# Rose Hamilton Elementary Curriculum Mapping
## Math – 2nd Grade
### 1st Nine Weeks

| Unit Chapter Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
|---|---|---|---|---|---|
| Quarter 1 Numbers and Operations in Base 10 | MA.2.NS.1 | How do predictable mathematical patterns help me understand number concepts? | Count orally forward or backward for 10 consecutive numbers from any given number up to 100. | numerical order | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.NS.1 | How do predictable mathematical patterns help me understand number concepts? | Count orally and write numbers by 2's to 100 | number combinations | |
| | MA.2.NS.1 | How do predictable mathematical patterns help me understand number concepts? | Count orally and write numbers by 5's to 100 | number combinations | |
| | MA.2.NS.1 | How do predictable mathematical patterns help me understand number concepts? | Count orally and write numbers by 10's to 100 | number combinations | |
| | MA.2.CA.7 | How do predictable mathematical patterns help me understand number concepts?  How does place value help me understand numerical quantities? | Describe the pattern of digits in the ones place for each group of ten, from tens through nineties. | | |
| | MA.2.CA.7 | How do predictable mathematical patterns help me understand number concepts? | explain that the tens digit does not change in any grouping of ten (i.e., teens, twenties, thirties, forties, etc | analog place value | |
| | MA.2.CA.7 | How do predictable mathematical patterns help me understand number concepts?  How does place value help me understand numerical quantities? | Describe the patterns in the tens and ones places as you increase or decrease a given number by ten, for any number up to 100. | place value | |

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| | MA.2.NS.7 | | Tell if a number is larger or smaller than a given number, with any two numbers up to 100. | | |
| | MA.2.NS.3 | How do predictable mathematical patterns help me understand number concepts? | Arrange a given set of numbers up to 100 in order from least to greatest. | numerical order rule of linear pattern | |
| | MA.2.NS.3 | How do predictable mathematical patterns help me understand number concepts? | Arrange a given set of numbers up to 100 in order from greatest to least. | numerical order rule of linear pattern | |
| Quarter 1 Operations and Algebraic Thinking | MA.2.CA.4 | How do the relationship between addition and subtraction contribute to mathematical understanding? | Model addition of numbers less than 100 with objects. | inverse relationship commutative property | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.CA.4 | How do the relationship between addition and subtraction contribute to mathematical understanding? | Model addition of numbers less than 100 by drawing pictures | inverse relationship | |
| | MA.2.CA.1 | How do the relationship between addition and subtraction contribute to mathematical understanding? | Add two whole numbers less than 100 without regrouping | inverse relationship commutative property | |
| | MA.2.CA.1 | | Use mental arithmetic to add 0, 1, 2, 3, 4, 5, or 10 to numbers less than 100 | inverse relationship commutative property | |
| | MA.2.CA.7 | How do predictable mathematical patterns help me understand number concepts? | Describe the rule for a given addition number pattern. | inverse relationship commutative property  rule of linear pattern | |
| | MA.2.CA.7 | How do predictable mathematical patterns help me understand number concepts? | Extend number patterns using addition. | inverse relationship rule of linear pattern | |
| Quarter 1 Measurement and Data | MA.2.M.7 | | Tell the value in pennies equal to a quarter, half-dollar, and dollar. | | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.M.5 | | Explain the difference between a.m. and p.m. | | |

# Curriculum Mapping
## Math – 2<sup>nd</sup> Grade
### 2<sup>nd</sup> Nine Weeks

| Unit Chapter Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
|---|---|---|---|---|---|
| Quarter 2 Numbers and Operations in Base 10 | MA.2.NS.4 | | Match the number names (first, second, third, etc.) with an ordered set of up to 100 items. | Ordinal numbers | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.NS.5 | | Create models or drawings to represent odd and even numbers | | |
| | MA.2.NS.5 | | Explain the difference between odd and even numbers. | | |
| | MA.2.G.5 | How does the bottom number of a fraction affect the size of the pieces? | Name the unit fractions: 1/2, 1/3, 1/4, 1/5, 1/6, 1/8, 1/10, and 1/12 | unit fraction | |
| Quarter 2 Operations and Algebraic Thinking | MA.2.CA.1 | How do I know a strategy is efficient and effective? | Add two whole numbers less than 100 without regrouping. | place value | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | 2MA.2.CA.1 | How do I know a strategy is efficient and effective? | Add two whole numbers less than 100 with regrouping. | place value | |
| | 2.MA.2.CA.1 | | Use mental arithmetic to subtract 0, 1, 2, 3, 4, 5, or 10 from numbers less than 100. | | |
| | MA.2.CA.6 | | Define the associative property for addition. | Associative property | |

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| | MA.2.CA.6 | How do I know my answer is correct? | Explain how to use the associative property for addition to simplify mental calculations and to check results. | Associative property | |
| | MA.2.CA.6 | How do I know my answer is correct? | Apply the associative property for addition to simplify mental calculations and to check results. | Associative property | |
| | MA.2.CA.7 | How do I know a strategy is efficient and effective? | Describe the rule for a given subtraction number pattern. | | |
| | MA.2.CA.7 | How do I know a strategy is efficient and effective? | Extend number patterns using subtraction. | | |
| | MA.2.CA.7 | | Create number patterns using subtraction. | | |
| Quarter 2 Measurement and Data | MA.2.M.1 | Why is it important for me to use consistent units of measure? | Tell how many inches are in a foot. | | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.M.1 | Why is it important for me to use consistent units of measure? | Tell how many feet are in a yard. | | |
| | MA.2.M.1 | | Tell how many inches are in a yard. | | |
| | MA.2.M.1 | | Describe the relationship between centimeter and meter. | Centimeter meter | |
| | MA.2.M.1 | What makes a given measurement tool an appropriate choice? | Describe the relationships among inch, foot, and yard. | | |
| | MA.2.M.2 | Why is it important for me to use consistent units of measure? | Tell how many minutes are in an hour. | time interval | |
| | MA.2.M.2 | | Tell how many days are in a week | time interval | |
| | MA.2.M.6 | | Tell how many months are in a year. | time interval | |

| Quarter 2 Geometry | MA.2.G.1 | Why is it important for me to know the special properties of shapes? | Describe plane shapes (triangle, square, rectangle) by size and number of sides and by number of vertices. | vertex (vertices) plane shape 2 dimensional congruent | |
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| | MA.2.G.1 | Why is it important for me to know the special properties of shapes? | Classify plane shapes (triangle, square, rectangle) by size and number of sides and by number of vertices. | vertex (vertices) plane shape 2 dimensional congruent | |
| | MA.2.G.1 | How can I tell how big a shape is? | Sort plane shapes (triangle, square, rectangle) by size and number of sides and by number of vertices. | vertex (vertices) plane shape 2 dimensional congruent | |
| | MA.2.G.1 | Why is it important for me to know the special properties of shapes? | Describe solid geometric shapes (cube, rectangular prism) according to the number and shape of faces and the number of edges and vertices. | rectangular prism vertex (vertices) solid shape 3 dimensional | |
| | MA.2.G.1 | Why is it important for me to know the special properties of shapes? | Classify solid geometric shapes (cube, rectangular prism) according to the number and shape of faces and the number of edges and vertices. | rectangular prism vertex (vertices) solid shape 3 dimensional | |
| | MA.2.G.1 | | Sort solid geometric shapes (cube, rectangular prism) according to the number and shape of faces and the number of edges and vertices | rectangular prism vertex (vertices) solid shape 3 dimensional | |
| | MA.2.G.1 | Why is it important for me to know the special properties of shapes? | Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. | | |

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# Curriculum Mapping
## Math – 2<sup>nd</sup> Grade
**3<sup>rd</sup> Nine Weeks**

| Unit Chapter Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
|---|---|---|---|---|---|
| Quarter 3 Numbers and Operations in Base 10 | MA.2.NS.2 | | Show numbers up to 100 in various combinations of tens and ones using place value drawings. | | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.NS.2 | | Show numbers up to 100 in various combinations of tens and ones using place value models. | | |
| | MA.2.NS.2 | | Write numbers up to 100 in various combinations of tens and ones. | | |
| | MA.2.G.5 | How does the bottom number of a fraction affect the size of the pieces? | Name the unit fractions: 1/2, 1/3, 1/4, 1/5, 1/6, 1/8, 1/10, and 1/12. | | |
| | MA.2.G.5 | How does the bottom number of a fraction affect the size of the pieces? | Tell which unit fraction is larger or smaller, given any two unit fractions. | | |
| | MA.2.DA.1 | How does collecting and organizing data help me draw conclusions? | Create tables, tally charts, and bar graphs using data. | | |
| | MA.2.DA.1 | How does collecting and organizing data help me draw conclusions? | Compare data found in tables, tally charts, and bar graphs | | |
| | MA.2.DA.1 | How does collecting and organizing data help me draw conclusions? | Interpret data using tables, tally charts, and bar graphs. | | |
| | MA.2.CA.1 | | Subtract two whole numbers less than 100 without regrouping. | | Daily Work Teacher Observations Unit Tests Anecdotal Records |

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| | MA.2.CA.4 | How do I know my answer is correct? | Apply understanding of inverse relationships to determine if an addition or subtraction answer is valid. | | |
| Quarter 3 Operations and Algebraic Thinking | MA.2.CA.2 | How do I know if a number sentence fits a problem situation?<br><br>How do I know my answer is correct? | Select whether an addition or subtraction number sentence fits a given problem situation. | | |
| | MA.2.CA.2 | How do I know if a number sentence fits a problem situation? | Write an addition number sentence for a given problem situation. | | |
| | MA.2.CA.2 | How do I know if a number sentence fits a problem situation? | Write a subtraction number sentence for a given problem situation. | | |
| | MA.2.M.2 | What makes a given measurement tool an appropriate choice? | Measure length to the nearest centimeter and meter. | Centimeter meter | Daily Work<br>Teacher Observations<br>Unit Tests<br>Anecdotal Records |
| | MA.2.M.2 | How do I know if an estimate is reasonable? | Estimate length to the nearest centimeter and meter. | Centimeter meter | |
| Quarter 3 Measurement and Data | MA.2.M.1 | | Tell how many centimeters are in a meter. | Centimeter meter | |
| | MA.2.M.2 | What makes a given unit of length optimal for describing an object?<br><br>What makes a given measurement tool an appropriate choice? | Select whether inches, feet, or yards is the most appropriate unit to measure within a given situation. | | |
| | MA.2.M.2 | What makes a given unit of length optimal for describing an object?<br><br>What makes a given measurement tool an appropriate choice? | Select whether centimeters or meters is the most appropriate unit to measure within a given situation. | Centimeter meter | |
| | MA.2.M.5 | | Tell the time to the nearest quarter hour using an analog clock. | time interval analog | |

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| | MA.2.M.5 | | Determine five-minute intervals using an analog clock. | time interval analog | |
| | MA.2.M.7 | | Determine the value of a collections of pennies, nickels, dimes, quarters, half-dollars, and dollars. | | |
| | MA.2.G.3 | Why is it important for me to know the special properties of shapes? | Predict the result of putting together and taking apart two-dimensional shapes. | | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.G.3 | | Create a new shape by putting together and taking apart two-dimensional shapes. | | |
| Quarter 3 Geometry | MA.2.G.3 | Why is it important for me to know the special properties of shapes? | Predict the result of putting together and taking apart three-dimensional shapes. | | |
| | MA.2.G.3 | | Create a new shape by putting together and taking apart three-dimensional shapes. | | |
| | MA.2.G.1 | How can I tell how big a shape is? | Identify (name) congruent two-dimensional shapes in any position | | |

# Curriculum Mapping
## Math – 2<sup>nd</sup> Grade
### 4<sup>th</sup> Nine Weeks

| Unit Chapter Lesson | Indiana Standard(s) | Key Questions | Resources/Activities | Vocabulary | Assessments |
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| Quarter 4 Number and Operations in Base 10 | MA.2.NS.5 | | Select odd and even numbers from a list of numbers up to 100. | | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| Quarter 4 Operations and Algebraic Thinking | MA.2.CA.2 | How do I know if an estimate is reasonable? | Decide whether answers for addition problems are reasonable by using estimation. | | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.CA.7 | | Apply the rule to extend a linear pattern. | | |
| Quarter 4 Measurement and Data | MA.2.M.4 | | Tell how many cups are in a pint. | capacity | |
| | MA.2.M.4 | Why is it important for me to use consistent units of measure? | Measure the capacity of a container using cups. | capacity | |
| | MA.2.M.4 | How do I know if an estimate is reasonable? | Estimate capacity of a container using cups | capacity | |
| | MA.2.M.4 | | Measure the capacity of a container using pints. | capacity | |
| | MA.2.M.4 | | Estimate capacity of a container using pints. | capacity | |
| | MA.2.M.6 | | Tell how many seconds are in a minute. | time interval analog | |
| | MA.2.M.6 | | Tell how many hours are in a day. | time interval analog | |

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| | MA.2.M.6 | | Tell how many days are in each month. | time interval | |
| | MA.2.M.6 | | Tell how many days are in a year | time interval | |
| | MA.2.M.6 | | Tell how many weeks are in a year. | time interval | |
| | MA.2.NS.3 | Why is it important for me to use consistent units of measure? | Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0,1,2,..., and represent whole-number sums and differences within 100 on a number line diagram. | | |
| Quarter 4 Geometry | MA.2.G.5 | | Demonstrate how fractions (including unit fractions) show parts of a whole using drawings | | Daily Work Teacher Observations Unit Tests Anecdotal Records |
| | MA.2.G.5 | | Demonstrate how fractions (including unit fractions) show parts of a whole using models. | | |
| | MA.2.G.5 | | Demonstrate how fractions (including unit fractions) show parts of a group (set) using drawings. | | |
| | MA.2.G.5 | | Demonstrate how fractions (including unit fractions) show parts of a group (set) using models. | | |
| | MA.2.G.2 | | Construct squares, rectangles, triangles, cubes, and rectangular prisms with appropriate materials. | | |

# MATHEMATICS: GRADE 2

The Mathematics standards for grade 2 are supplemented by the Process Standards for Mathematics. The Mathematics standards for grade 2 are made up of 5 strands: Number Sense; Computation and Algebraic Thinking; Geometry; Measurement; and Data Analysis. The skills listed in each strand indicate what students in grade 2 should know and be able to do in Mathematics.

## NUMBER SENSE GRADE 2

2.NS.1: Count by ones, twos, fives, tens, and hundreds up to at least 1,000 from any given number. 2.NS.2: Read and write whole numbers up to 1,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000.
2.NS.3: Plot and compare whole numbers up to 1,000 on a number line.
2.NS.4: Match the ordinal numbers first, second, third, etc., with an ordered set up to 30 items.
 2.NS.5: Determine whether a group of objects (up to 20) has an odd or even number of members (e.g., by placing that number of objects in two groups of the same size and recognizing that for even numbers no object will be left over and for odd numbers one object will be left over, or by pairing objects or counting them by 2s).
2.NS.6: Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones). Understand that 100 can be thought of as a group of ten tens — called a "hundred." Understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). 2.NS.7: Use place value understanding to compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

## COMPUTATION AND ALGEBRAIC THINKING GRADE 2

2.CA.1: Add and subtract fluently within 100. 2.CA.2: Solve real-world problems involving addition and subtraction within 100 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). Use estimation to decide whether answers are reasonable in addition problems.
2.CA.3: Solve real-world problems involving addition and subtraction within 100 in situations involving lengths that are given in the same units (e.g., by using drawings, such as drawings of rulers, and equations with a symbol for the unknown number to represent the problem).
2.CA.4: Add and subtract within 1000, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and that sometimes it is necessary to compose or decompose tens or hundreds.
2.CA.5: Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal groups.
2.CA.6: Show that the order in which two numbers are added (commutative property) and how the numbers are grouped in addition (associative property) will not change the sum. These properties can be used to show that numbers can be added in any order.
2.CA.7: Create, extend, and give an appropriate rule for number patterns using addition and subtraction within 1000.

# GEOMETRY GRADE 2

2.G.1: Identify, describe, and classify two- and three-dimensional shapes (triangle, square, rectangle, cube, right rectangular prism) according to the number and shape of faces and the number of sides and/or vertices. Draw two-dimensional shapes.

2.G.2: Create squares, rectangles, triangles, cubes, and right rectangular prisms using appropriate materials.

2.G.3: Investigate and predict the result of composing and decomposing two- and three-dimensional shapes.

2.G.4: Partition a rectangle into rows and columns of same-size (unit) squares and count to find the total number of same-size squares.

2.G.5: Partition circles and rectangles into two, three, or four equal parts; describe the shares using the words halves, thirds, half of, a third of, etc.; and describe the whole as two halves, three thirds, four fourths. Recognize that equal parts of identical wholes need not have the same shape.

# MEASUREMENT GRADE 2

2.M.1: Describe the relationships among inch, foot, and yard. Describe the relationship between centimeter and meter.

2.M.2: Estimate and measure the length of an object by selecting and using appropriate tools, such as rulers, yardsticks, meter sticks, and measuring tapes to the nearest inch, foot, yard, centimeter and meter.

2.M.3: Understand that the length of an object does not change regardless of the units used. Measure the length of an object twice using length units of different lengths for the two measurements. Describe how the two measurements relate to the size of the unit chosen.

2.M.4: Estimate and measure volume (capacity) using cups and pints.

2.M.5: Tell and write time to the nearest five minutes from analog clocks, using a.m. and p.m. Solve real-world problems involving addition and subtraction of time intervals on the hour or half hour.

2.M.6: Describe relationships of time, including: seconds in a minute; minutes in an hour; hours in a day; days in a week; and days, weeks, and months in a year.

2.M.7: Find the value of a collection of pennies, nickels, dimes, quarters and dollars.

# DATA ANALYSIS GRADE 2

2.DA.1: Draw a picture graph (with single-unit scale) and a bar graph (with single-unit scale) to represent a data set with up to four choices (What is your favorite color? red, blue, yellow, green). Solve simple put-together, take-apart, and compare problems using information presented in the graphs.