

**A Correlation of**



**to the**

**Louisiana  
Department of Education  
Mathematics—Grade Level Expectations  
Grade Two**



**C/M-92\_2**

**Book Title:** Investigations in Number, Data, & Space    **Grade Level:** Two

**Publisher:** Pearson Scott Foresman    **Subject/Course:** Mathematics

### Grade 2

#### **Number and Number Relations**

**In problem-solving investigations, students demonstrate an understanding of the real number system and communicate the relationships within that system using a variety of techniques and tools.**

**Students use estimation, mental arithmetic, number lines, graphs, appropriate models, manipulatives, calculators, and computers as they investigate problems involving whole numbers.**

<b>GRADE LEVEL EXPECTATIONS</b>	<b>CORRELATION NOTATIONS</b>
1. Model, read, and write place values for numbers through 999 in word, standard, and expanded form (N-1-E)	Coins, Coupons, and Combinations Investigation 3: Sessions 1, 4–5 Investigation 4: Sessions 1–4 Putting Together and Taking Apart Investigation 1: Sessions 1, 4–5 Investigation 2: Sessions 1–7 Investigation 4: Sessions 2–4 Investigation 5: Sessions 2–3, 4–5, 6
2. Model the concepts of thirds, fourths, fifths and sixths using regions, sets, and fraction words (e.g., one-third, three-fourths, five-sixths) (N-1-E)	Shapes, Halves, and Symmetry Investigation 3: Sessions 1–8
3. Make reasonable estimates of the number of objects in a collection with fewer than 100 objects (N-2-E)	Estimating by using a referent is introduced in Grade 3. See Mathematical Thinking at Grade 3.
4. Count and write the value of amounts of money up to \$1.00 using ¢ and \$ (N-2-E) (N-6-E) (M-1-E) (M-5-E)	Mathematical Thinking at Grade 2 Investigation 4: Sessions 2–4 Coins, Coupons, and Combinations Investigation 2: Sessions 6–9
5. Read, write, compare, and order whole numbers through 999 using words, number lines, and models (N-3-E) (N-1-E)	Coins, Coupons, and Combinations Investigation 4: Sessions 1–4 Putting Together and Taking Apart Investigation 2: Sessions 3–7 Investigation 4: Session 1

GRADE LEVEL EXPECTATIONS	CORRELATION NOTATIONS
6. From a given number, count forward and backward and count to 100 by 2s (N-3-E) (N-1-E) (N-4-E)	Mathematical Thinking at Grade 2 Investigation 2: Sessions 6 Investigation 4: Sessions 1–4 Investigation 5: Sessions 4–5
7. Know all basic facts for addition and subtraction and use them to solve real-life problems (N-5-E) (N-6-E) (N-7-E) (N-8-E) (N-9-E)	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1–5, 8 Session 6: Dialogue Box, page 45 Investigation 4: Session 1 Investigation 5: Session 3 Coins, Coupons, and Combinations Investigation 1: Sessions 1–6, 10–11 Sessions 8–9: Activity, pages 42–44 Putting Together and Taking Apart Investigation 1: Sessions 1–6 Investigation 2: Sessions 1–7 Investigation 3: Sessions 1–5 Investigation 4: Sessions 1–4 Investigation 5: Sessions 1–8
8. Recognize, select, connect, and use operations, operational words and symbols (+, –) for addition (join, part/part/whole) or subtraction (take away, comparison, missing addend, and set/subset) situations (N-6-E) (N-5-E)	Mathematical Thinking at Grade 2 Investigation 2: Session 1, 4–6 Investigation 3: Session 5 Investigation 4: Sessions 1, 5 Coins, Coupons, and Combinations Investigation 1: Sessions 2–11 Investigation 2: Session 7–9 Investigation 3: Sessions 1–5 Investigation 4: Sessions 2–5 Putting Together and Taking Apart Investigation 1: Sessions 1–4 Investigation 2: Sessions 1–4, 7 Investigation 3: Sessions 1–5 Investigation 4: Sessions 1–5 Investigation 5: Sessions 5–4, 7 How Long? How Far? Investigation 1: Sessions 5–7 Classroom Routines: Today's Number

GRADE LEVEL EXPECTATIONS	CORRELATION NOTATIONS
<p>9. Add and subtract 1- and 2-digit numbers (N-6-E) (N-7-E)</p>	<p>Mathematical Thinking at Grade 2  Investigation 2: Session 1, 4–6  Investigation 3: Session 5  Investigation 4: Sessions 1, 5  Coins, Coupons, and Combinations  Investigation 1: Sessions 2–11  Investigation 2: Session 7–9  Investigation 3: Sessions 1–5  Investigation 4: Sessions 2–5  Putting Together and Taking Apart  Investigation 1: Sessions 1–4  Investigation 2: Sessions 1–4, 7  Investigation 3: Sessions 1–5  Investigation 4: Sessions 1–5  Investigation 5: Sessions 5–4, 7  How Long? How Far?  Investigation 1: Sessions 5–7  Classroom Routines: Today’s Number</p>
<p>10. Round numbers to the nearest 10 or 100 and identify situations in which rounding is appropriate (N-7-E) (N-9-E)</p>	<p>Rounding is introduced in Grade 3.</p>
<p>11. Use the concept of one-to-several correspondence to trade single items for a greater quantity of items with unequal value (1 nickel for 5 pennies, 1 dime for 2 nickels) (N-9-E)</p>	<p>Mathematical Thinking at Grade 2  Investigation 4: Session 2  How Long? How Far?  Investigation 1: Sessions 2, 3, 4</p>

## Algebra

In problem-solving investigations students demonstrate an understanding of concepts and processes that allow them to analyze, represent, and describe relationships among variable quantities and to apply algebraic methods to real-world situations.

Students use manipulatives, models, graphs, tables, technology, number sense, and estimation as they investigate problems involving the concepts and application of algebra.

GRADE LEVEL EXPECTATIONS	CORRELATION NOTATIONS
12. Use number sentences to represent real-life problems involving addition and subtraction (A-1-E) (A-2-E)	Putting Together and Taking Apart Investigation 1: Sessions 1–2, 5–6 Investigation 3: Sessions 2–5 Investigation 4: Sessions 2–4 Investigation 5: 1–3 Classroom Routines: Writing equations for the number of days in school
13. Find the missing number in an equation involving addition or subtraction (e.g., $\# + 4 = 7$ , $8 - \# = 3$ ) (A-2-E) (N-4-E)	Putting Together and Taking Apart Investigation 3: Sessions 2, 3–5 Investigation 5: Sessions 1–3 Classroom Routines: Writing equations for the number of days in school

## Measurement

In problem-solving investigations, students demonstrate an understanding of the concepts, processes, and real-life applications of measurement.

Students use number sense, estimation, appropriate manipulatives, tools, and technology as they investigate problems involving measurement.

GRADE LEVEL EXPECTATIONS	CORRELATION NOTATIONS
<p>14. Measure and appropriately label measures of length and perimeter (i.e., inch, centimeter, foot), capacity (i.e., cup, quart, liter), and weight/mass (i.e., pound, kilogram) (M-1-E)</p>	<p>In Grade 2, students explore linear measurement by using direct and indirect comparison, nonstandard units, and <i>GeoLogo</i> software. They construct, compare, and measure simple paths in both on- and off-computer activities. In the Grade 1 curriculum, students lift and balance familiar objects to develop a sense of weight, and use a balance to compare weights. In the Grade 3 curriculum, students learn to weigh objects with a pan balance.</p> <p>How Long? How Far?            Investigation 1: Sessions 1–8            Investigation 2: Sessions 4–5</p> <p>Related content in Grade 3:            Exploring Solids and Boxes            Investigation 4: Session 1            Investigation 5: Sessions 1–4            Combining and Comparing            Investigation 2: Sessions 1–2</p>
<p>15. Read a thermometer in degrees Fahrenheit and Celsius and interpret the temperature (M-1-E)</p>	<p>This expectation can be introduced in Grade 1 during Classroom Routines: Understanding Time and Changes (weather).</p>
<p>16. Tell time to the nearest 5 minutes, and identify the time one hour before or after a given time (M-1-E) (M-3-E)</p>	<p>All curriculum units:            Appendix: About Classroom Routines:            Time and Time Again            Timelines and Rhythm Patterns            Investigation 1: Sessions 4–5            Investigation 2: Sessions 4–5</p>

GRADE LEVEL EXPECTATIONS	CORRELATION NOTATIONS
17. Select and use appropriate tools and units to measure length, time, capacity, and weight (e.g., scales for pounds and kilograms; rulers for inches and centimeters; measuring containers for cup, quarts, and liters) (M-2-E)	Nonstandard measurements are used at this grade level. How Long? How Far? Investigation 1: Sessions 1–8 Investigation 2: Sessions 1–8
18. Use non-standard units to cover a given region (M-2-E)	Shapes, Halves and Symmetry Investigation 2: Sessions 2, 3, 4–5, 6 Mathematical Thinking at Grade 2 Investigation 3: Session 6
19. Estimate length in standard units (inch, foot, and centimeter) (M-3-E)	Standard units are introduced in Grade 3.
20. Compare units within the <b>same</b> system (inch is shorter than a foot, minute is shorter than an hour, day is shorter than a month, cup holds less than a quart) (M-3-E)	Standard units are introduced in Grade 3.

## Geometry

In problem-solving investigations, students demonstrate an understanding of geometric concepts and applications involving one-, two-, and three-dimensional geometry, and justify their findings.

Students use number sense, estimation, models, drawings, manipulatives, and technology as they investigate problems involving geometric concepts.

GRADE LEVEL EXPECTATIONS	CORRELATION NOTATIONS
21. Compare and contrast 3-dimensional shapes (i.e., sphere, cube, cylinder, cone, prism, pyramid) according to their attributes (e.g., number of faces, shape of faces) (G-2-E)	Mathematical Thinking at Grade 2 Investigation 3: Sessions 1–5
22. Identify a reduction or enlargement of a given shape (G-2-E)	Shapes, Halves and Symmetry Investigation 3: Session 6
23. Identify congruent 3-dimensional solids in a variety of positions and orientations (G-3-E) (G-4-E) (G-2-E)	Shapes, Halves and Symmetry Investigation 3: Sessions 1–2
24. Identify and draw horizontal and vertical line segments (G-5-E)	This expectation is addressed in Grade 3.



## Data Analysis, Probability, and Discrete Math

In problem-solving investigations, students discover trends, formulate conjectures regarding cause-and-effect relationships, and demonstrate critical thinking skills in order to make informed decisions.

Students use collection and organizational techniques, number sense, estimation, manipulatives, and technology as they investigate problems involving data.

GRADE LEVEL EXPECTATIONS	CORRELATION NOTATIONS
25. Collect and organize data using observations, surveys, and experiments (D-1-E)	Coins, Coupons, and Combinations Investigation 2: Sessions 2–5, 10 Does it Walk, Crawl, or Swim? Investigation 1: Sessions 1–3 Investigation 4: Sessions 1–3 How Many Pockets? How Many Teeth? Investigation 1: Sessions 2–3 Investigation 2: Sessions 1–5 Investigation 3: Sessions 2–4 Classroom Routine: Keeping track of the number of days in school, Collecting and recording data about pockets
26. Construct and read line plots and tables (D-2-E)	Mathematical Thinking at Grade 2 Investigation 2: Session 6 Investigation 5: Sessions 1–2 Does it Walk, Crawl, or Swim? Investigation 1: Sessions 1–3 Investigation 2: Sessions 3–4 Investigation 3: Sessions 1–3 How Many Pockets? How Many Teeth Investigation 1: Sessions 1–5 Investigation 2: Sessions 1–5 Investigation 3: Sessions 1–5
27. Interpret pictographs in which each picture represents more than one object (D-2-E)	This investigation can be used to introduce this expectation. Mathematical Thinking at Grade 2 Investigation 5: Session 6
28. Generate questions that can be answered by collecting and analyzing data (D-3-E)	How Many Pockets? How Many Teeth Investigation 3: Session 1

<b>GRADE LEVEL EXPECTATIONS</b>	<b>CORRELATION NOTATIONS</b>
29. Solve logic problems involving two sets by using elementary set logic (i.e., <i>and</i> , <i>or</i> , and <i>is/is not</i> statements) (D-3-E)	Does it Walk, Crawl, or Swim? Investigation 1: Session 6 Investigation 2: Sessions 1–4 Investigation 3: Sessions 1–3 Investigation 4: Sessions 1–3

### **Patterns, Relations, and Functions**

**In problem-solving investigations, students demonstrate an understanding of patterns, relations, and functions that represent and explain real-world situations.**

**Students use number sense, estimation, manipulatives, drawings, tables, graphs, formulas, and technology as they investigate problems involving patterns, relations, and functions.**

<b>GRADE LEVEL EXPECTATIONS</b>	<b>CORRELATION NOTATIONS</b>
30. Recognize, extend, create, and explain patterns of addition and subtraction as represented in charts and tables and in varied forms of skip-counting (P-1-E) (P-2-E)	Mathematical Thinking at Grade 2 Investigation 4: Sessions 2–4 Coins, Coupons, and Combinations Investigation 1: Session 10 Investigation 2: Sessions 1, 4–5 Investigation 4: Sessions 2–4 Putting Together and Taking Apart Investigation 2: Sessions 1–2
31. Recognize, extend, create, and explain patterns that involve simple rotations or size changes with geometric objects (P-1-E) (P-2-E)	These activities involving symmetry can be adapted to meet this expectation. Shapes, Halves, and Symmetry Investigation 4: Sessions 1–7 See also, Grade 3.
32. Recognize and apply patterns in problem-solving in other content areas and real-life situations (P-3-E) (N-9-E)	Coins, Coupons, and Combinations Investigation 1: Session 10 Investigation 2: Sessions 1, 4–5 Investigation 4: Sessions 2–4 Timelines and Rhythm Patterns Investigation 2: Sessions 1–5