

Comparing 1st and 2nd Edition Grade 3 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: Trading Stickers, Combining Coins (Addition, Subtraction, and The Number System)

Investigation 1: Hundreds, Tens, and Ones	Most of the work of this Investigation is new. This new work includes the introduction of a context for modeling the base-10 structure of our number system—stickers that come singly, in strips of 10, or in sheets of 100. Students play <i>Capture 5</i> , moved from the Grade 2 unit <i>Putting Together and Taking Apart</i> .
Investigation 2: Working With 100	The work with Addition Cards comes from <i>Mathematical Thinking at Grade 3</i> and is now intended as a review of the addition combinations work in Grade 2. <i>Make a Dollar</i> , played with coin cards, is based on work from <i>Mathematical Thinking at Grade 4</i> . Other activities, such as <i>Close to 100</i> , are based on work from <i>Combining and Comparing</i> .

Unit 2: Surveys and Line Plots (Data Analysis)

Investigation 1: Representing and Describing Categorical Data	Most of the work of this Investigation is new.
Investigation 2: Representing and Describing Numerical Data	The work of this Investigation is new. Students develop survey questions that will result in numerical data, carry out their surveys, and represent and describe the data they collect.
Investigation 3: Collecting and Analyzing Measurement Data	The work of this Investigation, such as <i>Blowing a Pattern Block</i> and <i>About How Far Can a Third Grader Jump?</i> , is based on material in <i>From Paces to Feet</i> .

Unit 3: Collections and Travel Stories (Addition, Subtraction, and The Number System)

Investigation 1: Building 1,000	In addition to new material, some of this Investigation is based on work in Investigation 3 of <i>Landmarks in the Hundreds</i> .
Investigation 2: Addition	Much of this Investigation is new. Work includes Addition Starter Problems and <i>Capture on the 300 Chart</i> (a variation of <i>Capture 5</i>).
Investigation 3: Finding the Difference	The content of this Investigation is new. Work includes Making Subtraction Cards, <i>How Far From 100?</i> , and Travel Problems in which students <i>add up</i> or <i>subtract back</i> to find the difference between numbers.
Investigation 4: Subtraction Stories	The work of this Investigation, which focuses on visualizing, representing, and solving comparison and removal problems, is new.

Unit 4: Perimeter, Angles, and Area (2D Geometry and Measurement)

Investigation 1: Linear Measurement	The content of this Investigation, which focuses on linear measurement with both U.S standard and metric units and understanding and finding perimeter, is new.
Investigation 2: Understanding and Finding Area	This Investigation is based on the work with Tetrominoes and area in <i>Flips, Turns, and Area</i> .
Investigation 3: Triangles, Quadrilaterals, and Angles	In addition to new content, in which students consider the measure of angles relative to 90° , much of this Investigation is based on the Building Polygons work from Investigation 2 of <i>Exploring Solids and Boxes</i> .

Unit 5: Equal Groups (Multiplication and Division)

Investigation 1: Things That Come in Groups	This Investigation is based on using groups of objects to understand multiplication from <i>Things That Come in Groups</i> .
Investigation 2: Skip Counting and 100 Charts	In addition to new content (Solving Related Story Problems), this Investigation is based on the work of highlighting multiples on 100s charts and skip counting from <i>Things That Come in Groups</i> .
Investigation 3: Arrays	In addition to new content (Making Multiplication Cards), this Investigation is based on the array work from <i>Things That Come in Groups</i> .
Investigation 2: Understanding Division	In addition to new content (<i>Missing Factors</i> , a variation of <i>Factor Pairs</i>), this Investigation is based on the work of the relationship between multiplication and division in <i>Things That Come in Groups</i> .

Unit 6: Stories, Tables, and Graphs (Patterns, Functions, and Change)

Investigation 1: Changes in Temperature Over Time	This Investigation, which focuses on using graphs to represent changes over time (using the context of temperature), is new.
Investigation 2: Cube Train Patterns	This Investigation, in which students analyze number sequences generated by repeating patterns, is new.
Investigation 3: Representing Constant Change	This Investigation is new. Students use the fantasy context of Magic Marbles of Rhomaar to describe and represent a constant rate of change and to compare related situations of constant change.

Unit 7: Finding Fair Shares (Fractions)

Investigation 1: Sharing Brownies	This unit is based on <i>Fair Shares</i> . The work with finding and naming fractional parts of groups and with decimals is extended.
Investigation 2: Many Ways to Make a Share	
Investigation 2: Introduction to Decimals	

Unit 8: How Many Hundreds? How Many Miles? (Addition, Subtraction, and The Number System)

Investigation 1: Numbers in the Hundreds	In addition to new material including Related Subtraction Problems and <i>Capture from 300 to 600</i> (a variation of <i>Capture 5</i> , some of the work of this Investigation is based on the addition and subtraction work from <i>Combining and Comparing</i> .
Investigation 2: Addition Strategies	The content of this Investigation, which includes Addition Starter Problems and categorizing addition strategies (including creating an equivalent problem), is new.
Investigation 3: Subtraction	This Investigation is new and focuses on the development of efficient strategies for solving subtraction problems (comparison, removal, and missing part) with 3-digit numbers.

Unit 9: Solids and Boxes (3D Geometry and Measurement)

Investigation 1: Sorting, Describing, and Building Solids	This Investigation is based in on the work of describing and building solids from <i>Exploring Solids and Boxes</i> .
Investigation 2: Making Boxes	This Investigation is based on material from Investigation 3 of <i>Exploring Solids and Boxes</i> .
Investigation 3: How Many Cubes in a Box?	In addition to new content (16-Cube Boxes), this Investigation is based on material from Investigation 4 of <i>Exploring Solids and Boxes</i> .

Ten-Minute Math and Classroom Routines

Counting Around the Class	This is the same as the first edition Ten-Minute Math, Counting Around the Class.
Guess My Rule	This is the same as the first edition Ten-Minute Math, Guess My Rule.
More or Less?	This is new.
Practicing Place Value	This is new.
Quick Images	This is the same as the first edition Ten-Minute Math, Quick Images.
Today's Number	This is the same as the first edition Ten-Minute Math, Today's Number.
What Time Is It?	This is new.
Class Collection (Routine)	This is new.
What's the Temperature? (Routine)	This is new.

Comparing 1st and 2nd Edition Grade 3 Units: What's Gone?

The following first edition activities and/or Investigations no longer appear in the second edition of the Grade 3 *Investigations* curriculum. Note that some content has moved to other grade levels.

Mathematical Thinking at Grade 3 (Introduction)

- Plus-Minus-Stay the Same (Adding and subtracting 10 and multiples of 10 remains a major focus in Grade 3.)
- Doubles and Halves (Work on symmetrical pattern block designs and the focus on doubles addition combinations has been moved to Grade 2.)
- Exploring Odds and Evens (This work has been moved to Grade 2.)

Thins That Come in Groups (Multiplication and Division)

- Writing Riddles for Our Pictures
- (Excursion) Each Orange Had 8 Slices
- *Cover 50* (This game has been modified and renamed *Multiple Turn Over*. It now appears in Grade 4.)
- Calculating Savings
- Planning a Survey, Data Tables and Line Plots (Work of this type is now found in the data analysis unit, *Surveys and Line Plots*.)

Flips, Turns, and Area (2-D Geometry)

- *Tumbling Tetrominoes*, on and off computer
- Rectangles with Different Shapes (Work of this type is now found in the Grade 4 2-D Geometry and Measurement unit, *Size, Shape, and Symmetry*.)
- Assessment: Puzzle Pieces

From Paces to Feet (Measuring and Data)

- Investigation 1: Measuring with Paces and Steps
- Investigation 2: Some of this work (the need for a standard unit of measure, Assessment: The King's Foot, and the introduction to U.S standard and metric measurement units and tools) has been moved to the measurement unit in Grade 2, *Measuring Length and Time*.
- Investigation 3: Do Our Chairs Fit Us?
- Investigation 4: Measuring Project: Balobbyland

Landmarks in the Hundreds (The Number System)

- Factors of 100, Making a Picture of 100 (Work with the composition of 100 is still central.)
- Dividing a Dollar (Work with coins now appears in *Trading Stickers, Combining Coins*.)
- Hundreds from Home
- Factors of Numbers Greater Than 100 (This work appears in Grade 4.)
- Calculator Skip Counting
- Assessment: How Many in 500?
- Money Problems, More Money Problems

Up and Down the Number Line (Changes)

- The activities in this unit are no longer part of the Grade 3 curriculum. (However, number lines are a central part of the three addition and subtraction units. Work with positive and negative numbers, in the context of temperature, appears in the unit *Surveys and Line Plots*.)

Combining and Comparing (Addition and Subtraction)

- Investigation 1: Comparisons with Record Numbers, Investigation 2: How Much Heavier or Lighter? and Investigation 5: Calendar Comparisons (However, understanding comparison and solving subtraction problems that involve comparison remain major focuses of Grade 3 and work of this type appears in all three addition and subtraction units.)
- Investigation 3: Adding with Money, Inches, and Time (However, problems involving adding and subtracting with money now appear in all three addition and subtraction units. The Grade 3 Ten-Minute Math activity, *What Time is It?*, focuses on naming, notating, and telling time on a digital or analog clock and determining intervals of time to the minute.)
- Handfuls of Beans

Turtle Paths (2-D Geometry)

- Much of the work of this unit is now provided as part of the *LogoPaths* software package. Introduction of specific *LogoPaths* games and activities (e.g., *Feed the Turtle*, *Missing Measure*, and *200 Steps*) are included as optional in the 2-D Geometry and Measurement unit, *Perimeter, Angles, and Area*.

Fair Shares (Fractions)

- Backward Sharing

Exploring Solids and Boxes (3-D Geometry)

- Making a Box City

Ten-Minute Math

- Calendar Math (This has been replaced with Today's Number.)
- Estimation and Number Sense (This has been replaced with More or Less?.)
- Likely or Unlikely?
- What's Likely?
- Length and Perimeter