

## Comparing 1<sup>st</sup> and 2<sup>nd</sup> Edition Grade 1 Units: Where Is It Now?

The following describes the work of the second edition, in relation to the first edition. Note that, while many first edition activities are part of the second edition, they may be presented and used differently.

### **Unit 1: How Many of Each? (Addition, Subtraction, and The Number System 1)**

Investigation 1: Counting and Quantity	In addition to new activities (e.g. Collect 20 Together, Mystery Boxes, Ordering Numbers, Roll and Record, Heads and Tails, How Many Am I Hiding?), the work of this unit is based on <i>Mathematical Thinking at Grade 1</i> and <i>Building Number Sense</i> . In addition, three Classroom Routines are introduced: Morning Meeting, which includes some of the attendance work from Investigation 5 of <i>Mathematical Thinking at Grade 1</i> ; Start With/Get To, which is new; and Quick Images, which was introduced in <i>Building Number Sense</i> in the first edition.
Investigation 2: Counting and Comparing	
Investigation 3: Combining	
Investigation 4: Composing Numbers	

### **Unit 2: Making Shapes and Designing Quilts (2D Geometry)**

Investigation 1: Composing and Decomposing 2-D Shapes	This Investigation is based largely on Sessions 1-10 of <i>Quilt Squares and Block Towns</i> , and includes work with a revised version of the <i>Shapes</i> software. Additional work focuses on different ways to make the pattern block shapes.
Investigation 2: Describing and Sorting Shapes	Students sort Shape Cards as they did in Sessions 11 and 12 of <i>Quilt Squares and Block Towns</i> , but they also use Power Polygons, Geoboards and dot paper as they describe and compare 2D shapes, particularly quadrilaterals and triangles. The <i>Shapes</i> software presents familiar (Free Explore and Solve Puzzles) and new (Quick Images) activities.
Investigation 3: Quilts	This Investigation is based in large part on Sessions 13-15 of <i>Quilt Squares and Block Towns</i> and includes work with the revised <i>Shapes</i> software focused on quilt squares.

### Unit 3: Solving Story Problems (Addition, Subtraction, and the Number System 2)

Investigation 1: Combinations	This Investigation, which revisits and extends the Unit 1 work with How Many of Each? problems and with combinations and combining, is based on material from <i>Mathematical Thinking at Grade 1</i> and <i>Building Number Sense</i> . What’s new is a focus on strategies for finding many combinations of a number, and variations that encourage counting on.
Investigation 2: Introducing Subtraction	These Investigations focus on addition and subtraction through story problems (from <i>Building Number Sense</i> and <i>Number Games and Story Problems</i> ), and through games and activities, some of which are new (e.g. Roll and Record: Subtraction, Five-in-a-Row: Subtraction, and Today’s Number).
Investigation 3: Working with Addition and Subtraction	
Investigation 4: Counting Larger Amounts	This Investigation is based, in part, on Investigation 3 of <i>Building Number Sense</i> . Students also investigate (and analyze data about) the area of their feet and create a 100 chart by cutting a horizontal number line into rows of 10.

### Unit 4: What Would You Rather Be? (Data Analysis)

Investigation 1: Sorting	This Investigation is based in part on Investigation 5 of <i>Mathematical Thinking at Grade 1</i> and on Investigation 1 of <i>Survey Questions and Secret Rules</i> . In addition, students sort Power Polygons, shells, and objects in a teacher-made collection.
Investigation 2: Collecting and Representing Data	This Investigation is based in large part on Investigation 2 of <i>Survey Questions and Secret Rules</i> .
Investigation 3: Comparing Age Data	This Investigation is based, in part, on Investigation 4 of <i>Survey Questions and Secret Rules</i> .

### Unit 5: Fish Lengths and Animal Jumps (Measurement)

Investigation 1: Learning to Measure	Both Investigations are mostly new, although students measured with cubes, kid steps, and foot outlines in Investigation 3 of <i>Bigger, Taller, Heavier, Smaller</i> . Students iterate nonstandard units such as cubes, tiles, paper clips, and foot outlines to measure lengths. Two contexts—measuring fish to determine if they are “keepers” and the lengths of typical animal jumps to see which can jump the farthest—provide engaging real-world contexts for this work, and help students begin to consider the relationship between the size of the unit and the total number of units.
Investigation 2: Measuring Distances	

### Unit 6: Number Games and Crayon Puzzles (Addition, Subtraction, and the Number System 3)

Investigation 1: Combinations of Ten	This unit includes material from Investigations 2 and 4 of <i>Building Number Sense</i> and Investigations 1 and 3 of <i>Number Games and Story Problems</i> .
Investigation 2: Combinations of Numbers	
Investigation 3: Addition and Subtraction	

### Unit 7: Color, Shape, and Number Patterns (Patterns and Functions)

Investigation 1: Repeating Patterns	This Investigation is based, in part, on the work with repeating patterns that was found in Investigation 3 of <i>Mathematical Thinking at Grade 1</i> and in the work with clapping patterns found in the number units. It also includes material (e.g. Make a Train, Break a Train, What Comes Here?) from the first edition Kindergarten Unit <i>Pattern Trains and Hopscotch Paths</i> .
Investigation 2: Number Sequences	Most of this Investigation is new and focuses on three contexts—a penny jar, staircases, and shape patterns—that involve situations with a constant increase. The work with Staircases is based on work that was in the Kindergarten Unit <i>Pattern Trains and Hopscotch Paths</i> in the first edition.

### Unit 8: Twos, Fives, and Tens (Addition, Subtraction, and the Number System 4)

Investigation 1: Getting to 100	This Investigation is based on material from Investigation 3 of <i>Building Number Sense</i> and Investigation 2 of <i>Number Games and Story Problems</i> .
Investigation 2: Twos, Fives, and Tens	This Investigation is based in large part on Investigation 2 of <i>Number Games and Story Problems</i> .
Investigation 3: Tens	This Investigation revisits the Unit 6 work with combinations of 10, introduces Roll Tens ( <i>Number Games and Story Problems</i> ) and a new game called Ten Plus.

## Unit 9: Blocks and Boxes (3D Geometry)

Investigation 1: Comparing and Constructing 3D Shapes	This unit is, for the most part, Investigations 2 and 3 of <i>Quilt Squares and Block Towns</i> . It also includes Copying Cubes, from Investigation 1 of <i>Building Number Sense</i> .
Investigation 2: Building a Block Town	

### Classroom Routines

Morning Meeting	This is based in large part on the first edition Routine: Understanding Time and Changes. The Attendance activity is based in part on the first edition Counting Routine.
Start With/Get To	This is new.
Quick Images	While Quick Images was a first edition activity, including it as a Classroom Routine is new.
Quick Surveys	This Routine is based in part on the first edition Routine: Exploring Data.
Tell a Story	This is new.

### Comparing 1<sup>st</sup> and 2<sup>nd</sup> Edition Grade 1 Units: What's Gone?

The following first edition activities and/or Investigations no longer appear in the second edition of the Grade 1 *Investigations* curriculum. Note that some content has moved to other grade levels.

#### ***Mathematical Thinking at Grade 1 (Introduction)***

- Exploring Calculators. (There is no explicit use of calculators in Grade 1.)
- Patterns Around Us, A Pattern Exhibit. (These activities moved to Kindergarten.)
- Collect 15 Together. (This game is now in Kindergarten. First graders play Collect 20 Together.)
- Making Kid Pins.
- How We Got to School Today.

#### ***Building Number Sense (The Number System)***

- Counting Pattern Blocks. (However, a similar activity appears in the second edition geometry unit.)
- Easy and Hard Quick Images.
- How Many Dots?
- Numbers on Our Fingers.
- On and Off. (The second edition includes a variation of this game, called Heads and Tails.)
- Towers of 10. (The second edition includes a variation of this game, called Three Towers.)
- Which Holds More?
- Exploring Calculators. (There is no explicit use of calculators in Grade 1.)
- A Counting Story and A Class Counting Adventure (Excursion)

***Survey Questions and Secret Rules (Collecting and Sorting Data)***

- The work with Attribute Blocks. (First graders use Power Polygons in the second edition.)
- The work with lids. (This has been replaced with teacher-created collections of objects.)
- Not-Boxes.
- Investigation 3.
- Family Portraits, Ordering People by Age, and Who's the Mystery Person?
- A Most Unusual Day.

***Quilt Squares and Block Towns (2-D and 3-D Geometry)***

- Drawing Classroom Objects. (However, students do draw 2-D and 3-D shapes in the second edition.)

***Number Games and Story Problems (Addition and Subtraction)***

- Quick Image Picture of 10.
- On and Off. (The second edition includes a variation of this game, called Heads and Tails.)
- Total of 10. (In the second edition this is called Make 10.)
- Number Combination Stories (Excursion)
- Collect 25¢. (This game, and work with coin values and equivalencies, has moved to Grade 2 in the second edition. In the second edition, the work in first grade is on recognizing and identifying coins.)
- Counting by Kangaroos (Excursion)
- Combining with Unknown Change. (In the second edition, students do activities and games (e.g. Counters in a Cup) that focus on the mathematics of finding a missing part or an unknown change.)

***Bigger, Taller, Heavier, Smaller (Measuring)***

- Investigation 1.
- Investigation 2. (Students investigate area through the pattern block puzzles in the second edition 2D geometry unit.)
- Much of Investigation 3. (Work with direct comparison is now part of the Kindergarten units about measurement and the number system. Instead of hands, students use cubes, tiles, paper clips, and foot outlines as nonstandard units.)

***Classroom Routines***

- The Guess My Rule activities that were part of Exploring Data. (While no longer a Classroom Routine, Guess My Rule activities are included in the first grade curriculum.)