoors. A digital scrapbook is made on a computer and is a collection of images. The students must know the difference between a shape and a pattern.

3. Read together.

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

- What is the difference between a shape and a pattern? (*Accept reasonable answers. A shape is a specific figure, such as a circle, triangle, or square. A pattern is formed by repeating shapes, colors, or designs.*)

Review the images on pages 22–24.

- What is a shape or pattern that you see? (*Accept reasonable answers. Shapes could be circle, triangle, heart, or rectangle. Patterns could be stripes on a tiger or watermelon or spots on a leaf.*)
- Which of the images on these pages show patterns made of shapes? (*Sample answer: The leaves on page 22 have a pattern made of hearts.*)

4. Emphasize the Main Idea.

Math ideas like shapes and patterns are found all around us.

- As a class, make an initial list with the headings "Shape" and "Pattern." Have students brainstorm items they see in the classroom that could be placed under each heading.

Chapter 5: Paper Art, Student Reader page 26

1. Prepare to read.

Chapter Summary: This chapter introduces the art of origami. Origami originated more than 500 years ago in Japan but has since spread throughout the world. Initially, it was used to teach shapes. In this art form, a piece of paper is folded to make an object. Cranes are the most popular animal made with origami. The crane is a "bird of happiness." Origami helps us think about math as we use angles and shapes and solve problems.

Math Connection: This chapter demonstrates how geometry is used to transform a piece of flat paper into an object that is a piece of art.

2. Focus student attention.

Before You Read: Point out the chapter title: "Paper Art." Tell students that you are going to read about origami. Origami is a form of art that involves folding a flat piece of paper into an object. Understanding shapes is important when doing origami. At the end of the chapter, there is something students can try.

3. Read together.

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

- What does origami have to do with geometry? (*Geometry is the study of shapes. In origami, you fold paper into different shapes to make an object.*)
- On page 29: What shapes do you see in the origami art on this page? Use fingers to draw straight lines to highlight the shapes. (*Accept reasonable answers.*)
- Do you think origami artists still have to be careful when creating origami art and their folds? (*Sample answers: Yes, they want the folds to be crisp. No, paper is not rare now.*)

Distribute pieces of paper so students can follow steps to create a fox. Ask:

- What things are you thinking about while folding? (*making straight lines, folding correctly, the size of the triangle*)

4. Emphasize the Main Idea.

A flat shape can be folded to make many other shapes.

- Show students examples or pictures of origami.

Chapter 6: An Ocean Forest, Student Reader page 32

1. Prepare to read.

Chapter Summary: Kelp forests are important ecosystems that support many different living things. Scientists monitor the health of these forests by gathering data about the animals and plants that live there. This helps the scientists determine if the ecosystem is balanced. If it is not balanced, the ecosystem is unhealthy. The data scientists collect tells them whether they need to take action to help the ecosystem.

Math Connection: This chapter demonstrates how comparing the numbers of groups of living things helps scientists to monitor the health of environments.

2. Focus student attention.

Before You Read: Point out the chapter title: "An Ocean Forest." Tell students that you are going to read about a forest ecosystem that grows underwater. Ask them what a forest is. If they are not familiar with the term *ecosystem*, explain that it is all the living and nonliving things in an area. Ask students what they think it means for an ecosystem to be balanced. Remind them to pay special attention to the way that scientists use math skills to check the health of the ecosystem.

3. Read together.

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

- What kind of data do scientists collect to make sure there is enough kelp for animals to eat and use for safety? (*They need to count kelp and count the animals that eat the kelp.*)
- How do scientists use math to know if an ecosystem is balanced? (*They use data about who eats what, and they track the counts of the different types of living things to see if the ecosystem is balanced. They use numerical data to know if counts of certain organisms might be getting too low.*)
- Why do scientists need to compare data over time? (*This helps them to see how numbers have changed and to evaluate the health of the ecosystem.*)

4. Emphasize the Main Idea.

Scientists keep track of how many plants and animals live in an ecosystem to see if it is balanced.

- Draw a diagram on the board. Draw an upward pointing arrow labeled "Sea Urchins" next to a downward arrow labeled "Kelp." Ask: Why does having more sea urchins mean having less kelp (*Sea urchins eat kelp. When there are more sea urchins, more kelp will be eaten, so there will be less kelp.*)

  Highlight that if there is not enough food, some animals may die. This means that the number of animals goes down. If there is a lot of food, the number of animals may go up. Be sure that students do not think that balanced in this situation means that there are the same number of animals and plants.
- Play a game of tug-of-war. Focus on when the game is balanced. Ask students to think about what would make it unbalanced (*adding or subtracting people on either side; including adults or generally stronger players on one side or the other*). If you were a scientist, what kind of data would you gather over time to make sure the game stays as balanced as possible?

Chapter 7: Beach Heroes, Student Reader page 38

1. Prepare to read.

Chapter Summary: Faith loves spending time at Crystal Lake Beach with her family. But after the Fourth of July celebration, she is upset to see trash left on the beach. As she and her dad help clean up the beach, she tries to think of ways to prevent trash from being left on the ground in the future. She notices the amount of trash and compares that to the trash cans that are available. This helps her develop solutions to the problem.

Math Connection: This chapter highlights that problem-solving often uses math skills to develop solutions. In this case, the math skills counting and comparing help solve a problem.

2. Focus student attention.

Before You Read: Point out the chapter title: "Beach Heroes." Tell students that you are going to read about a girl named Faith who has a problem that she wants to solve. Faith is helping clean up the trash on her favorite beach after a celebration. While she does this, she thinks of a solution that could keep the beach clean after the next celebration. Remind students to pay special attention to how Faith uses math skills to figure out the solution.

3. Read together.

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

- What problem do Faith and her dad see when they arrive at the beach? (*They see trash on the beach.*)
- What do Faith and her dad do to solve that problem? (*They volunteer and help put the trash in bags.*)
- What does Faith think about as she collects the trash? (*She realizes this problem will occur again. She thinks about finding a permanent solution.*)
- What information does Faith need to collect to develop a permanent solution? How did she use math? (*She counts the bags of trash and recycling collected. She counts the number of trash cans and recycling bins and compares that number to the number of bags filled.*)
- What solution do Faith and her dad come up with? How do they use math? (*They look at where the most trash is and think that there needs to be more trash cans in that area. They think about where the cans should be placed.*)
- What do Faith and her dad do with the data they gather and the solution they develop? (*They send a letter to the mayor with their suggestion.*)

4. Emphasize the Main Idea.

Math is used in all kinds of problem-solving, including keeping our communities clean.

- As a class, identify a problem in your school community that can be solved with math. For example, perhaps the classroom doesn't have enough of something, and a solution is to share or to rotate activities. Write a summary describing the plan.

Chapter 8: Mr. Bixby Bakes, Student Book Reader 44

1. Prepare to read.

Chapter Summary: Mr. Bixby is getting ready for the opening day of his bakery and uses math to prepare. He needs to know how long things need to be baked, which tools to use, how many cookies he is making, and the size of the cookies. Mr. Bixby uses math to make sure his bakery opens on time and has enough for everyone.

Math Connection: This chapter demonstrates how the math skills of measuring, counting, comparing numbers, and arranging items evenly in rows and columns are used by a baker in a bakery.

2. Focus student attention.

Before You Read: Point out the chapter title: "Mr. Bixby Bakes." Tell students that you are going to read a story in which a baker uses math to make sure he has enough cookies for the opening day of his bakery. Remind students to pay special attention to how Mr. Bixby uses math skills to figure out the solution.

3. Read together.

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

- After reading each page: What kind of math is Mr. Bixby using on this page? (*Answers will vary but should include ideas of measuring, planning, counting, comparing, and arranging.*)
- Why is it important for Mr. Bixby to start by thinking about the type of cookie people like best? (*It helps him decide how many to make and the size of the cookie.*)
- Mr. Bixby uses different sizes of materials, like baking trays and scoops. How does he know which size to choose? (*He chooses the sizes of his materials based on the size of the cookies he wants to make and how many cookies he needs to make.*)
- Why does Mr. Bixby writes notes? (*It helps him plan by keeping track of how many cookies he wants to bake, how many cookies can fit on a tray, and how many trays of cookies he needs to bake.*)
- Why is thinking about the size of cookie or pretzel important? (*This lets him know how many he can fit on a baking tray.*)
- What kinds of things does Mr. Bixby have to think about when he is arranging his cookies on the baking trays? (*He needs to think about the size of cookie, the size of baking tray, how many he can fit on the tray, and how many rows and columns he'll need.*)

4. Emphasize the Main Idea.

When running a business, we use math to make a plan.

- Invite a community member who owns a business to visit the class and discuss how they use math to plan, as well as what math skills they use.

Chapter 9: Virtual Bike Adventure, Student Reader page 50

1. Prepare to read.

Chapter Summary: In this chapter, Destiny's mom brings home a new game for her to use. In this game, Destiny can use her bike to take a virtual trip. On her trip, she experiences many things, including the woods to Red Riding Hood's grandmother's house, the Gingerbread Man, and helping the Three Little Pigs. Her goal is to travel 25 kilometers. She uses math to determine how far she has traveled and how far she has left to go.

Math Connection: This chapter demonstrates how addition and subtraction can be used to determine how far you have traveled and how far you still must go on a trip.

2. Focus student attention.

Before You Read: Point out the chapter title: "Virtual Bike Adventures." Tell students that you are going to read a story about Destiny and her virtual bike ride. This bike ride will seem like a real bike ride, but it will take place in a game. She will experience all kinds of places and people as she rides. In this story, distance is measured in kilometers instead of miles. Remind students to pay special attention to how math is used to help her keep track of her ride. Ask students to share when they have gone on a trip or bike ride before. How did they know how far they had traveled or had left to go?

3. Read together.

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

- How is math used in the game? How did it help Destiny? (*She adds the distances she has traveled and subtracts to know how much farther she must go.*)
- What does Destiny need to do to know how far she rode in total to see the Three Little Pigs? (*She needs to add the distance to the Three Little Pigs to how far she has already traveled.*)
- How did Destiny know the final path would take her to 25 kilometers total? (*She has been keeping track of her distances and adding them together.*)
- How can Destiny and her mom use math on their bike ride outside? (*Sample answers: They can measure how far they have traveled and add the distances together. They can set a goal of how many kilometers they want to travel and subtract the kilometers they travel to know how many they have left.*)

4. Emphasize the Main Idea.

We add and subtract to tell how far we have traveled and how far we have to go.

- Invite students to create a map that shows Destiny's bike ride. Discuss how marking the distances and using the map would help Destiny know how far she has gone and how far she still has to go. What do you think Destiny is feeling at each point? How does math help her think about her progress?

Chapter 10: Beads and Bracelets, Student Reader page 56

1. Prepare to read.

Chapter Summary: Nina has materials to make friendship bracelets, but she is worried she won't have enough beads and charms to make 50 bracelets. With her dad's help, she uses skip counting to count the number of beads and charms. This helps them save time counting and helps to make sure that she has enough materials to make all 50 bracelets.

Math Connection: In this chapter, the characters use skip counting to quickly count and add large amounts.

2. Focus student attention.

Before You Read: Point out the chapter title: "Beads and Bracelets." Tell students that you are going to read a story about Nina. Nina is making friendship bracelets using beads and charms. She is afraid that she doesn't have enough beads and charms to make 50 bracelets. Remind students to pay special attention to how Nina and her dad uses math skills to know if she has enough materials.

3. Read together.

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

- What information do Nina and her dad have that will help them know if they have enough beads? (*They know the number of bracelets they want to make and the number of beads they will need.*)
- Why is Nina's idea of skip counting a great idea? (*It will save them time. For example, the beads come in packages of 100. This makes it easy to skip count.*)
- Why is counting a large number of items by ones harder than counting by 10s or 100s? (*It takes longer; it is easier to get lost or make mistakes while counting.*)
- How does Nina know she has enough beads? (*She has enough because she has the right number of beads to make the planned number of bracelets.*)
- What would Nina and her dad have to do if the materials didn't come in bags? Could they still use skip counting? (*Sample answer: They could first count the materials into groups and then skip count from there.*)

4. Emphasize the Main Idea.

Skip counting by 10s and 100s helps you quickly count a large number of items.

- Provide groups of students with a jar of pennies, beads, or beans. Have students guess how many items are in the jar and then count the items using skip counting. Discuss how this helps them count faster.

Chapter 11: Planning on a Budget, Student Reader page 62

1. Prepare to read.

Chapter Summary: Three friends and their coach work together to plan a team soccer party for 40 people. They only have a budget of $100, so they must consider what they need and how much things will cost. To do so, they make a list of how much of each item they will need and how much each will cost. Their planning helps them stay on budget.

Math Connection: In this chapter, students use counting, adding money, and comparing numbers to stay within a budget.

2. Focus student attention.

Before You Read: Point out the chapter title: "Planning on a Budget." Tell students that you are going to read a story about three friends who are planning a party. Remind students to look for how math skills help them make a plan and keep within their budget.

3. Read together.

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

- Why does Alena disagree with Parker's suggestion of 40 pizzas? (*Parker notices that there will be 40 people, and he thinks they need a pizza for each. Alena thinks that will be too much pizza and that they shouldn't need to buy that many.*)
- Why is it important to stay within a budget when you are planning an event? (*Sample answer: You want to have enough for everybody, but you don't want to run out of money when buying what you need.*)
- What do the friends need to know during the planning process? (*Sample answers: They need to know how many people are coming, what supplies they need, what can be borrowed and donated, and what they need to buy. They need to make sure that they have enough money in the budget to pay for everything they need.*)
- How do the friends use math to help them plan the party? (*They make a plan. They add and subtract.*)

4. Emphasize the Main Idea.

We use math when we make a budget.

- Invite the school principal or other school administrator to the class to share a budget that was used for a school event or party. If possible, ask the students to help the principal begin planning for the next school event.

Chapter 12: Hundreds of Nuts, Student Reader page 68

1. Prepare to read.

Chapter Summary: The owners of a black walnut orchard need help picking up all the fallen black walnuts! Oliver and Sally are interested in making money so they can buy a new game. They will be paid 1¢ for each black walnut they pick up. Each time they are paid, they are given different types of money—sometimes dimes, sometimes pennies, or even dollar bills. Oliver and Sally use place value to count their money.

Math Connection: Oliver and Sally use place value when they count the money they are paid for collecting black walnuts.

2. Focus student attention.

Before You Read: Point out the chapter title: "Hundreds of Nuts." Tell students that you are going to read a story about two cousins, Oliver and Sally. The cousins hear that owners of a black walnut orchard are paying people to collect black walnuts when they fall to the ground. Remind students to look for ways that math is used in this story.

3. Read together.

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

- Do you think 1¢ per walnut will earn a lot of money? (*Sample answer: It depends on how many walnuts you can pick up. It looks like the trees are big, and there are probably a lot of walnuts.*)
- How do Oliver and Sally use math to figure out how much money they can make per day? (*They earn 1¢ per walnut and can each pick up to 100 walnuts a day. This means they can make 100¢ each, or they can each make $1 a day.*)
- On page 71: How are they using math on this page? (*Sample answer: They know how much the coins are worth and compare the values.*)
- What do Oliver and Sally need to know about money to be able to trade coins and bills correctly? (*They need to know the value of each type of coin. They need to know how many pennies are in a dime, how many dimes are in a dollar, etc.*)
- How did math help Oliver and Sally buy the game? (*They were able to set a goal and add up the money they earned until they knew they had enough for the game.*)

4. Emphasize the Main Idea.

The value of a digit is based on its position in a number.

- Distribute play money, including bills and coins, to students. Make sure to use denominations that start with the number 1. Challenge them to make trades with other students and explain why their trades are correct.

Chapter 13: Is It an Insect?, Student Reader page 74

1. Prepare to read.

Chapter Summary: In this chapter, the author describes their role in organizing the Museum of Natural Wonders insect collection. The author must decide which animals are insects and does this by noticing similarities. Animals can be organized into groups based on similarities and differences like numbers of legs or body parts.

Math Connection: Identifying patterns, comparing, and classifying are math skills that are important to museums.

2. Focus student attention.

Before You Read: Point out the chapter title: "Is It an Insect?" Tell students that you are going to read about how math skills can help organize items in a museum. This chapter looks at some insects and how they are similar and different. Remind them to pay special attention to how insects are grouped by features.

3. Read together.

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

On pages 75–78: As you read about different insects, write each animal's name and characteristics on the board. To emphasize classifying, highlight any time multiple insects have the same characteristics, for example, wings vs. no wings. Highlight differences as well.

- On page 75: How does math help the author decide that this animal is an insect? (*They counted. It has 3 body parts and 6 legs, which means it is an insect.*)
- How is the animal on page 75 different from the one on page 76? (*They have different numbers of body parts and legs.*)
- Classifying means grouping things based on similarities, and differentiating means separating based on differences. How does math help the author classify and differentiate? (*They count body parts. They notice shapes. They measure.*)

4. Emphasize the Main Idea.

We use math to classify.

- Set up a rock museum. Have students collect rocks from outside and bring them inside. Challenge them to set up displays by classifying the rocks. They can use color, patterns, and size to group them.

Chapter 14: The Lesson Inside the Story, Student Reader page 80

1. Prepare to read.

Chapter Summary: Distance and time are the focus of this chapter, which recounts the famous story of the tortoise and the hare. The confident hare challenges the slow tortoise to race, and the tortoise accepts. While the hare naps during the race, the tortoise keeps going and wins the race. Students consider that distance is not the only factor when they travel. Other factors can impact final times.

Math Connection: This chapter focuses on the math concepts of distance and time.

2. Focus student attention.

Before You Read: Point out the chapter title: "The Lesson Inside the Story." Tell students that you are going to read a famous story that teaches a lesson. This story is about a race between a tortoise and a hare. Ask students who they think should win a race between these two animals. Tell them to pay attention to things that change during the race and how these things affect the results.

3. Read together.

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

- Which animal would most people expect to win this race? Why? (*Most people would expect the hare to win because he is faster.*)
- What does it mean to be faster or slower? (*Faster means that you do things more quickly than others. Slower means you do things more slowly than others.*)
- Who won the race? Did that animal move faster? (*The tortoise won the race even though he moved slower.*)
- What things changed about the race during the story? What stayed the same? (*The hare took a nap. He stopped moving, and this added time to his race. The tortoise's speed stayed the same, and he kept moving.*)
- What lesson is taught by this story? (*Slow and steady wins the race.*)

4. Emphasize the Main Idea.

When we travel, we pay attention to both time and distance.

- Ask students to think of things that could change the time it takes to complete a trip. What things could affect the time it takes to get to school in the morning? What things might affect the time it takes to get to a friend's house or a store? Do these trips always take the same amount of time?

Chapter 15: A Precious Gift, Student Reader page 86

1. Prepare to read.

Chapter Summary: Abuela's birthday is tomorrow. Emma wants to give her a special present, but she is worried that she won't have enough money. Emma counts her money to know how much she has. She decides to save money by making Abuela a homemade gift. In the end, she is able to give a great present and save some money!

Math Connection: Emma uses the math skills of addition and subtraction of money to solve problems.

2. Focus student attention.

Before You Read: Point out the chapter title: "A Precious Gift." Tell students that you are going to read a story about a girl who is deciding what to get her abuela for her birthday. Clarify that *abuela* means "grandmother" in Spanish. Remind them to pay attention to how Emma counts money and how that helps her decide on a gift.

3. Read together.

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

- What math skill is Emma using to find out how much money she has? (*She is using addition.*)
- Why does Emma think that she doesn't have enough money? (*She thinks that a gift will cost more money than she has.*)
- How does math help Emma decide what type of gift to get for Abuela? (*She counts her money and sees that she only has so much to spend. This makes her think of other options, such as making a gift.*)
- On page 90: What is Emma's idea? How does she know she will have enough for this gift? (*She's going to make something out of materials she already has. She only has to spend money on glue.*)
- How is Emma saving money? (*She is creative and thinks of an idea that uses mostly things she already has.*)
- *What math skills does Emma use in this story?* (*Emma needs to add up her money. She needs to buy glue and subtract that from the amount she has.*)

4. Emphasize the Main Idea.

Knowing how much money you have and finding ways to save it are important.

- Hand out copies of a weekly ad for a local store. Tell students to imagine they have $20 and to determine what items they have enough money for. Can they make a healthy meal and still save some money? What toys or clothes could they buy? Could they make these decisions without math?

Chapter 16: Science Investigation, Student Reader page 92

1. Prepare to read.

Chapter Summary: Alena and Parker are investigating whether plant food makes plants grow taller. They use math in many ways. They must count seeds, measure the amount of water and food they give, and measure the growth of their plants. They organize their data in charts and bar graphs and use these to draw a conclusion.

Math Connection: Conducting experiments uses many math skills, such as data collection, measurement, and constructing and analyzing graphs and charts.

2. Focus student attention.

Before You Read: Point out the chapter title: "Science Investigation." Tell students that you are going to read about two students doing a science experiment. Alena and Parker use this experiment to see if plant food makes plants grow taller. They think the plants that they give plant food will grow taller. Ask students how they think Alena and Parker will use math to see if they are correct. Remind students to look for ways that Alena and Parker use math during this investigation.

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:

- How are Alena and Parker using math on this page? (*Answers will vary based on page.*)
- Why is measurement important in this investigation? (*They need to measure the plant food and water to make sure they are giving the right amount. They need to measure how much the plants have grown.*)
- Why did Alena and Parker choose to make bar graphs? (*Bar graphs make it easy for them to compare their data.*)
- What types of math did they use during their investigation? (*They used measuring, counting, and comparing. They made bar graphs to share their results.*)
- Do you agree they proved that the plants that had plant food grew taller? Why? (*Yes. The plants they gave plant food grew taller. The bars on the "Plants with Plant Food" graph are higher than the bars on the "Plants with No Plant Food" graph.*)

4. Emphasize the Main Idea.

We use math to measure in science investigations.

- Describe simple experiments to students, and ask them to determine what math skills were used during each experiment.

Chapter 17: The Coziest Shapes, Student Reader page 98

1. Prepare to read.

Chapter Summary: In this chapter, students follow along with Kate as she looks at the different quilts owned by her family. Kate notices that there are many different pieces of fabric used in the quilts and that different shapes are put together to form a new shape or pattern.

Math Connection: Students consider how they use math skills such as knowledge of shapes, pattern identification, and measurement to plan and design a quilt.

2. Focus student attention.

Before You Read: Point out the chapter title: "The Coziest Shapes." Tell students that you are going to read about making patchwork quilts. If the word *quilt* is unfamiliar to some students, clarify that a patchwork quilt is a cozy blanket made from lots of different pieces of material. Preview the pictures, and ask students to describe how each quilt looks similar to or different from the other quilts in the chapter. Remind them to pay special attention to how math is used to make a quilt.

3. Read together.

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

- On page 98: Look at the quilts on this page. How is math used in this picture? (*Sample answer: The quilts are folded, which makes them take up less room.*)
- On page 99: What shapes do you see in the quilts on this page? (*The fabric is cut into diamonds, but they are put together on the quilt to look like cubes.*)
- On page 100: What shapes do you see in the quilts on this page? What shapes does the stitching make? (*Sample answers: I see diamonds, cubes, and triangles. I see one hexagon. In some places, the stitching makes triangles.*)
- What happens when there are different shapes used in a quilt? (*The shapes make different patterns and pictures.*)
- What do quilt makers have to think about before they start sewing? (*They think about what they want the quilt to look like. They think about shapes, sizes, colors, and patterns.*)
- How does math help make every quilt special? (*Sample answer: The shapes can be put together in many different patterns.*)

4. Emphasize the Main Idea.

Shapes can make up interesting patterns.

- Have students cut out shapes from colored card stock or construction paper, or provide a variety of cut-out shapes to students. Have students combine the shapes to make pattern blocks as if they were designing a quilt. Encourage them to explore different arrangements and talk about how the different shapes can be used to make different patterns so the quilt is different and special.

Chapter 18: Blankets for Pets, Student Reader page 104

1. Prepare to read.

Chapter Summary: Marco visits an animal shelter and is asked to help make beds for the kennels. He works with Tina to decide how to best use a large blanket to make as many beds as possible. They discuss folding the blanket into different shapes to decide which shape will make the most beds and will fit the best.

Math Connection: Knowing how to divide a larger shape into equal, smaller shapes is useful when you need to make multiple items.

2. Focus student attention.

Before You Read: Point out the chapter title: "Blankets for Pets." Tell students that you are going to read a story about an animal shelter that uses donated bedspreads and blankets to make beds for the animals. Explain the importance of animal shelters and why they might depend on donations from the community. Remind students to pay special attention to how math skills are used in this chapter.

3. Read together.

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

- How does Amy know that there are animals that need walks and beds? (*Sample answers: She might keep track of how many animals they have and when they go on walks. How many animals they have tells her how many beds they need.*)
- Show students a picture of a dog kennel. Which shape would be the best for a bed? Which might not work well? (*Answers will vary, but students should show reasoning for their choice. A triangle might give the dog room to walk around and not step on the bed.*)
- Should Marco and Tina cut the bedspread into parts that are not equal? Why or why not? (*Accept supported and reasonable answers.*)
- On page 107: What is Marco's idea? Why is it a good one? Can you come up with other ideas? (*Sample answer: Marco wants to cut it into four equal pieces and only use two pieces for now. This saves fabric for later. My idea is to cut it into different sizes for different sizes of kennels.*)
- How do you think Marco and Tina might change their idea if there were kennels of different sizes? (*They would need shapes that are different sizes.*)

4. Emphasize the Main Idea.

Dividing a shape into equal parts can make different and smaller shapes.

- Present students with different situations that necessitate a shape being divided into equal parts, such as a pizza, a pie, a soccer field that many teams need to practice on, or a swimming pool that needs lanes for swimmers. Ask them to explore how to divide the shape equally and to share why they think their idea is the best one.

Chapter 19: Packing Up, Student Reader page 110

1. Prepare to read.

Chapter Summary: Farrah loves her job packing different objects at a shipping center. She must consider things like an object's shape and size and the type of material it is made of so she can make the right decision on packaging. Farrah considers how to pack a metal bird with sharp claws, a large rug, furniture like armchairs, artwork, and even a chandelier!

Math Connection: Measurement and geometry are important math skills when packing an item into a box

2. Focus student attention.

Before You Read: Point out the chapter title: "Packing Up." Tell students that you are going to read a story about how Farrah uses math to help with her job at a shipping center. Just about every item she packs needs a special box. She must figure out the best way to pack and ship these items. Remind students to look for ways math is used in this story.

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 does Farrah need to think about when packing things like lamps, dishes, or furniture? (*She needs to think about size, shape, weight, and what the item is made of.*)
- On page 111: Mohammed and Farrah need to pack a metal bird. What types of things do they need to consider? (*They need to measure the height, width, and depth of the bird in order to select the right size box. They need to find a way to protect the bird's claws, and the decide on a foam block.*)
- *Three-dimensional*, or *3D*, means an object has 3 dimensions. It has height, width, and depth. What is depth? Why would that change how an object is packed? (*Depth means how deep it is. You must find a package that fits how tall, wide, and deep the item is.*)
- Why is measurement so important in Farrah's work? (*She needs to know the size of the object and the material she will pack it in to make sure the object fits in the box. She wants to use a box that is not too small and not too big.*)
- How does Farrah pick the packing materials she will use? (*She considers the shape, length, width, weight, and characteristics like how breakable the object is.*)

4. Emphasize the Main Idea.

Size, shape, and material determine how objects are packaged.

- Invite students to work in your classroom shipping center. Provide student groups with an array of packing materials, such as tissue paper, packing paper, boxes, and envelopes. Challenge them to use the materials to pack an object they are given and describe their reasoning.

Chapter 20: Blocks Stacked to Last, Student Reader page 116

1. Prepare to read.

Chapter Summary: This chapter explores the Mayan pyramids and how they were built. These pyramids are different from the famous Egyptian pyramids because of how they look and how they were constructed. The Maya used different materials and tools and achieved a different look that has lasted thousands of years.

Math Connection: Measurement and geometry played an important role in building pyramids.

2. Focus student attention.

Before You Read: Point out the chapter title: "Blocks Stacked to Last." Tell students that you are going to read an informative chapter about the Mayan pyramids. Show students some of the images in the chapter of pyramids and an image of an Egyptian pyramid for comparison. Ask them to describe what they see and how these structures are different from other buildings. Ask them to pay attention to how shapes and lines were used. Remind them to pay special attention to when math is mentioned while you read.

3. Read together.

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

- On page 117: Describe the picture of the Mayan pyramid. What words would you use? (*Sample answers: I see triangles, a pyramid, rectangles, half ovals for the headstones, and lots of edges and steps.*)
- Why was limestone used to build pyramids? (*Limestone is softer than some other rocks. It can be cut easily using harder rocks. It hardens after it is exposed to air. Limestone was available.*)
- Why do you think the Maya wanted a flat top and stairs instead of a pointed top and no stairs like the Egyptians? (*The flat part is where the temple was, and the stairs were used to get there.*)
- How did the Maya use math to make decisions? (*Lead students to point out the use of shapes and lines as they describe how decisions were made. The Maya had a good understanding of shapes, angles, and measurement.*)

4. Emphasize the Main Idea.

Mayan pyramids have a special and unique shape.

- Invite students to design a structure with a purpose, like a theater or concert space. Discuss how the shape of their structure matches how it will be used.

Chapter 21: Are We There Yet?, Student Reader page 122

1. Prepare to read.

Chapter Summary: A rhyming poem takes us on a road trip journey. From beginning to end, this poem describes how far the family has traveled, how much time has passed, and what they see along the way. Using math such as simple subtraction, the author guides students to think about how we know how much distance and time are left in the trip.

Math Connection: Using subtraction can tell you the distance you still have to go to complete a trip.

2. Focus student attention.

Before You Read: Point out the chapter title: "Are We There Yet?" Tell students that they are going to read a poem about a family road trip. Ask them to pay attention to what each stanza describes. Clarify that a stanza is a group of lines in a poem. One aspect of how math is demonstrated in this poem is the distance traveled throughout the poem. Another aspect of math in this poem is how math is used in the poem's structure. As you read the poem, point out the rhythm and rhyme structure in the stanzas.

3. Read together.

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

- What do you notice about each stanza? (*There are four lines in each stanza, and each pair of lines rhymes.*)
- The author separates the information into stanzas. How does that help you follow along? (*It helps because the stanzas describe distance and what they saw.*)
- Why is it important to plan out stops on a long trip? (*Sample answer: Planning a trip makes sure you make time to eat and stretch your legs. It gives you a break from driving.*)
- What happens to the time it takes to complete a trip if you make stops? (*The trip takes longer by the amount of time you are stopped.*)
- On page 125: What is happening to the distance traveled on this page? (*It is increasing*).
- On page 125: What is happening to the time spent on the road on this page? (*It is increasing.*)
- What do you think is happening to the distance and time they still need to travel? How do you know? (*They are decreasing. I know this because the distance and time they spent traveling is increasing.*)

4. Emphasize the Main Idea.

As the distance we have left becomes smaller, so does the time we have left to travel.

- Invite students to write a poem that describes a car trip, how far they have traveled, how far they have to go, and what they see or feel. Challenge them to use the same stanza structure as this poem.

Chapter 22: Time for Soccer, Student Reader page 128

1. Prepare to read.

Chapter Summary: Sammy is very excited about getting to soccer practice and doesn't want to be late. On the way to practice, he must pay attention to time as he hurries to the store to get things he needs for practice. Once at practice, Sammy notices how the coach keeps track of time to make sure that they can complete all the drills that are planned.

Math Connection: In this chapter, the importance of knowing the time and watching time spent is highlighted.

2. Focus student attention.

Before You Read: Point out the chapter title: "Time for Soccer." Tell students that you are going to read a story about Sammy, who is preparing for soccer practice. Sammy realizes that knowing the time and knowing how much time he is using are important to keep a schedule. This helps him make sure he has the time to do everything he needs to do. Remind students to pay special attention to how math is used in this chapter.

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 does Mom remind Sammy that he needs to be quick and not to be late? (*Soccer practice starts at a certain time, and he has a lot of things he wants to buy.*)
- Sammy notices the big hand on the clock has moved a lot. How does that help him make a decision about buying a soccer ball? (*The movement of the hand indicates that he has spent a lot of time already, and he doesn't have much time left if he wants to be on time.*)
- How does the coach make sure everything can be done in practice that should be done? (*He plans how long the team will spend on each drill.*)
- Why does the coach have practice all planned out? (*The coach wants to make sure that the team has time to do all the drills.*)
- Why do we need to pay attention to the time that activities like practices start and know what time they are supposed to end? (*It helps us know how much time we can spend on activities between the start and end times.*)

4. Emphasize the Main Idea.

To make the most of our time, we pay attention to when activities start and end.

- Ask students to create a schedule for an event like sports practice, a music concert, or a day in a classroom. Ask them to list all the activities they want to do and then arrange them in a schedule. Then, have then share why they decided on the activities, the order, and how much time to spend on them.

Chapter 23: Making Music, Student Reader page 134

1. Prepare to read.

Chapter Summary: This chapter describes how musical symbols and their placement on a musical staff tell a musician how to play. Whole notes, half notes, and quarter notes tell a musician how long to hold the note. Where the notes are placed indicates the pitch of the notes. Each line or space on a staff is identified by a letter. Counting is emphasized.

Math Connection: Counting and recognizing patterns are important math skills when playing an instrument.

2. Focus student attention.

Before You Read: Point out the chapter title: "Making Music." Tell students that you are going to read a chapter about reading music. If the word *note* is unfamiliar for some, clarify that it is a specific musical sound, represented by a written symbol that identifies the pitch. Pitch is the highness or lowness of a sound. Remind them to pay special attention to when math is mentioned.

3. Read together.

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

- How is math used to show how long a note should be held? (*The type of note tells the musician how long to hold the note—how long to count.*)
- How is math used to describe notes? (*Notes are described as whole notes, half notes, or quarter notes.*)
- A staff is organized using letters. How is that using math? (*Probe answers to help students understand that recognizing order and continuing the pattern are math.*)
- What happens when different types of notes and their different locations on the staff are combined? (*That is how music is made.*)
- What are the different ways that music is organized? (*Letters show the notes. These are named A to G. The order of sounds on the staff from top to bottom means lower to higher sounds.*)

4. Emphasize the Main Idea.

Reading and playing music use math.

- Invite a musician or music teacher to the class to play music for the students. Alternatively, play a recording of both simple and complex music. Encourage students to try to recognize any order or patterns, as well as any time they can count notes.

Chapter 24: Field Day, Student Reader page 140

1. Prepare to read.

Chapter Summary: It's field day at Jace's school. He joins in on different games. His friend Sarah acts as the scorekeeper. For some games, she measures distances and give points to each competitor. She makes a table showing the results to share with her classmates so everyone can see who won.

Math Connection: This chapter demonstrates why measurement and data sharing are important during field day.

2. Focus student attention.

Before You Read: Point out the chapter title: "Field Day." Tell students that you are going to read a story about a field day. Ask them to pay attention to the games and how the scorekeeper determines who wins. If the word *scorekeeper* is unfamiliar to some, clarify that it means someone who keeps track of the scores. Remind them to pay special attention to when math is used in the chapter. Ask students to think about games they have played before and how they know who wins.

3. Read together.

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

- How does a scorekeeper do their job? Why are they important to games? (*They keep track of each person or team's scores. They watch to see who wins. Without them, we wouldn't know how the teams or people did.*)
- How is math being used when the class splits into teams for the shoe kick? What math is used when Sarah figures out the score for each team? (*The players organize into two teams of equal numbers of players. Sarah uses addition to find the score.*)
- How did Sarah determine who won each game? (*She measured the distances and recorded the scores. She added the scores during the games.*)
- Why does the scorekeeper use math? (*Sample answer: If she didn't use math, we would guess the results, and people might argue.*)
- Sarah decided to display the results in the form of a table. Do you agree or disagree with this choice? Why? (*Sample answer: I agree because it helped her organize all the numbers so that it was easy for others to see and understand.*)

4. Emphasize the Main Idea.

Adding up points and measuring distances can tell us who won a game.

- Play simple games such as hopping as far as you can, balancing on one foot for as long as possible, or rock paper scissors. As they play, each student should keep score. Discuss how students kept score and how they might present the results.

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