

Focus and Coherence from

Instructional Design

A single authorship team from Kindergarten through Algebra 2 results in a logical progression of focused topics with meaningful coherence from course to course.

The **Learning Target** and **Success Criteria** for each lesson focus the learning into manageable chunks, using clear teaching text and Key Ideas within the Student Edition.

Learning Target: Compare fractions that have the same denominator.

Success Criteria:

- I can model fractions that have the same denominator.
- I can use the numerators to compare fractions.
- I can explain how to compare fractions that have the same denominator.

FOCUS

A focused program dedicates lessons, activities, and assessments to grade-level standards while simultaneously supporting and engaging students in the major work of the course.

Laurie's Notes

Preparing to Teach

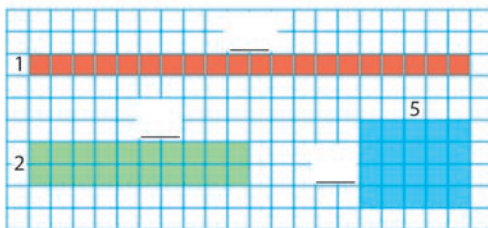
In the previous lesson, students learned how to use an Inch Ruler to measure lengths to the nearest inch. In this lesson, they add *foot* and *yard* to their length measurement units. Students will measure objects to the nearest foot and nearest yard. They will also choose among an inch ruler, yardstick, and measuring tape as the instrument for measuring a specific object.

Think and Grow: Find Factor Pairs

You can write whole numbers as products of two factors. The two factors are called a **factor pair** for the number.

Example Find the factor pairs for 20.

Find the side lengths of as many different rectangles with an area of 20 square units as possible.



The side lengths of each rectangle are a factor pair.

So, the factor pairs for 20 are _____ and _____, _____ and _____, and _____ and _____.

$$\begin{array}{ccc} & \text{factor pair} & \\ & \swarrow \quad \searrow & \\ 2 & \times & 4 = 8 \\ \uparrow & & \uparrow \\ \text{factor} & & \text{factor} \end{array}$$

2 and 4 are a factor pair for 8.

A 4×5 rectangle has the same area as a 5×4 rectangle. Both give the factor pair 4 and 5.



Laurie's Notes prepare you for the math concepts in each chapter and lesson and make connections to the threads of major topics for the course.

vii

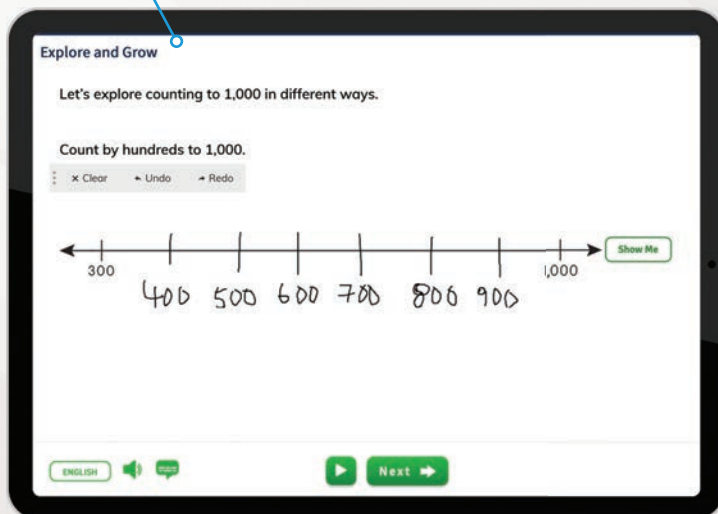
Rigor in Math: A Balanced Approach

Instructional Design

The authors wrote each chapter and every lesson to provide a meaningful balance of rigorous instruction.

Conceptual Understanding

Students have the opportunity to develop foundational concepts central to the *Learning Target* in each *Explore and Grow* by experimenting with new concepts, talking with peers, and asking questions.



RIGOR

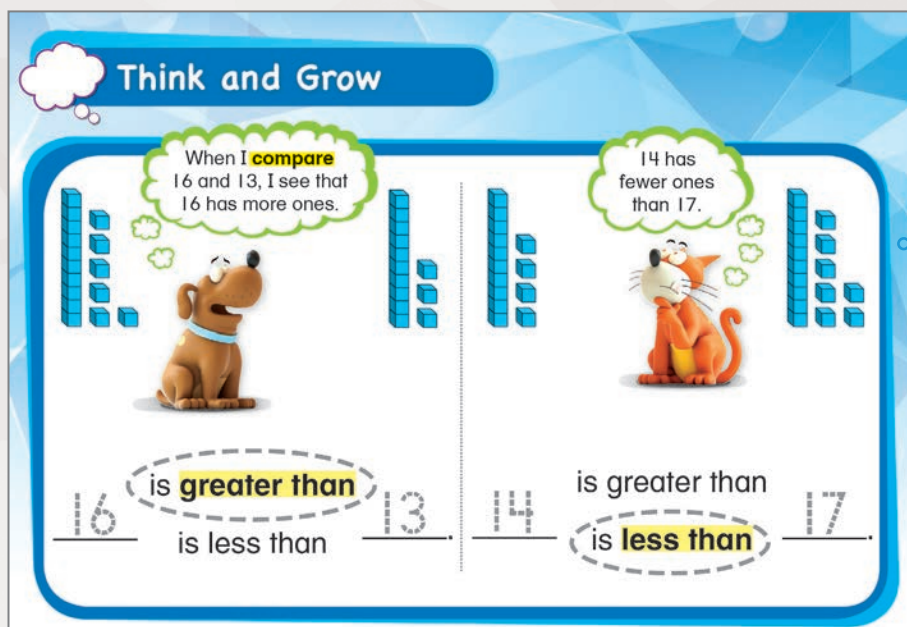
A rigorous program provides a balance of three important building blocks.

- **Conceptual Understanding**
Discovering why
- **Procedural Fluency**
Learning how
- **Application**
Knowing when to apply

Conceptual Thinking

Ask students to think deeply with conceptual questions.

14. **MP Number Sense** A sum has 5 addends. Each addend is a unit fraction. The sum is 1. What are the addends?



Procedural Fluency

Solidify learning with clear, stepped-out teaching in *Key Ideas* and *Think and Grow* examples.

Then shift conceptual understanding into procedural fluency with *Show and Grow*, *Apply and Grow*, *Homework & Practice*, and *Review & Refresh*.

1

Place Value Concepts

- What kinds of numbers would you find on a map?
- Why is place value important when you read a map?

Chapter Learning Target:
Understand place value.

Chapter Success Criteria:

- I can define the value of a number.
- I can explain how to use symbols to compare two numbers.
- I can compare the value of two identical digits in a number.
- I can read and write multi-digit numbers in multiple forms.

Connecting to Real Life

Students begin every chapter thinking about the world around them. Students apply what they learn in the chapter with a related *Performance Task*.

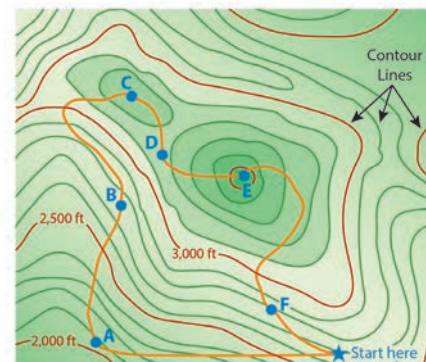
Name _____

Performance Task

1

You hike from Point A through Point F along the orange path shown on the map.

1. What is the distance in elevation between each contour line?
2. As you walk from A to C, are you walking uphill or downhill? Explain.



Daily Application Practice

Modeling Real Life, Dig Deeper, and other non-routine problems help students apply surface-level skills to gain a deeper understanding. These problems lead students to independent problem-solving.

5. **Modeling Real Life** You download 2 music videos, a TV series, and a movie for \$42.95 total. The TV series costs 2 times as much as the movie. How much does each music video cost?



6. **DIG DEEPER!** Which item costs more per ounce? How much more?



THE PROBLEM-SOLVING PLAN

1. Understand the Problem

Think about what the problem is asking, what information you know, and how you might begin to solve.

2. Make a Plan

Plan your solution pathway before jumping in to solve. Identify any relationships and decide on a problem-solving strategy.

3. Solve and Check

As you solve the problem, be sure to evaluate your progress and check your answers. Throughout the problem-solving process, you must continually ask, "Does this make sense?" and be willing to change course if necessary.

Problem-Solving Plan

Walk students through the Problem-Solving Plan, featured in many *Think and Grow* examples, to help students make sense of problems with confidence.