



Investigations

in Number, Data, and Space[®]

Comparing 1st and 2nd Edition Grade 5 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: Number Puzzles and Multiple Towers (Multiplication and Division 1)

Investigation 1 Finding Factor Pairs and Prime Numbers	This Investigation includes the work with factors and number puzzles from <i>Mathematical Thinking at Grade 5</i> . There are new sessions on prime factorization.
Investigation 2 Multiplication Strategies	These Investigations are based on the work of multiplication and division from <i>Mathematical Thinking at Grade 5</i> and <i>Building on Numbers You Know</i> , including cluster problems and multiplication and division strategies, with a greater emphasis on using contexts and representations. Two new games are included: <i>Multiplication Compare</i> and <i>Division Compare</i> .
Investigation 3 Division Strategies	

Unit 2: Prisms and Pyramids (3D Geometry and Measurement)

Investigation 1 Finding the Volume of Boxes	This unit includes most of the work on volume from <i>Containers and Cubes</i> .
Investigation 2 Using Standard Cubic Units	
Investigation 3 Volume Relationships Among Solids	

Unit 3: Thousands of Miles, Thousands of Seats (Addition, Subtraction, and the Number System)

Investigation 1 Using Place Values	This Investigation 1 is based on the work students did with the 10,000 charts and playing Close to 1,000 in <i>Mathematical Thinking at Grade 5</i> . There is increased emphasis on adding and subtracting multiples of 10, 100, and 1,000 from larger numbers.
Investigation 2 Studying Subtraction	The work in these Investigations is new, and builds upon the addition and subtraction work in grades K-4.
Investigation 3 Adding and Subtracting Large Numbers	

Unit 4: What's that Portion? (Fractions and Percents 1)

Investigation 1 Using Percents and Fractions	These Investigations include most of the work on fractions and percents from <i>Name That Portion</i> .
Investigation 2 Comparing and Ordering Fractions	
Investigation 3 Adding and Subtracting Fractions	This Investigation includes all the addition of fraction work from <i>Name that Portion</i> , such as clock fractions and fraction tracks. There is additional work on adding and subtracting fractions, using models and representations.

Unit 5: Measuring Polygons (2-D Geometry and Measurement)

Investigation 1 Polygons: Names, Properties, and Angles	This Investigation is based on the work with polygons, particularly triangles and quadrilaterals; and finding angle sizes in Power Polygons from the unit <i>Picturing Polygons</i> . Geo-Logo activities have been modified for use in the new software, <i>LogoPaths</i> .
Investigation 2 Finding Perimeter and Area of Related Rectangles	This Investigation is new.
Investigation 3 Similarity	This Investigation is based on the similarity work from <i>Picturing Polygons</i> .

Unit 6: Decimal Grids and Number Lines (Decimals, Fractions and Percents 2)

Investigation 1 Understanding and Comparing Decimals	This unit includes the work with decimals from <i>Name That Portion</i> . Many of the activities are the same but the work on adding and subtracting decimals has been expanded.
Investigation 2 Adding Decimals	

Unit 7: How Many People? How Many Teams? (Multiplication and Division 2)

Investigation 1 Equivalence in Multiplication and Division	This Investigation is new.
Investigation 2 Reviewing Multiplication Strategies	These Investigations are based on the multiplication and division work in <i>Building on Numbers You Know</i> , including “How Did I Solve It?” problems. Student work with larger numbers, and their work with division is extended.
Investigation 3 Division Strategies and Notation	
Investigation 4 Using the Operations	This Investigation is based on the “Exploring Operations” Investigation in <i>Building on Numbers You Know</i> , but uses a new context—Field Day.

Unit 8: Growth Patterns (Patterns, Functions, and Change)

Investigation 1 Height and Growth	This unit is based on the same ideas from <i>Patterns of Change</i> , including describing and representing situations where the rate of change is constant or non-constant, but uses different contexts. Some of the tile activities (squares, staircase) from <i>Patterns of Change</i> are used.
Investigation 2 Growth Patterns	

Unit 9: How Long Can You Stand on One Foot? (Data Analysis and Probability)

Investigation 1 Comparing Balancing Data	This Investigation includes the data work Standing On One Foot and Mystery Balancers from <i>Data: Kids, Cats, and Ads</i> .
Investigation 2 Collecting Data from Experiments	While this Investigation includes data ideas from <i>Data: Kids, Cats, and Ads</i> (such as creating a survey question, sample size, data representations), this Investigation is new.
Investigation 3 Fair and Unfair Games	This Investigation includes the probability experiments with spinners and probability work with “fair games” from <i>Between Never and Always</i> .

Ten-Minute Math

Estimation and Number Sense	This Ten- Minute Math is based on the first edition activity the <i>Estimation Game</i> from <i>Building on Numbers You Know</i> , and the first edition Ten-Minute Math, Closest Estimate.
Guess My Rule	This is new as a Ten-Minute Math and is based on the activity in <i>Name That Portion</i> .
Number Puzzles	This is new as a Ten-Minute Math and is based on the Number Puzzles activity.
Practicing Place Value	This is new.
Quick Images	This is the same as the first edition Ten-Minute Math, Quick Images. Seeing Numbers, has been incorporated as part of this Ten-Minute Math.
Quick Survey	This is the same.

Comparing 1st and 2nd Edition Grade 5 Units: What's Gone?

The following first edition activities and/or Investigations no longer appear in the second edition of the Grade 5 *Investigations* curriculum. Note that some content has moved to other grade levels.

Mathematical Thinking at Grade 5 (Introduction, Landmarks in the Number System)

- Factor Pairs from 100 to 1,000
- Exploring Rectangles of 1,000 Squares
- Factor Pairs of 1,100
- Close to 0

Picturing Polygons (2-D Geometry)

- Is it a Polygon? and Making Polygons (Investigation 1) has been moved to the Grade 4 2-D Geometry and Measurement unit.
- Polygon Pictures with Coordinate Geometry
- Much of Sorting Polygons has been moved to Grades 3 and 4
- Patterns of Angles and Turns
- Software: Polygons with Coordinates, Polygons with Moves and Turns, Guess and Test Polygons

Name that Portion (Fractions, Percents, and Decimals)

- Fraction Strips
- Investigation 4: Data and Percents in Circle Graphs (Excursion)

Between Never and Always (Probability)

- Creating a Likelihood Line has been moved to the Grade 4 Data Analysis and Probability unit
- Testing Guessing Skills (bottle caps), Guessing Skills Distributions
- The Scoring Options Game
- Rock, Paper, Scissors

Building on Numbers You Know (Computation and Estimation Strategies)

- The Digits Game
- The Ringle and Zennie are no longer used as contexts
- Investigation 4: A Million Dots (Excursion)
- The Estimation Game is now a Ten-Minute Math activity, used throughout the year

Measurement Benchmarks (Estimating and Measuring)

- Sessions from Investigation 1 (Using Length Benchmarks, Using Measuring Tools, Measuring and Comparing, Mapping 100 Meters) have been modified and are now in the Grade 4 2-D Geometry and Measurement unit
- Investigation 2: Measures of Weight and Liquid Volume
- Investigation 3: It's About Time

Patterns of Change (Tables and Graphs)

- Investigation 2: Motion Stories, Graphs, and Tables
- Investigation 3: Computer Trips on Two Tracks
- Software: Trips

Containers and Cubes (3-D Geometry: Volume)

- Investigation 1, The Packaging Factory has been modified and moved to the Grade 4 3-D Geometry and Measurement unit. (Part of it remains in the Gr 5 unit as review)
- More Packing Problems
- Measuring the Space in Other Classrooms (excursion)
- How Do the Heights Compare? (excursion)
- Building Models

Data: Kids, Cats, and Ads (Sampling and Comparing Data)

- Investigation 2: Examining Cats
- Investigation 3: Sampling Ourselves
- Investigation 4: A Sample of Ads
- Investigation 5: Researching Play Injuries

Ten-Minute Math

- Counting Around the Class
- Guess My Number, Guess My Unit
- What Is Likely?
- Graph Stories
- Volume and Surface Area