

## Chapter 11: Curriculum for Grade 4

### Part A. Correlation of Objectives with Recommended Textbooks

The following pages show how resources from *Investigations in Number, Data, and Space* (“Investigations”) and Scott Foresman Addison Wesley (“SFAW”) align with the TEAM-Math and Alabama Course of Study objectives.

Abbreviations for units in *Investigations in Number, Data, and Space* follow:

- LT = “Landmarks in the Thousands”
- MMLN = “Money, Miles, and Large Numbers”
- 34LS = “3 out of 4 Like Spaghetti”
- DSEP = “Different Shapes, Equal Pieces”
- AS = “Arrays and Shares
- PG = “Packages and Groups”
- SD = “Shape of the Data”
- COT = “Changes Over Time”
- SS = “Sunken Ships and Grid Patterns”
- S and S = “Seeing Solids and Silhouettes”

#### NUMBER STRAND – Grade 4

| Alabama Course of Study  | TEAM-Math   | Investigations                                  | SFAW                 |
|--|---|---|----------------------|
| 1. Demonstrate number sense by comparing and ordering decimals to hundredths and whole numbers to 999,999. <ul style="list-style-type: none"> <li>a. Identifying a number when given a pictorial representation of tenths and hundredths or groups of ones, tens, hundreds, and thousands</li> <li>b. Writing a number in expanded notation through the hundred-thousands</li> <li>c. Determining the place value of a digit in a whole number through the hundred-thousands and in a decimal to the hundredths</li> </ul> 2. Write money amounts in words and dollar-and-cent notation. <ul style="list-style-type: none"> <li>a. Identifying equivalent units of money</li> </ul> 3. Rename improper fractions as mixed numbers and mixed numbers as improper fractions. <ul style="list-style-type: none"> <li>a. Using a number line to simplify, compare, and order fractions and mixed numbers</li> </ul> 8. Recognize equivalent forms of commonly used fractions and decimals. | N1. Order, compare...   |   |                      |
|  | a. Compare, order, and expand whole numbers to millions   | LT:1:1,2,3                                      | 1:5; 3:15<br>11:3,15 |
|  | b. Understand and demonstrate place value from hundredths through hundred thousands using words, models, and pictorial representation, including money in dollars and cents | LT:1:1,2,3; 2:1; 3:1,2; 4:1<br>MMLN:1:3,4,5     | 1: 4,9,10,12<br>11:1 |
|  | c. Determine place value in a decimal through hundredths  |   | 1: 1<br>11:2         |
|  | d. Demonstrate an understanding and use of equivalency in fractions and decimals  | 34LS:2:2,3<br>DSEP:1:2,3,4,5<br>2:1,2,3,4 3:1,2 |                      |
|  | e. Rename improper fractions as mixed numbers and mixed numbers as improper fractions   | DSEP:2:3,4 3:1,2                                | 9: 9,10,11,14,       |
|  | f. Demonstrate and understand addition and subtraction of fractions with like and unlike denominators   | 34LS:3:3<br>DSEP:1:5                            | 10:2,12,13           |

| Alabama Course of Study   | TEAM-Math   | Investigations   | SFAW  |
|---|---|--|---|
| 6. Solve problems, including word problems, that involve addition and subtraction of four-digit numbers with and without regrouping.<br>a. Estimating sums and differences of whole numbers by using appropriate strategies such as rounding, front-end estimation, and compatible numbers<br>b. Adding and subtracting decimals and money amounts<br>c. Demonstrating computational fluency in multiplication and division fact families through 12  | N2. Computation   |  |   |
|   | a. Demonstrate computational fluency in basic addition, subtraction, multiplication, and division | LT:2:2,3,4,5<br>MMLN:1:1,2,3,4,5,6,7,8<br>2:1,2; 3:1,2,3,4<br>AS:1:3; 2:5,6 3:1  | 2:1,2; 3:1,8  |
|   | b. Regroup in subtraction and addition problems with hundreds, through hundred thousands          | LT:3:3,4,5 4:2,3<br>MMLN:1:6,7,8 3:2,3,4   | 2: 5; 6: 10<br>2: 6,7,8,14<br>4: 15; 5: 12  |
|   | c. Divide using one digit divisors with and without remainders                                    | AS:2:7,8 3:2,3,4<br>PG:3:1,2,3,4,5,6,10  | 7: 3,4,7,8,9  |
|   | d. Multiply using two digit multipliers   | PG:2:2,3 3:4,5   | 6: 1,5,6,8  |
| 5. Round whole numbers to the nearest ten, hundred, or thousand and decimals to the nearest tenth.  | N3. Round whole numbers to nearest ten, hundred, and thousands                                    | LT:3:3,4<br>MMLN:<br>1:1,2,3,4,5,6,7,8   | 1: 6 11: 4  |
| 7. Solve problems, including word problems, involving the basic operations of multiplication and division on whole numbers through two-digit multipliers and one-digit divisors.<br>a. Estimating products and quotients of whole numbers by using appropriate strategies such as rounding, front-end estimation, and compatible numbers<br>b. Identifying information needed to determine the appropriate operation to solve a problem<br>c. Estimating sums and differences of whole numbers by using appropriate strategies such as rounding, front-end estimation, and compatible numbers | N4. Solve real life problems using:<br>a. Basic operations<br>b. Estimating<br>c. Reasoning       | LT:2:2,3,4,5 3:3,4,5<br>MMLN:2:1,2,3<br>34LS:1:2 2:3,4,5,6,7<br>PG:3:1,2,3,4,5,6<br>SD:2:1,4   | 3: 11,15<br>5: 1,3,4,5,6,8,12<br>6: 1,3,5,6,10<br>7: 1,3,4,5,6,7,8<br>9: 14<br>12: 10 |
|   | N5. Extend to notions of equivalence ( $50/100 = \frac{1}{2} = 50\%$ )                            | MMLN:1:6,7,8 2:1,2<br>34LS:1:2,3 2:5,6,7   |   |
|   | d. Writing equivalent forms of fractions  | N6. Extend the understanding of ratios and develop the concept of proportions in problem solving:<br><ul style="list-style-type: none"> <li>• Equivalent fractions</li> <li>• Unit rate</li> <li>• Factor of change</li> </ul> | DSEP:3:3,4,5  |

**ALGEBRA – Grade 4**

| Alabama Course of Study   | TEAM-Math  | Investigations                                | SFAW           |
|---|--|---|----------------|
|   | A1. Understand and use the associative, distributive, and commutative properties to solve problems | AS: 2: 1,2,3,4,5,6<br>PG: 2: 1,2,3 3: 3,4,5,6 |                |
|   | A2. Complete and extend patterns with symbols, numbers, and units                                  | AS: 1: 1,2,3<br>Ten Minute Math<br>34LS: 1: 1 | 2:9; 7:1; 12:4 |
| 9. Write number sentences for word problems that involve multiplication or division.        | A3. Write a number sentence for a problem expressed in words                                       | AS: 2: 7,8 3: 2,3,4<br>LT: 2: 1,5             | 7:10           |
| 10. Complete addition and subtraction number sentences with a missing addend or subtrahend. | A4. Solve number sentences for a missing addend, subtrahend, or factor                             | DSEP: Ten Minute Math<br>COT: 1: 5,6          | 2:13           |

**GEOMETRY – Grade 4**

| Alabama Course of Study   | TEAM-Math   | Investigations                                      | Scott-Foresman Addison Wesley |
|---|---|---|-------------------------------|
| 11. Identify triangles, quadrilaterals, pentagons, hexagons, or octagons based on the number of sides, angles, and vertices.<br>a. Drawing lines of symmetry in triangles, quadrilaterals, pentagons, hexagons, or octagons | G1. Identify, compare, classify, and analyze geometric solid and plane figures including:<br>a. Symmetry (rotational and mirror for plane figures)<br>b. Congruency | SS: 2: 2,3<br>S and S: 1:1; 2:1,2,3; 4: 1           | 8:2<br>8:7                    |
| b. Demonstrating slides (translations), flips (reflections), and turns (rotations) using triangles, quadrilaterals, pentagons, hexagons, or octagons  | G2. Identify reflection (flip), rotation (turn), and translation (slide) and make predictions   | SS: 2: 5,6,7,8,9<br>S and S: 2: 1,2,3,4<br>3: 2,3   | 8:6                           |
| 12. Find locations on a map or grid using ordered pairs.  | G3. Locate and name coordinates on a grid (ordered pairs):<br>a. Parallel and perpendicular lines<br>b. Edges<br>c. Vertices<br>d. Angles<br>e. Surfaces            | SS: 1: 1,2,3,4 2: 1,2,3                             | 4:9                           |
|   | G4. Identify and build a three-dimensional object from a two-dimensional object   | S and S: 2: 1,2,3                                   | 8:1                           |
|   | G5. Solve problems using:<br>a. Predicting<br>b. Estimating<br>c. Spatial reasoning   | SS: 1: 3,4,5,6 2: 4,5<br>S and S: 2: 1,2,3,4 3: 2,3 | 8:1                           |

**MEASUREMENT – Grade 4**

| <b>Alabama Course of Study</b>  | <b>TEAM-Math</b>  | <b>Investigations</b>                             | <b>SFAW</b>                  |
|---|---|---|------------------------------|
| 14. Measure length, width, weight, and capacity, using metric and customary units, and temperature in degrees <ul style="list-style-type: none"> <li>a. Fahrenheit and degrees Celsius.</li> <li>b. Estimating perimeter and area of irregular shapes using unit squares and grid paper</li> <li>c. Estimating area using unit squares</li> </ul> | M1. Identify appropriate units and tools of measurement in customary and metric units               | MMLN: 2: 4 3: 2,3,4                               | 10:7,8,9,10<br>11:9,10,11,14 |
|   | M2. Convert units of measurement within the same system   |   | 10:11                        |
| <ul style="list-style-type: none"> <li>d. Estimating perimeter and area of irregular shapes using unit squares and grid paper</li> <li>e. Estimating area using unit squares</li> </ul>   | M3. Determine and use estimated and exact measurement of perimeter and area in real life situations | SS: Ten Minute Math<br>DSEP: 1:1,2,3,4; 2:1,2,3,4 | 8:10,11,12                   |
| 13. Calculate elapsed time in hours and minutes.  | M4. Calculate elapsed time, minutes, hours, days, and so forth to solve problems                    |   | 3:15 4: 3,15                 |

**DATA ANALYSIS AND PROBABILITY – Grade 4**

| <b>Alabama Course of Study</b>  | <b>TEAM-Math</b>   | <b>Investigations</b>  | <b>SFAW</b>                           |
|---|--|--|---------------------------------------|
| 15. Represent categorical data using tables and graphs, including bar graphs, line graphs, and line plots. <ul style="list-style-type: none"> <li>• Collecting data using observations, surveys, or experiments</li> <li>• Creating tally charts to represent data collected from real-life situations</li> </ul> | D1. Collect, represent, interpret, and analyze data using a variety of tables, graphs, charts, and grids | 34LS: 2: 1,2,3,4,5,6,7<br>PG: Ten Minute Math<br>SD: 1: 1,2,3 2: 1,2,3,4<br>3: 1<br>COT: 1: 1,2,3,4 3: 1,2,6,7 | 3:5<br>4:6,7,8,10,11,13,15<br>9:12,14 |
| 17. Represent numerical data using tables and graphs, including bar graphs and line graphs.   | D2. Develop an understanding of mean, median, and range  | SD: 2: 4,5,6,7   | 4:12                                  |
| 16. Determine if outcomes of simple events are likely, unlikely, certain, equally likely, or impossible.  | D3. Determine if an outcome of simple events are likely, certain, or impossible                          | MMLN: 1: 3 2: 7,8<br>3: 1 Ten Minute Math  | 12:5                                  |
|   | D4. Understand the concept of probability and use it to predict outcomes of a given situation            | 34LS: 1: 1<br>Ten Minute Math  | 12:5,6,7,8                            |