

**Introduction**

Unique Learning System and News-2-You maintain alignment with state standards through instructional targets. These targets are the bridge between the general content standards adopted by a state and relevant curriculum content for students with significant disabilities. The n2y Instructional Targets have been aligned with the Indiana Academic Standards in English Language Arts and Mathematics and the Indiana Content Connectors.

The chart below describes the sections of this alignment document. Each instructional target is addressed in one or more of the unit lessons. Additionally, differentiated task descriptors are provided to define how students with diverse abilities will have access to essential content of the standards.

| Standard  |  | Grade Band  |
|---|--|---|
| Indiana Mathematics Standards   |  | Indiana Connectors  |
| n2y Instructional Targets   |  | n2y Supporting Activities   |
| Instructional Targets reflect the essential content of grade level standards. In ELA and Math, these targets are aligned to the Common Core Standards.  | <b>Unique</b><br>Lessons that address instructional targets are listed in this column. Lessons from Unique units maintain a consistent format so that instructional targets are taught each month. | <b>Unique</b><br>Unique's supporting tools and guides supplement the unit lessons. Pertinent supports are listed in this column.                            |
|   |  | <b>News-2-You</b><br>Supporting activities and lessons, which provide practice for Instructional Targets, are listed in this column.                        |
| <b>n2y Differentiated Tasks</b><br>Differentiated tasks descriptors ensure that students with a wide variety of learning abilities and needs are able to access, participate and make progress in the standards based activities. Differentiated task descriptors are written in student performance terminology. |  |   |
| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>Students at this level are expected to reach the highest level of independence.</li> </ul>   | <ul style="list-style-type: none"> <li>Students at this level likely will require support in all learning activities.</li> </ul>   | <ul style="list-style-type: none"> <li>Students at this level require maximum support in learning. Increasing participation is the primary goal.</li> </ul> |

## Math Standards for Counting and Cardinality

## Grades K-2

| Indiana Mathematics Standards  | Indiana Connectors   |
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| <p><b>KINDERGARTEN</b></p> <p>K.NS.1: Count to at least 100 by ones and tens and count on by one from any number.</p> <p>K.NS.2: Write whole numbers from 0 to 20 and recognize number words from 0 to 10. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).</p> <p>K.NS.3: Find the number that is one more than or one less than any whole number up to 20.</p> <p>K.NS.4: Say the number names in standard order when counting objects, pairing each object with one and only one number name and each number name with one and only one object. Understand that the last number name said describes the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were counted.</p> <p>K.NS.5: Count up to 20 objects arranged in a line, a rectangular array, or a circle. Count up to 10 objects in a scattered configuration. Count out the number of objects, given a number from 1 to 20.</p> <p>K.NS.6: Recognize sets of 1 to 10 objects in patterned arrangements and tell how many without counting.</p> | <p><b>KINDERGARTEN</b></p> <p>K.NS.1.a Count to at least 20 by ones and tens and count on by one from any number.</p> <p>K.NS.2.a.1 Write whole numbers from 0 to 20.<br/>K.NS.2.a.2 Recognize number words from 0 to 10 to the numeral.<br/>K.NS.2.a.3 Identify a number of objects with a written numeral 0-20 (with 0 representing a count of no objects.)</p> <p>K.NS.3.a Find the number that is one more than or one less than any whole number up to 20.</p> <p>K.NS.4.a Say the number names in standard order when counting objects, pairing each object with one and only one number name and each number name with one and only one object. Understand that the last number name said describes the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were counted.</p> <p>K.NS.5.a Count up to 20 objects arranged in a line. Count up to 5 objects in a scattered configuration. Count out the number of objects, given a number from 1 to 20.</p> <p>K.NS.6.a Recognize sets of 1 to 6 objects in patterned arrangements and tell how many without counting.</p> |

| n2y Instructional Targets   | n2y Elementary Grade Band Lessons and Activities   | n2y Supporting Activities   |
|---|--|---|
| <p><i>Know number names and the count sequence.</i></p> <ul style="list-style-type: none"> <li>Count by ones to 10, 20 and 100.</li> <li>Count by 10s to 100.</li> <li>Read and write numerals to 10 and 20.</li> </ul> <p><i>Count to tell the number of objects.</i></p> <ul style="list-style-type: none"> <li>Demonstrate one-to-one correspondence when counting.</li> <li>Count a number of objects to tell <i>how many</i>.</li> </ul> <p><i>Compare numbers.</i></p> <ul style="list-style-type: none"> <li>Indicate whether the number of objects in one group is <i>more</i>, <i>less</i> or <i>equal</i> to the number of objects in another group.</li> </ul> | <p><b>Unique</b></p> <p>Lesson 19: Number Sense<br/>Lesson 20: Graphing</p>  | <p><b>Unique</b></p> <p>ULS Instructional Tools: Math Pack/Numbers<br/>ULS Instructional Guides: Mathematics<br/>Manipulative pictures<br/>Standards Connection</p> <p><b>News-2-You</b></p> <p>Activities: Dot-to-Dot<br/>Activities: Patchwork Math<br/>Activities: Which is Greater?<br/>Activities: Which is Less?<br/>Activities: Patchwork Math</p>                     |
| <b>n2y Differentiated Tasks</b>   |  |   |
| <p><b>Level 3</b></p> <ul style="list-style-type: none"> <li>Students will count a number of objects and identify the associated numeral.</li> <li>Students will count objects in two defined groups and determine which group contains more or less than the other or whether the groups are equal.</li> </ul>   | <p><b>Level 2</b></p> <ul style="list-style-type: none"> <li>Students will match objects to a corresponding number line (1-to-1 match) to count and identify a number of objects.</li> <li>Students will pair objects from two groups to determine which group has more or less than the other or whether the groups are equal.</li> </ul> | <p><b>Level 1</b></p> <ul style="list-style-type: none"> <li>Students will count to a given number through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will select numbers (errorless choice) to count and compare numbers within a math problem involving the concepts of <i>more</i> and <i>less</i>.</li> </ul> |

| Math Standards for Operations and Algebraic Thinking   |   | Grades K–2 |
|--|---|------------|
| Indiana Mathematics Standards  | Indiana Connectors  |            |
| <p><b>KINDERGARTEN</b></p> <p>K.CA.1: Use objects, drawings, mental images, sounds, etc., to represent addition and subtraction within 10.</p> <p>K.CA.2: Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem).</p> <p>K.CA.3: Use objects, drawings, etc., to decompose numbers less than or equal to 10 into pairs in more than one way, and record each decomposition with a drawing or an equation (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>). [In Kindergarten, students should see equations and be encouraged to trace them, however, writing equations is not required.]</p> <p>K.CA.4: Find the number that makes 10 when added to the given number for any number from 1 to 9 (e.g., by using objects or drawings), and record the answer with a drawing or an equation.</p> <p>K.CA.5: Create, extend, and give an appropriate rule for simple repeating and growing patterns with numbers and shapes.</p> <p><b>GRADE 1</b></p> <p>1.CA.1: Demonstrate fluency with addition facts and the corresponding subtraction facts within 20. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using the relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known sums (e.g., adding <math>6 + 7</math> by creating the known equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>). Understand the role of 0 in addition and subtraction.</p> | <p><b>KINDERGARTEN</b></p> <p>K.CA.1.a Use objects, drawings, mental images, sounds, etc., to represent addition and subtraction within 10.</p> <p>K.CA.2.a Use strategies to solve real-world problems involving addition and subtraction within 6 (e.g., by using objects or drawings to represent the problem).</p> <p>K.CA.3.a Use objects, drawings, etc., to decompose numbers less than or equal to 10 in more than one way.</p> <p>K.CA.4.a Find the number that makes 10 when added to the given number for any number from 1 to 9 (e.g., by using objects or drawings.)</p> <p>K.CA.5.a Create, extend, and give an appropriate rule for simple repeating and growing patterns with numbers and shapes.</p> <p><b>GRADE 1</b></p> <p>1.CA.1.a.1: Demonstrate addition facts and the corresponding subtraction facts within 20. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using the relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known sums (e.g., adding <math>6 + 7</math> by creating the known equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>). Understand the role of 0 in addition and subtraction.</p> |            |

1.CA.2: Solve real-world problems involving addition and subtraction within 20 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 objects, drawings, and equations with a symbol for the unknown number to represent the problem).

1.CA.3: Create a real-world problem to represent a given equation involving addition and subtraction within 20.

1.CA.4: Solve real-world problems that call for addition of three whole numbers whose sum is within 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).

1.CA.5: Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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 two-digit numbers, one adds tens and tens, ones and ones, and that sometimes it is necessary to compose a ten.

1.CA.6: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5 + 2 = 2 + 5$ ,  $4 + 1 = 5 + 2$ ).

1.CA.7: Create, extend, and give an appropriate rule for number patterns using addition within 100.

**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).

1.CA.2.a.1: Use strategy to solve real-world problems involving addition and subtraction within 10 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem.

1.CA.3.a.1: Create a real-world problem to represent a given equation involving addition and subtraction within 10.

1.CA.4.a.1: Solve real-world problems that call for addition of three whole numbers whose sum is within 10 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).

1.CA.5.a.1: Add within 50 including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

1.CA.6.a.1: Understand the meaning of the equal sign.

1.CA.7.a.1: Create, extend, and give an appropriate rule for number patterns using addition within 50.

**GRADE 2**

2.CA.1.a.1: Add and subtract within 40 using multiple strategies.

2.CA.2.a.1: Use strategies to solve real-world problems involving addition and subtraction in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem.

2.CA.3.a.1: Use strategies to solve real-world problems involving addition and subtraction in situations involving lengths that are given in the same units.

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| <p>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.</p> <p>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.</p> <p>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.</p> <p>2.CA.7: Create, extend, and give an appropriate rule for number patterns using addition and subtraction within 1000.</p> |  | <p>2.CA.4.a.1: Add and subtract whole numbers, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>2.CA.5.a.1: Use addition to write an equation to express the total as a sum of equal groups.</p> <p>2.CA.6.a.1: 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.</p> <p>2.CA.7.a.1: Create, extend, and give an appropriate rule for number patterns using addition and subtraction within 100.</p> |
| <b>n2y Instructional Targets</b>  | <b>n2y Elementary Grade Band Lessons and Activities</b>  | <b>n2y Supporting Activities</b>  |
| <p><i>Represent and solve problems involving addition and subtraction.</i></p> <ul style="list-style-type: none"> <li>Model putting together (addition, more, equal) and taking away (subtraction, less, equal) with objects and representations.</li> <li>Add and subtract within ranges of 1–10 and 1–20.</li> <li>Use objects, representations and numerals to solve real-life word problems.</li> <li>Understand and use +, −, and = symbols when solving problems.</li> </ul> <p><i>Work with equal groups of objects to gain foundations for multiplication.</i></p> <ul style="list-style-type: none"> <li>Share equal numbers of objects between 2 and 4 people.</li> <li>Add to find a total number in an array (e.g., 3 rows, 3 columns).</li> </ul>  | <p>Unique</p> <p>Lesson 19: Number Sense<br/>Lesson 25: Algebra/Patterns</p>   | <p>Unique</p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers<br/>Manipulative pictures<br/>Standards Connection</p>  |
|   | <p>News-2-You</p> <p>Activities: Word Problems</p>   |   |
| <b>n2y Differentiated Tasks</b>   |  |   |
| <b>Level 3</b>  | <b>Level 2</b>   | <b>Level 1</b>  |
| <ul style="list-style-type: none"> <li>Students will add and subtract numbers within the context of a real-world scenario.</li> <li>Students will read, write and solve a math sentence.</li> <li>Students will count an equal number of objects into groups or an array.</li> <li>Students will extend the sequence of a nonnumeric pattern.</li> </ul>  | <ul style="list-style-type: none"> <li>Students will model addition and subtraction of two sets of objects in the context of a real-world scenario.</li> <li>Students will select pictures and numbers to model a math sentence.</li> <li>Students will match a given number of objects into a group or an array.</li> <li>Students will continue the sequence in a pattern of objects.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count sets of objects through an active participation response (e.g., voice output device, eye gaze choice board). Students will select a number (errorless choice) to make a choice of numbers within a math sentence.</li> <li>Students will select a number of objects to put into a group.</li> <li>Students will select an object to represent <i>what's next</i> in a pattern.</li> </ul>  |

## Math Standards for Numbers and Operations in Base Ten

## Grades K–2

### Indiana Mathematics Standards

#### *KINDERGARTEN*

#### *GRADE 1*

1.NS.1: Count to at least 120 by ones, fives, and tens from any given number. In this range, read and write numerals and represent a number of objects with a written numeral.

1.NS.2: Understand that 10 can be thought of as a group of ten ones — called a “ten.” Understand that the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. Understand that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

1.NS.3: Match the ordinal numbers first, second, third, etc., with an ordered set up to 10 items.

1.NS.4: Use place value understanding to compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ .

1.NS.5: Find mentally 10 more or 10 less than a given two-digit the number without having to count, and explain the thinking process used to get the answer.

1.NS.6: Show equivalent forms of whole numbers as groups of tens and ones, and understand that the individual digits of a two-digit number represent amounts of tens and ones.

#### *GRADE 2*

2.NS.1: Count by ones, twos, fives, tens, and hundreds up to at least 1,000 from any given number.

### Indiana Connectors

#### *KINDERGARTEN*

#### *GRADE 1*

1.NS.1.a.1: Count to at least 50 by ones, fives, and tens from 0 with tools.

1.NS.1.a.2: From 0 - 50, read and write numerals and represent a number of objects with a written numeral.

1.NS.2.a.1: Understand that 10 can be thought of as a group of ten ones — called a “ten.”

1.NS.2.a.2: Understand that when groups of tens and ones are combined, a new number is formed.

1.NS.3.a.1: Match the ordinal numbers first, second, third, etc., with an ordered set up to 5 items.

1.NS.4.a.1: Use place value understanding to compare two two-digit numbers based on meanings of the tens and ones digits.

1.NS.4.a.2: Choose the correct symbol  $>$ ,  $=$ , and  $<$ .

1.NS.5.a.1: Find 10 more or 10 less than a given two-digit number.

1.NS.6.a.1: Understand that the two digits of a two-digit number represent amounts of tens, and ones.

#### *GRADE 2*

2.NS.1.a.1: Count by ones, fives, and tens up to at least 100 from 0.

2.NS.1.a.2: Count by twos to at least 100 from 0 with tools.

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| <p>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.</p> <p>2.NS.3: Plot and compare whole numbers up to 1,000 on a number line.</p> <p>2.NS.4: Match the ordinal numbers first, second, third, etc., with an ordered set up to 30 items.</p> <p>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).</p> <p>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).</p> <p>2.NS.7: Use place value understanding to compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</p> |   | <p>2.NS.2.a.1: Read and write whole numbers up to at least 100 in standard form.</p> <p>2.NS.3.a.1: Plot and compare whole numbers up to 100 on a number line.</p> <p>2.NS.4.a.1: Match the ordinal numbers first, second, third, etc., with an ordered set up to 10 items.</p> <p>2.NS.5.a.1: Determine whether a group of objects (up to 10) 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).</p> <p>2.NS.6.a.1: Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.</p> <p>2.NS.7.a.1: Use place value understanding to compare two two-digit numbers.</p> <p>2.NS.7.a.2: Use <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</p> |
| <p><b>n2y Instructional Targets</b></p> <p><i>Understand place value.</i></p> <ul style="list-style-type: none"> <li>Model to show understanding of tens and ones (e.g., 10 is a bundle of ones; <math>16 = 10 + 6</math>).</li> <li>Compose (put together) or decompose (break apart) a two-digit number (e.g., <math>27 = 2</math> tens and 7 ones).</li> <li>Skip count by 2s and 5s to 20 and 50; by 10s to 20, 50 and 100.</li> <li>Compare two numbers to determine <math>&gt;</math>, <math>&lt;</math> or <math>=</math>.</li> </ul> <p><i>Use place value understanding and properties of operations to add and subtract.</i></p> <ul style="list-style-type: none"> <li>Build strategies to add or subtract two-digit numbers.</li> </ul>  | <p><b>n2y Elementary Grade Band Lessons and Activities</b></p> <p><b>Unique</b></p> <p>Lesson 19: Number Sense<br/>Lesson 20: Picture Graph<br/>Lesson 25: Algebra/Patterns</p> | <p><b>n2y Supporting Activities</b></p> <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers<br/>ULS Instructional Tools: Math Pack/Arrays<br/>Manipulative pictures<br/>Standards Connection</p> <p><b>News-2-You</b></p> <p>Activities: Which is Greater?<br/>Activities: Which is Less?<br/>Activities: Which Comes Next?<br/>Activities: Graphing</p>  |

n2y Differentiated Tasks

| Level 3   | Level 2   | Level 1  |
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| <ul style="list-style-type: none"> <li>Students will model and identify the number of 10s and 1s in a two-digit number.</li> <li>Students will skip count (by 2s, 5s or 10s) to a given number (20, 50, 100).</li> <li>Students will compare numbers to 20 to determine <i>more, less</i> or <i>equal</i>.</li> </ul> | <ul style="list-style-type: none"> <li>Students will model a two-digit number by counting a group of 10s and remaining 1s.</li> <li>Students will use a model to count by 10s to 50.</li> <li>Students will compare numbers to 10 with a model to determine <i>more, less</i> or <i>equal</i>.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count a group of 10s and remaining 1s through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will count objects and form groups of 10s through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will compare two sets of objects to determine <i>more, less</i> or <i>equal</i>.</li> </ul> |

| Math Standards for Measurement and Data   |   | Grades K–2 |
|---|---|------------|
| Indiana Mathematics Standards   | Indiana Connectors  |            |
| <p><b>KINDERGARTEN</b></p> <p>K.M.1: Make direct comparisons of the length, capacity, weight, and temperature of objects, and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.</p> <p>K.M.2: Understand concepts of time, including: morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year. Understand that clocks and calendars are tools that measure time.</p> <p>K.DA.1: Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group and explain the reasoning used.</p> <p><b>GRADE 1</b></p> <p>1.M.1: Use direct comparison or a nonstandard unit to compare and order objects according to length, area, capacity, weight, and temperature.</p> <p>1.M.2: Tell and write time to the nearest half-hour and relate time to events (before/after, shorter/longer) using analog clocks. Understand how to read hours and minutes using digital clocks.</p> <p>1.M.3: Find the value of a collection of pennies, nickels, and dimes.</p> <p>1.DA.1: Organize and interpret data with up to three choices (What is your favorite fruit? apples, bananas, oranges); ask and answer questions about the total number of data points, how many in each choice, and how many more or less in one choice compared to another.</p> <p><b>GRADE 2</b></p> <p>2.M.1: Describe the relationships among inch, foot, and yard. Describe the relationship between centimeter and meter.</p> <p>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.</p> | <p><b>KINDERGARTEN</b></p> <p>K.M.1.a Make comparisons of the length, weight, and temperature of objects.</p> <p>K.M.2.a Understand the concept of time.</p> <p>K.DA.1.a Sort objects by attributes.</p> <p><b>GRADE 1</b></p> <p>1.M.1.a.1: Use a nonstandard unit to compare and order objects according to length, weight, and temperature.</p> <p>1.M.2.a.1: Tell and write time to the nearest hour.</p> <p>1.M.3.a.1: Find the value of a collection of pennies, nickels, and dimes.</p> <p>1.DA.1.a.1: Interpret data with two choices. Ask and answer questions about the total number of data points, how many in each choice, and how many more or less in one choice compared to another.</p> <p><b>GRADE 2</b></p> <p>2.M.1.a.1: Identify inch, foot, yard, centimeter, and meter.</p> <p>2.M.2.a.1: 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.</p> |            |

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| <p>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.</p> <p>2.M.4: Estimate and measure volume (capacity) using cups and pints.</p> <p>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.</p> <p>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.</p> <p>2.M.7: Find the value of a collection of pennies, nickels, dimes, quarters and dollars.</p> <p>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.</p> |  | <p>2.M.3.a.1: Measure the same object with two different tools.</p> <p>2.M.4.a.1: Measure volume (capacity) using cups and pints.</p> <p>2.M.5.a.1: Tell and write time to the nearest half hour.</p> <p>2.M.6.a.1: Describe relationships of time, by at least including: hours in a day; days in a week; and days, weeks, and months in a year.</p> <p>2.M.7.a.1: Find the value of a collection of pennies, nickels, dimes, quarters, and dollars.</p> <p>2.DA.1.a.1: Interpret a picture graph (with single-unit scale) and a bar graph (with single-unit scale) to represent a data set with up to three choices.</p> |
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| n2y Instructional Targets  | n2y Elementary Grade Band Lessons and Activities  | n2y Supporting Activities   |
|--|---|---|
| <p><i>Measure and estimate lengths in standard units.</i></p> <ul style="list-style-type: none"> <li>Compare two lengths and use appropriate vocabulary to describe (short, long, etc.).</li> <li>Use nonstandard units to estimate and measure the length of an object.</li> <li>Use standard measurements to measure the length of an object (inches, feet, etc.).</li> </ul> <p><i>Work with time and money.</i></p> <ul style="list-style-type: none"> <li>Use time concept vocabulary to describe personal activities and schedules (first and then; today, tomorrow, yesterday and days of the week, etc.).</li> <li>Tell time to the hour and half hour.</li> <li>Identify and count coins and dollars to solve word problems.</li> </ul> <p><i>Represent and interpret data.</i></p> <ul style="list-style-type: none"> <li>Gather and sort data in response to questions.</li> <li>Display data in picture graphs.</li> <li>Answer questions about information in a graph.</li> </ul> | <p><b>Unique</b></p> <p>Lesson 21: Measure It! (Craft)<br/>Lesson 26: Direction Following (Recipe)</p> <p>Lesson 23: Telling Time<br/>Core Tasks 1.1: Daily Schedules<br/>Core 1.2: Monthly Calendars<br/>Core Task 4.1: Calendar (Circle Time)</p> <p>Lesson 22: Money Applications</p> <p>Lesson 20: Graphing</p> | <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Time<br/>ULS Instructional Tools: Math Pack/Money<br/>Standards Connection</p> <p><b>News-2-You</b></p> <p>Activities: Time to the Hour<br/>Activities: Time to the Half Hour<br/>Activities: Graphing</p> |

n2y Differentiated Tasks

| <i>Level 3</i>  | <i>Level 2</i>  | <i>Level 1</i>   |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Students will use standard units to measure and compare the length of objects.</li> <li>• Students will select and use appropriate measurement tools for a purpose.</li> <li>• Within a real-world scenario, students will tell time to the hour or half hour on digital or analog clocks.</li> <li>• Students will identify days of the week in relation to a sequence of activities.</li> <li>• Students will recognize and count coins and bills for an amount discussed in a real-world scenario.</li> <li>• Students will ask and answer questions to gather data.</li> <li>• Students will sort, display and count data on a graph.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will use nonstandard units to measure and compare the lengths of objects.</li> <li>• Students will use measurement tools for a specific task.</li> <li>• Within a real-world scenario, students will match time to the hour on digital or analog clocks.</li> <li>• Students will identify today, tomorrow, and yesterday in relation to daily activities.</li> <li>• Students will use coins or bills to match a price within a real-world scenario.</li> <li>• Using picture supports, students will ask and answer questions to gather data.</li> <li>• Students will sort picture data on a graph.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will compare the length of two objects and indicate which is longer or shorter.</li> <li>• Students will select a measurement tool for an activity.</li> <li>• Specific to a task, students will select a time to the hour.</li> <li>• Students will select the day of the week as part of a daily schedule.</li> <li>• Students will indicate a choice to purchase one of two items and exchange money for that purchase.</li> <li>• Students will ask a question to gather data, through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>• Students will select a picture to display on a data graph.</li> </ul> |

| Math Standards for Geometry   |   | Grades K–2 |
|---|---|------------|
| Indiana Mathematics Standards   | Indiana Connectors  |            |
| <p><b>KINDERGARTEN</b></p> <p>K.G.1: Describe the positions of objects and geometric shapes in space using the terms inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of and to the right of.</p> <p>K.G.2: Compare two- and three-dimensional shapes in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).</p> <p>K.G.3: Model shapes in the world by composing shapes from objects (e.g., sticks and clay balls) and drawing shapes.</p> <p>K.G.4: Compose simple geometric shapes to form larger shapes (e.g., create a rectangle composed of two triangles).</p> <p><b>GRADE 1</b></p> <p>1.G.1: Identify objects as two-dimensional or three-dimensional. Classify and sort two-dimensional and three-dimensional objects by shape, size, roundness and other attributes. Describe how two-dimensional shapes make up the faces of three-dimensional objects.</p> <p>1.G.2: Distinguish between defining attributes of two- and three-dimensional shapes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size). Create and draw two-dimensional shapes with defining attributes.</p> <p>1.G.3: Use two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. [In grade 1, students do not need to learn formal names such as "right rectangular prism."]</p> <p>1.G.4: Partition circles and rectangles into two and four equal parts; describe the parts using the words halves, fourths, and quarters; and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of, the parts. Understand for partitioning circles and rectangles into two and four equal parts that decomposing into equal parts creates smaller parts.</p> | <p><b>KINDERGARTEN</b></p> <p>K.G.1.a Describe the positions of objects and geometric shapes in space using the terms above, below, behind, in front of, next to.</p> <p>K.G.2.a.1 Compare two-dimensional shapes in different sizes using informal language to describe their sides.<br/>K.G.2.a.2 Compare three-dimensional shapes in different sizes using informal language to describe their sides and faces.</p> <p>K.G.3.a Compose shapes from objects.</p> <p>K.G.4.a Compose simple geometric shapes.</p> <p><b>GRADE 1</b></p> <p>1.G.1.a.1: Identify objects as two-dimensional or three-dimensional.<br/>1.G.1.a.2: Explore attributes of two-dimensional and three-dimensional objects.<br/>1.G.1.a.3: Identify the two-dimensional shapes that make up the faces of three-dimensional objects.</p> <p>1.G.2.a.1: Name defining attributes of two- and three-dimensional shapes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size).</p> <p>1.G.3.a.1: Use geometric shapes (e.g., two-dimensional and three dimensional) to create a composite shape.</p> <p>1.G.4.a.1: Divide circles and rectangles into two equal parts; name the parts of the shape using the word halves.</p> |            |

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| <p><b>GRADE 2</b><br/>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.</p> <p>2.G.2: Create squares, rectangles, triangles, cubes, and right rectangular prisms using appropriate materials.</p> <p>2.G.3: Investigate and predict the result of composing and decomposing two- and three-dimensional shapes.</p> <p>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.</p> <p>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.</p>  |  | <p><b>GRADE 2</b><br/>2.G.1.a.1: Draw given two-dimensional or three-dimensional objects.<br/>2.G.1.a.2: Identify attributes of two-dimensional and three-dimensional objects.</p> <p>2.G.2.a.1: Create squares, rectangles, triangles, and cubes.</p> <p>2.G.3.a.1: Compose and decompose two- and three-dimensional shapes.</p> <p>2.G.4.a.1: Divide a rectangle into rows and columns of same-size (unit) squares and count to find the total number of same-size squares.</p> <p>2.G.5.a.1: Divide circles and rectangles into two and four equal parts; name the parts of the shape using the word halves and quarters.</p> |
| <b>n2y Instructional Targets</b>  | <b>n2y Elementary Grade Band Lessons and Activities</b>    | <b>n2y Supporting Activities</b>   |
| <p><i>Identify and describe shapes.</i></p> <ul style="list-style-type: none"> <li>Recognize two- and three-dimensional shapes in the environment.</li> <li>Describe positions of objects and shapes in the environment with positional vocabulary (<i>in, on, under, beside, etc.</i>).</li> </ul> <p><i>Reason with shapes and their attributes.</i></p> <ul style="list-style-type: none"> <li>Identify shapes as two-dimensional (flat) or three-dimensional (solid).</li> <li>Identify basic two-dimensional shapes by name (square, circle, triangle, rectangle, etc.) and describe attributes (number of sides, corners, etc.).</li> <li>Identify basic three-dimensional shapes by name (cubes, rectangular prisms, cones, cylinders and spheres) and describe attributes (number of edges, faces, etc.).</li> <li>Compare two- or three-dimensional shapes and describe their similarities and differences.</li> <li>Draw or build two- or three-dimensional shapes.</li> <li>Compose a large shape from smaller shapes.</li> <li>Partition circles and rectangles into two, three or four parts (halves, thirds, fourths).</li> </ul> | <p><b>Unique</b><br/>Lesson 24: Geometry/Spatial Sense</p> | <p><b>Unique</b><br/>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Shapes Standards Connection</p> <p><b>News-2-You</b><br/>Activities: Read &amp; Do<br/>Activities: Matching</p>  |

n2y Differentiated Tasks

| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>   |
|--|---|--|
| <ul style="list-style-type: none"> <li>• Students will independently identify shapes within the environment.</li> <li>• Students will independently describe the position of an object in the environment.</li> <li>• Students will independently sort two-dimensional and three-dimensional shapes.</li> <li>• Students will independently identify and describe two-dimensional shapes.</li> <li>• Students will independently identify and describe three-dimensional shapes.</li> <li>• Independently describe the similarities and differences between two or more shapes.</li> <li>• Given attributes, independently draw or build a two- or three-dimensional shape.</li> <li>• Independently build a large shape from smaller shapes.</li> <li>• Independently partition a shape into two, three or four equal parts.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will match an object in the environment with a shape.</li> <li>• Students will identify the position of an object in the environment with support.</li> <li>• Students will sort two-dimensional and three-dimensional shapes with support.</li> <li>• Students will match like two-dimensional shapes.</li> <li>• Students will match like three-dimensional shapes.</li> <li>• Identify the similarities and differences between two shapes with support.</li> <li>• Given a model, draw or build a two- or three-dimensional shape.</li> <li>• Match small shapes to build a larger shape.</li> <li>• Partition a shape into two, three or four equal parts with support.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will select a named shape in the environment from a field of choices.</li> <li>• Students will select the position of an object in the environment from a field of choices.</li> <li>• Students will select a two-dimensional or three-dimensional shape (may be errorless).</li> <li>• Students will select named two-dimensional shapes.</li> <li>• Students will select named three-dimensional shapes.</li> <li>• Compare two shapes by selecting a shared attribute from a single option or errorless choice.</li> <li>• Make a selection to participate in drawing or building a two- or three-dimensional shape.</li> <li>• Make a selection to build a large shape.</li> <li>• Participate in partitioning a shape.</li> </ul> |

| Math Standards for Operations and Algebraic Thinking   |   | Grades 3–5   |
|--|---|--|
| Indiana Mathematics Standards  |   | Indiana Connectors   |
| <p><b>GRADE 3</b><br/>3.AT.1: Solve real-world problems involving addition and subtraction of whole numbers within 1000 (e.g., by using drawings and equations with a symbol for the unknown number).</p> <p><b>GRADE 4</b><br/>4.AT.1: Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p> <p><b>GRADE 5</b><br/>5.AT.1: Solve real-world problems involving multiplication and division of whole numbers (e.g., by using equations to represent the problem). In division problems that involve a remainder, explain how the remainder affects the solution to the problem.</p> <p>5.AT.5: Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to hundredths, including problems that involve money in decimal notation (e.g., by using equations to represent the problem).</p>  |   | <p><b>GRADE 3</b><br/>3.AT.1.a.1: Use pictures and/or manipulatives to solve real-world one-step addition and subtraction word problems.</p> <p><b>GRADE 4</b><br/>4.AT.1.a.1: Solve or solve and check one- or two-step word problems requiring addition, subtraction.</p> <p><b>GRADE 5</b><br/>5.AT.1.a.1: Solve problems or word problems using up to 3-digit multiplication or 3-digit division with no remainder.</p> <p>5.AT.5.a.1: Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to hundredths, including problems that involve money in decimal notation.</p> |
| n2y Instructional Targets  | n2y Intermediate Grade Band Lessons and Activities                                  | n2y Supporting Activities  |
| <p><i>Represent and solve problems involving multiplication and division.</i></p> <ul style="list-style-type: none"> <li>Model products of whole numbers (e.g., <math>3 \times 2</math> as 3 groups with 2 objects in each group).</li> <li>Model whole number quotients (e.g., <math>16 \div 8</math> as 16 objects placed in 8 groups with 2 in each group).</li> <li>Use multiplication and division of whole numbers to solve real-world story problems.</li> </ul> <p><i>Use the four operations with whole numbers to solve problems.</i></p> <ul style="list-style-type: none"> <li>Solve problems (<math>=</math>, <math>-</math>, <math>\times</math> or <math>\div</math>) in which a symbol or letter represents an unknown (e.g., <math>4 + a = 10</math>).</li> <li>Solve multi-step story problems containing whole numbers.</li> </ul> <p><i>Gain familiarity with factors and multiples.</i></p> <ul style="list-style-type: none"> <li>Model multiplication and division by making groups of equal sizes.</li> </ul> <p><i>Write and interpret numerical expressions.</i></p> <ul style="list-style-type: none"> <li>Write and solve a number problem based on a real-world situation.</li> </ul> | <p><b>Unique</b></p> <p>Lesson 16: Number Sense<br/>Lesson 24: Algebra/Patterns</p> | <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers<br/>ULS Instructional Tools: Math Pack/Arrays<br/>Manipulative pictures<br/>Standards Connection</p> <p style="background-color: #f4a460;"><b>News-2-You</b></p> <p>Current Events Newspaper: Sudoku<br/>Activities: Which Comes Next?<br/>Activities: Word Problems<br/>Joey's Locker: Tac-Tac-Toe</p>   |

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| <ul style="list-style-type: none"> <li>Identify which operation comes first when a calculation requires more than one operation.</li> </ul> <p><i>Generate and analyze patterns.</i></p> <ul style="list-style-type: none"> <li>Extend the sequence of a non-numeric pattern.</li> <li>Continue a sequence of numbers with a given rule (e.g., “add 2” relates to counting by 2s; “add 5” relates to counting by 5s).</li> </ul>  |  |   |
| <b>n2y Differentiated Tasks</b>   |  |   |
| <p><i>Level 3</i></p> <ul style="list-style-type: none"> <li>Students will calculate addition and subtraction problems in the context of a real-world scenario.</li> <li>Students will read, write and solve a math sentence.</li> <li>Students will solve multi-step problems, using a combination of operations in the context of a real-world scenario.</li> <li>Students will model multiplication and division with objects and numbers, showing equal groups in the context of a real-world scenario.</li> <li>Students will extend a sequence of numbers to show a pattern (2s, 5s, 10s, etc.).</li> </ul> | <p><i>Level 2</i></p> <ul style="list-style-type: none"> <li>Students will model addition and subtraction of two sets of objects in the context of a real-world scenario.</li> <li>Students will select pictures and numbers to model a math sentence.</li> <li>Students will solve a two-step problem, using operations and models in the context of a real-world scenario.</li> <li>Students will count equal numbers of objects in selected groups or an array.</li> <li>Students will extend a sequence of objects to show a pattern.</li> </ul> | <p><i>Level 1</i></p> <ul style="list-style-type: none"> <li>Students will count a set of objects through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will select a number (errorless choice) to make a choice of numbers within a math problem.</li> <li>Students will select numbers and count within a two-step problem in the context of a real-world scenario.</li> <li>Students will count a set of objects in a group through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will select an object to show what appears next in a pattern.</li> </ul> |

| Math Standards for Numbers and Operations in Base Ten  |  | Grades 3–5 |
|--|--|------------|
| Indiana Mathematics Standards  | Indiana Connectors   |            |
| <p><b>GRADE 3</b><br/>3.C.1: Add and subtract whole numbers fluently within 1000.</p> <p>3.C.2: Represent the concept of multiplication of whole numbers with the following models: equal-sized groups, arrays, area models, and equal “jumps” on a number line. Understand the properties of 0 and 1 in multiplication.</p> <p><b>GRADE 4</b><br/>4.C.1: Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.</p> <p>4.C.2: Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.</p> <p>4.C.3: Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.</p> <p>4.C.4: Multiply fluently within 100.</p> <p><b>GRADE 5</b><br/>5.C.1: Multiply multi-digit whole numbers fluently using a standard algorithmic approach.</p> <p>5.C.2: Find whole-number quotients and remainders with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning used.</p> <p>5.C.8: Add, subtract, multiply, and divide decimals to hundredths, using models or drawings and strategies based on place value or the properties of operations. Describe the strategy and explain the reasoning.</p> | <p><b>GRADE 3</b><br/>3.C.1.a.1: Adding and subtracting whole numbers.</p> <p>3.C.2.a.1: Solve multiplication problems with manipulatives and arrays with numbers 1, 5, and 10 (tier 2: 1 &amp; 5).</p> <p><b>GRADE 4</b><br/>4.C.1.a.1: Grouping up to 10 objects with another set of up to 10 objects, and determining the final result.</p> <p>4.C.2.a.1: Relate multiplication to skip counting to enable to students to solve multiplication problems up to two digits by 0 1, 2, 5, and 10.</p> <p>4.C.3.a.1: Able to group a set of objects no more than 50 objects into smaller sets of equal proportions.</p> <p>4.C.4.a.1: Multiplying whole numbers within 100.</p> <p><b>GRADE 5</b><br/>5.C.1.a.1: Use fact families to help multiply factors up to 10 (0-10).</p> <p>5.C.2.a.1: Solve word problems that require division.<br/>5.C.2.a.2: Solve word problems that require multiplication.</p> <p>5.C.8.a.1: Solve 1 step problems using decimals.</p> |            |

| n2y Instructional Targets   | n2y Intermediate Grade Band Lessons and Activities   | n2y Supporting Activities  |
|---|--|--|
| <p><b>Building Blocks to Counting and Cardinality</b></p> <ul style="list-style-type: none"> <li>Read and write numerals.</li> <li>Count a number of objects.</li> </ul> <p><b>Understand the place value system.</b></p> <ul style="list-style-type: none"> <li>Use number lines or visual representations to illustrate whole numbers, including ones, tens and hundreds.</li> <li>Use visual representations to illustrate or compare decimals to the tenths' or hundredths' place.</li> <li>Compare multi-digit numbers by use of symbols: <math>&gt;</math>, <math>&lt;</math> or <math>=</math>.</li> </ul> <p><b>Use place value understanding and properties of operations to perform multi-digit arithmetic.</b></p> <ul style="list-style-type: none"> <li>Solve addition and subtraction problems up to 30, 50 and 100.</li> <li>Illustrate concepts of multiplication (equal shares) and division (equal groups) with multi-digit numbers.</li> <li>Solve single-digit and multi-digit multiplication and division problems.</li> </ul> | <p><b>Unique</b></p> <p>Lesson 16: Number Sense<br/>Lesson 18: Money<br/>Lesson 24: Algebra/Patterns</p>   | <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers<br/>ULS Instructional Tools: Math Pack/Arrays<br/>Manipulative pictures<br/>Standards Connection</p> <hr/> <p><b>News-2-You</b></p> <p>Current Events Newspaper: Sudoku<br/>Activities: Dot-to-Dot<br/>Activities: Which is Greater?<br/>Activities: Which is Less?<br/>Activities: Which Comes Next?</p>   |
| n2y Differentiated Tasks  |  |  |
| Level 3   | Level 2  | Level 1  |
| <ul style="list-style-type: none"> <li>Students will count and read numbers to 100.</li> <li>Students will compare numbers to 100 to determine <i>more</i>, <i>less</i> or <i>equal</i>.</li> <li>Students will solve addition and subtraction problems to 50 and 100.</li> <li>Students will model and solve simple multiplication and division problems in the context of a real-world scenario.</li> <li>Students will read money numbers containing a decimal to indicate dollars and cents.</li> </ul>   | <ul style="list-style-type: none"> <li>Students will count and read one-digit and two-digit numbers.</li> <li>Students will compare numbers to 20 with a model to determine <i>more</i>, <i>less</i> or <i>equal</i>.</li> <li>Students will solve addition and subtraction problems to 20.</li> <li>Students will model groups to multiply or divide.</li> <li>Students will match a decimal money amount to the same figure in cents.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count to a given number through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will compare two sets of objects to determine <i>more</i>, <i>less</i> or <i>equal</i>.</li> <li>Students will count sets of objects within addition or subtraction problems through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will count a set of objects in a group through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will select a money amount containing a decimal to demonstrate making a purchase.</li> </ul> |

## Math Standards for Numbers and Operations with Fractions

Grades 3–5

### Indiana Mathematics Standards

#### GRADE 3

3.NS.1: Read and write whole numbers up to 10,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 10,000.

3.NS.2: Compare two whole numbers up to 10,000 using  $>$ ,  $=$ , and  $<$  symbols.

3.NS.3: Understand a fraction,  $1/b$ , as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction,  $a/b$ , as the quantity formed by  $a$  parts of size  $1/b$ . [In grade 3, limit denominators of fractions to 2, 3, 4, 6, 8.]

3.NS.6: Understand two fractions as equivalent (equal) if they are the same size, based on the same whole or the same point on a number line.

#### GRADE 4

4.NS.1: Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.

4.NS.2: Compare two whole numbers up to 1,000,000 using  $>$ ,  $=$ , and  $<$  symbols.

4.NS.3: Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures.

4.NS.8: Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number.

### Indiana Connectors

#### GRADE 3

3.NS.1.a.1: Read, demonstrate, and write whole numbers up to 200.

3.NS.2.a.1: Compare two whole numbers up to 200 using symbols and words (tier two to 50).

3.NS.3.a.1: Identify the number of shaded parts (numerator) of a given representation (rectangles and circles).

3.NS.3.a.2: Identify the total number of parts (denominator) of a given representation (rectangles and circles).

3.NS.3.a.3: Identify the fraction that matches the representation (rectangles and circles; halves, fourths, thirds).

3.NS.6.a.1: Use  $=$ ,  $<$ , or  $>$  to compare two fractions with the same numerator or denominator.

#### GRADE 4

4.NS.1.a.1: Read, write and demonstrate (show) whole numbers up to 500.

4.NS.2.a.1: Compare two whole numbers up to five-digits using symbols ( $>$ ,  $=$ , and  $<$ ) and words.

4.NS.3.a.1: Using a model, express a whole number as a fraction.

4.NS.8.a.1: Identify two numbers that when multiplied together create a certain product (multiples of 5, up to 100).

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| <p><b>GRADE 5</b><br/>5.NS.1: Use a number line to compare and order fractions, mixed numbers, and decimals to thousandths. Write the results using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols.</p> <p>5.NS.5: Use place value understanding to round decimal numbers up to thousandths to any given place value.</p>  |   | <p><b>GRADE 5</b><br/>5.NS.1.a.1: Read, write, or select a decimal to the hundredths place.<br/>5.NS.1.a.2: Compare two decimals to the hundredths place with a value of less than 1. Make relationship to money. Use symbols <math>&lt;</math>, <math>&gt;</math>, and <math>=</math> &amp; vocabulary. Model with coins.</p> <p>5.NS.5.a.1: Round decimals to the next whole number. Use next dollar up strategy.</p> |
| <b>n2y Instructional Targets</b>   | <b>n2y Intermediate Grade Band Lessons and Activities</b>   | <b>n2y Supporting Activities</b>  |
| <p><i>Develop understanding of fractions as numbers.</i></p> <ul style="list-style-type: none"> <li>Use concrete models to illustrate fractional parts (equal parts showing a whole and one half, one third and one fourth of a whole).</li> <li>Match symbolic representations (<math>1/2</math>, <math>1/3</math>, <math>1/4</math>, etc.) to fractional parts.</li> </ul> <p><i>Use equivalent fractions as a strategy to add and subtract fractions.</i></p> <ul style="list-style-type: none"> <li>Add fractions with like denominators to solve real-world problems, using a visual or an object model.</li> </ul> | <p><b>Unique</b><br/>Lesson 20: It's a Fraction</p>   | <p><b>Unique</b><br/>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers (fractions)<br/>Standards Connection</p>  |
| <b>n2y Differentiated Tasks</b>  |   |   |
| <b>Level 3</b>   | <b>Level 2</b>  | <b>Level 1</b>  |
| <ul style="list-style-type: none"> <li>Students will identify fractional representations with a fractional model.</li> <li>Students will apply use of fractional representation of <math>1/4</math>, <math>1/2</math> and <math>1/3</math> in the context of real-word problems and scenarios.</li> </ul>  | <ul style="list-style-type: none"> <li>Students will model a whole that is divided into two, three or four equal parts.</li> <li>Students will recognize appropriate use of <math>1/2</math> and <math>1/4</math> in the context of real-world problems and scenarios.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select matching parts that fit together to make a whole.</li> <li>Students will select fractional units as part of a real-world problem or scenario.</li> </ul>  |

| Math Standards for Measurement and Data   |   | Grades 3–5 |
|---|---|------------|
| Indiana Mathematics Standards   | Indiana Connectors  |            |
| <p><b>GRADE 3</b></p> <p>3.M.1: Estimate and measure the mass of objects in grams (g) and kilograms (kg) and the volume of objects in quarts (qt), gallons (gal), and liters (l). Add, subtract, multiply, or divide to solve one-step real-world problems involving masses or volumes that are given in the same units (e.g., by using drawings, such as a beaker with a measurement scale, to represent the problem).</p> <p>3.M.3: Tell and write time to the nearest minute from analog clocks, using a.m. and p.m., and measure time intervals in minutes. Solve real-world problems involving addition and subtraction of time intervals in minutes.</p> <p>3.M.4: Find the value of any collection of coins and bills. Write amounts less than a dollar using the ¢ symbol and write larger amounts using the \$ symbol in the form of dollars and cents (e.g., \$4.59). Solve real-world problems to determine whether there is enough money to make a purchase.</p> <p>3.M.7: Find perimeters of polygons given the side lengths or by finding an unknown side length.</p> <p>3.DA.1: Create scaled picture graphs, scaled bar graphs, and frequency tables to represent a data set – including data collected through observations, surveys, and experiments – with several categories. Solve one- and two-step “how many more” and “how many less” problems regarding the data and make predictions based on the data.</p> <p><b>GRADE 4</b></p> <p>4.M.2: Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb., oz.; l, ml; hr., min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.</p> <p>4.M.3: Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.</p> | <p><b>GRADE 3</b></p> <p>3.M.1a.1: Add to solve one-step word problems using pounds, gallons, quarts, liters, (grams).</p> <p>3.M.3.a.1: Solve real-world word problems involving the addition and subtraction of time intervals to whole hours or within an hour (whole hours: 5:00 to 8:00, within hours: 7:15 to 7:45). Using manipulatives/pictures of clock.</p> <p>3.M.4.a.1: Solve real-world problems to determine whether there is enough money to make a purchase using the next dollar strategy (round up to the next whole dollar).</p> <p>3.M.7.a.1: Identify a figure as getting larger or smaller when the dimensions of the figure change.</p> <p>3.M.7.a.2: Use addition to find the perimeter of a rectangle, (triangle for tier 2).</p> <p>3.DA.1.a.1: Organize given data into picture or bar graph.</p> <p>3.DA.1.a.2: Select the appropriate statement that describes the data representations based on a given graph (picture/bar).</p> <p><b>GRADE 4</b></p> <p>4.M.2.a.1: Identify the appropriate units of measurement for different purposes in a real life context (e.g., measure a wall using feet, not inches).</p> <p>4.M.3.a.1: Solve real-world problems using interval of time to the half-hour.</p> <p>4.M.3.a.2: Solve real-world problems using money up to the value of one dollar.</p> |            |

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| <p>4.DA.3: Interpret data displayed in a circle graph.</p> <p><b>GRADE 5</b><br/>5.M.1: Convert among different-sized standard measurement units within a given measurement system, and use these conversions in solving multi-step real-world problems.</p> <p>5.DS.1: Formulate questions that can be addressed with data and make predictions about the data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, bar graphs, and line graphs. Recognize the differences in representing categorical and numerical data.</p>  |   | <p>4.DA.3.a.1: Use the circle graph to estimate about how many people/items are in a section. Limit measurements (1/2, 1/4).</p> <p><b>GRADE 5</b><br/>5.M.1.a.1: Convert measurements of time (day in a week, hours in a day, months in a year, minutes in an hour, seconds in a minute).<br/>5.M.1.a.2: Solve problems involving when finding time lapse.</p> <p>5.DS.1.a.1: Use graph data (bar graph) to determine questions that could be answered with the graph of answer a simple question about the graph (e.g., average height among 3 classrooms, # of boys and girls).</p> |
| <p><b>n2y Instructional Targets</b></p>  | <p><b>n2y Intermediate Grade Band Lessons and Activities</b></p>  | <p><b>n2y Supporting Activities</b></p>  |
| <p><i>Solve problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects.</i></p> <ul style="list-style-type: none"> <li>Use time concepts to describe personal activities and schedules (e.g., calendar dates and days).</li> <li>Tell time to hour, half-hour, quarter-hour and five-minute intervals.</li> <li>Use standard units to measure length (inches, feet) or weight (pounds, ounces).</li> <li>Solve problems and describe differences in length or weight (more, less or same; &gt;, &lt; or =, etc.).</li> </ul> <p><i>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</i></p> <ul style="list-style-type: none"> <li>Solve real-world problems, including use of operations that involve intervals of time.</li> <li>Solve real-world problems, including use of operations that involve liquid volumes and masses of objects.</li> <li>Solve real-world problems, including use of operations that involve money.</li> </ul> <p><i>Represent and interpret data.</i></p> <ul style="list-style-type: none"> <li>Collect, organize and display data on a picture, line plot or bar graph.</li> <li>Answer questions to interpret data on graphs.</li> </ul> | <p><b>Unique</b></p> <p>Lesson 21: Measure It!<br/>Lesson 22: Crafty Kid<br/>Lesson 19: Telling Time<br/>Lesson 18: Money<br/>Lesson 17: Survey and Chart<br/>Core Task 1.1: Daily Schedules<br/>Core Task 1.2: Monthly Calendars<br/>Core Task 4.1: Calendar (Circle Time)</p> | <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Time<br/>ULS Instructional Tools: Math Pack/Money<br/>Standards Connection</p> <p><b>News-2-You</b></p> <p>Recipe Page Standards Connection<br/>Activities: Time to the Hour<br/>Activities: Time to the Half Hour<br/>Activities: Time to the Quarter Hour<br/>Activities: Time Lapse<br/>Activities: Graphing</p>   |

n2y Differentiated Tasks

| <i>Level 3</i>   | <i>Level 2</i>   | <i>Level 1</i>   |
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| <ul style="list-style-type: none"> <li>• Students will use inches and feet to measure and compare length in the context of a real-world activity.</li> <li>• Students will select and use appropriate measurement tools for measurement of liquid mass and weight in the context of a real-world activity or scenario.</li> <li>• Students will identify time and solve simple real-world problems involving intervals of time.</li> <li>• Students will identify dates, including days, months and years, on a calendar.</li> <li>• Students will calculate an amount of coins and bills to solve a problem within a real-world scenario.</li> <li>• Students will collect, organize and report data that is presented on a graph.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will identify the number of inches or feet in a supported measurement of length.</li> <li>• With support, students will use appropriate measurement tools in a supported measurement of liquid mass and weight within a real-world task.</li> <li>• Students will identify time to the hour and half hour as it applies to a real-world scenario or schedule.</li> <li>• Students will identify the days and months on a calendar.</li> <li>• Students will select coins or bills to match a price within a real-world scenario.</li> <li>• Students will ask questions to gather data and display it on a graph.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will identify the number of inches in a supported measurement of length.</li> <li>• Students will select a measurement tool within the context of an activity.</li> <li>• Students will select a time as part of a sequence of activities or a schedule.</li> <li>• Students will select the day of the week and month of the year as part of a daily schedule.</li> <li>• Students will use money to make a purchase.</li> <li>• Students will ask a question and select pictures as part of a data-gathering process.</li> </ul> |

| Math Standards for Geometry   |   | Grades 3–5   |
|---|---|--|
| Indiana Mathematics Standards   |   | Indiana Connectors   |
| <p><b>GRADE 3</b><br/>3.G.1: Identify and describe the following: cube, sphere, prism, pyramid, cone, and cylinder.</p> <p><b>GRADE 4</b><br/>4.G.5: Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse).</p> <p><b>GRADE 5</b><br/>5.G.1: Identify, describe, and draw triangles (right, acute, obtuse) and circles using appropriate tools (e.g., ruler or straightedge, compass and technology). Understand the relationship between radius and diameter.</p> <p>5.G.2: Identify and classify polygons including quadrilaterals, pentagons, hexagons, and triangles (equilateral, isosceles, scalene, right, acute and obtuse) based on angle measures and sides. Classify polygons in a hierarchy based on properties.</p> |   | <p><b>GRADE 3</b><br/>3.G.1.a.1: Identify the following: cube, sphere, cylinder, cone.</p> <p><b>GRADE 4</b><br/>4.G.5.a.1: Classify shapes based on attributes (angles, parallel and perpendicular lines).</p> <p><b>GRADE 5</b><br/>5.G.1.a.1: Categorize angles as right, acute, or obtuse.<br/>5.G.1.a.2: Identify the diameter &amp; radius of a circle.</p> <p>5.G.2.a.1: Recognize properties of simple plane figures by counting the number of sides.<br/>5.G.2.a.2: Distinguish plane figures by the name of the shape and number of sides.</p> |
| n2y Instructional Targets   | n2y Intermediate Grade Band Lessons and Activities  | n2y Supporting Activities  |
| <p><i>Reason with shapes and their attributes. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</i></p> <ul style="list-style-type: none"> <li>Sort and label shapes by multiple defining attributes.</li> <li>Classify figures on the basis of angles and parallel lines.</li> <li>Describe attributes of two-dimensional shapes (number of sides and angles, straight and curved lines, etc.).</li> <li>Partition shapes into equal parts and express these parts as fractions.</li> </ul> <p><i>Graph points on the coordinate plane to solve real-world and mathematical problems.</i></p> <ul style="list-style-type: none"> <li>Identify and plot points on a coordinate plane.</li> <li>Identify the distance between two points on a coordinate plane.</li> </ul>                         | <p style="background-color: #f4a460;">Unique</p> <p>Lesson 23: Geometry/Spatial Sense</p> | <p style="background-color: #f4a460;">Unique</p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Shapes Standards Connection</p>   |

n2y Differentiated Tasks

| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>  |
|---|--|---|
| <ul style="list-style-type: none"> <li>• Students will sort and identify shapes by multiple attributes.</li> <li>• Students will identify and state the purpose of the lines, curves and angles of a shape.</li> <li>• Students will divide a shape into equal parts and identify the fractional representation.</li> <li>• Students will connect multiple points on a coordinate plane and compare distances.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will sort and match shapes on the basis of multiple attributes.</li> <li>• Students will identify shapes with similar lines or curves as part of a real-world scenario.</li> <li>• Students will divide a shape into two or four equal parts.</li> <li>• Students will connect points on a coordinate plane that represent locations.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will select a named shape (errorless choice).</li> <li>• Students will match shapes having similar lines and curves.</li> <li>• Students will select matching parts that fit together to make a whole.</li> <li>• Students will select a location that is indicated on a coordinate plane.</li> </ul> |

## Math Standards for Expressions and Equations

Grades 6–8

| Indiana Mathematics Standards   | Indiana Connectors   |
|---|--|
| <p><b>GRADE 6</b></p> <p>6.AF.1: Evaluate expressions for specific values of their variables, including expressions with whole-number exponents and those that arise from formulas used in real-world problems.</p> <p>6.AF.2: Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions and to justify whether two linear expressions are equivalent when the two expressions name the same number regardless of which value is substituted into them.</p> <p>6.AF.3: Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.</p> <p>6.AF.4: Understand that solving an equation or inequality is the process of answering the following question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.</p> <p>6.AF.5: Solve equations of the form <math>x + p = q</math>, <math>x - p = q</math>, <math>px = q</math>, and <math>x/p = q</math> fluently for cases in which <math>p</math>, <math>q</math> and <math>x</math> are all nonnegative rational numbers. Represent real-world problems using equations of these forms and solve such problems.</p> <p>6.AF.6: Write an inequality of the form <math>x &gt; c</math>, <math>x \geq c</math>, <math>x &lt; c</math>, or <math>x \leq c</math>, where <math>c</math> is a rational number, to represent a constraint or condition in a real-world or other mathematical problem. Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.</p> <p>6.AF.7: Understand that signs of numbers in order pairs indicate the quadrant containing the point; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. Graph points with rational number coordinates on a coordinate plane.</p> <p><b>GRADE 7</b></p> <p>7.AF.2: Solve equations of the form <math>px + q = r</math> and <math>p(x + q) = r</math> fluently, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems.</p> | <p><b>GRADE 6</b></p> <p>6.AF.1.a.1: Given a real-world problem evaluate the expressions for the specific values of their variables.</p> <p>6.AF.2.a.1: Use properties to produce equivalent expressions.</p> <p>6.AF.3.a.1: Given a real-world problem evaluate the expressions for the specific values of two variables.</p> <p>6.AF.4.a.1: Use substitution to determine validity of an equation.</p> <p>6.AF.5.a.1: Solve real-world, single step linear equations.</p> <p>6.AF.6.a.1: Given a real-world problem, write an inequality.</p> <p>6.AF.7.a.1: Graph a point on a coordinate plane.</p> <p><b>GRADE 7</b></p> <p>7.AF.2.a.1: Solve equations with 1 variable based on real-world problems.</p> <p>7.AF.2.a.2: Use variables to represent quantities in a real-world or mathematical problem to solve problems by reasoning about the quantities.</p> |

| n2y Instructional Targets   | n2y Middle School Grade Band Lessons and Activities   | n2y Supporting Activities  |
|---|---|--|
| <p><b>Building Blocks to Expressions and Equations</b></p> <ul style="list-style-type: none"> <li>Understand and use +, - and = symbols in problems.</li> <li>Solve addition and subtraction problems.</li> <li>Model and solve problems involving multiplication or division.</li> </ul> <p><b>Apply and extend previous understanding of arithmetic to algebraic expressions</b></p> <ul style="list-style-type: none"> <li>Use the commutative, associative and distributive properties to add, subtract and multiply whole numbers.</li> <li>Write and simplify expressions in which letters stand for unknown numbers within a real-world scenario.</li> </ul> <p><b>Reason and solve one-variable equations and inequalities</b></p> <ul style="list-style-type: none"> <li>Order a sequence of steps to solve an equation.</li> </ul> <p><b>Solve real-life and mathematical problems by using numerical and algebraic expressions and equations</b></p> <ul style="list-style-type: none"> <li>Solve real-world problems involving addition and subtraction of decimals, using models when needed.</li> <li>Solve real-world problems involving multiplication of decimals and whole numbers, using models when needed.</li> <li>Write and solve equations with one variable to solve real-world word problems.</li> <li>Write and solve inequalities with one variable to solve real-world problems.</li> </ul> <p><b>Work with radicals and integer exponents</b></p> <ul style="list-style-type: none"> <li>Determine the value of a quantity that is squared or cubed.</li> </ul> | <p><b>Unique</b></p> <p>Lesson 19: Math Story Problems<br/>Lesson 25: Algebra<br/>Lesson 22: Money Applications<br/>Core Task 2.5: Snack Basket<br/>Core Task 2.1: Attendance</p>   | <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers<br/>ULS Instructional Tools: Math Pack/Money<br/>ULS Instructional Tools: Math Pack/Arrays<br/>Standards Connection</p> <p><b>News-2-You</b></p> <p>Activities: Word Problems</p>   |
| n2y Differentiated Tasks  |   |  |
| Level 3   | Level 2   | Level 1  |
| <ul style="list-style-type: none"> <li>Students will calculate addition and subtraction problems in the context of a real-world scenario.</li> <li>Students will read, write and solve a math sentence.</li> <li>In the context of a real-world scenario, students will use a combination of operations to solve multi-step problems.</li> <li>Using objects and numbers showing equal groups, students will model multiplication and division in the context of real-world scenarios.</li> </ul>   | <ul style="list-style-type: none"> <li>In the context of a real-world scenario, students will model addition and subtraction of two sets of objects.</li> <li>Students will select pictures and numbers to model a math sentence.</li> <li>Students will solve a two-step problem, using operations and models in the context of a real-world scenario.</li> <li>Students will count equal numbers of objects in selected groups or in an array.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count a set of objects in an addition or a subtraction problem through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will select a number (errorless choice) within a math problem.</li> <li>In the context of a real-world scenario, students will select numbers and count within a two-step problem.</li> <li>Students will count a set of objects in a group through an active participation response (e.g., voice output device, eye gaze choice board).</li> </ul> |

**Math Standards for the Number System** **Grades 6–8**

| Indiana Mathematics Standards  | Indiana Connectors  |
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| <p><i>GRADE 6</i><br/>6.C.1: Divide multi-digit whole numbers fluently using a standard algorithmic approach.</p> <p><i>GRADE 7</i><br/>7.C.1: Understand <math>p + q</math> as the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction, depending on whether <math>q</math> is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p> <p>MA.7.C.6: Use proportional relationships to solve ratio and percent problems with multiple operations, such as the following: simple interest, tax, markups, markdowns, gratuities, commissions, fees, conversions within and across measurement systems, percent increase and decrease, and percent error.</p> <p>7.C.8: Solve real-world problems with rational numbers by using one or two operations.</p> <p><i>GRADE 8</i><br/>8.C.1: Solve real-world problems with rational numbers by using multiple operations.</p> | <p><i>GRADE 6</i><br/>6.C.1.a.1: Divide multi-digit whole numbers.</p> <p><i>GRADE 7</i><br/>7.C.1.a.1: Add a positive and negative integer.</p> <p>MA.7.C.6.a.1: Use proportions to solve ratio problems.<br/>MA.7.C.6.a.2: Solve word problems involving ratios.<br/>MA.7.C.6.a.3: Use proportional relationships to solve multistep percent problems.</p> <p>7.C.8.a.1: Understand the order of operations to solve real-world multistep problems using whole numbers.</p> <p><i>GRADE 8</i><br/>8.C.1.a.1: Solve real-world problems with rational numbers by using two operations.</p> |

| n2y Instructional Targets   | n2y Middle School Grade Band Lessons and Activities   | n2y Supporting Activities  |
|---|---|--|
| <p><i>Building Blocks to The Number System</i></p> <ul style="list-style-type: none"> <li>Recognize and compare numbers showing the symbols <math>&gt;</math>, <math>&lt;</math> or <math>=</math>.</li> <li>Match symbolic representations (<math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, etc.) to fractional parts.</li> </ul> <p><i>Compute fluently with multi-digit numbers and find common factors and multiples.</i></p> <ul style="list-style-type: none"> <li>Add, subtract, multiply and divide multi-digit numbers with fluency.</li> <li>Fluently add, subtract, multiply and divide numbers with decimals.</li> </ul> <p><i>Apply and extend previous understanding of numbers to the system of rational numbers.</i></p> <ul style="list-style-type: none"> <li>Indicate positive and negative numbers (using a number line, temperatures, negative numbers, etc.) in a real-world scenario.</li> <li>Graph positive and negative numbers (using a number line, temperatures including negative numbers, etc.) in a real-world scenario.</li> </ul> | <p><b>Unique</b></p> <p>Lesson 19: Math Story Problems<br/>Lesson 20: Measure It!<br/>Lesson 22: Money Applications</p> | <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers<br/>ULS Instructional Tools: Math Pack/Money Standards Connection</p> |
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| <p><i>Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers.</i></p> <ul style="list-style-type: none"> <li>• Add and subtract fractions with like denominators (<math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, &amp; <math>\frac{1}{10}</math>) with sums less than or equal to one.</li> <li>• Using a model, divide a whole number into fractional units (<math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{8}</math>, <math>\frac{1}{10}</math>) and count the fractional parts of a whole (3 parts of 4, 6 parts of 10, etc.).</li> <li>• Add and subtract rational numbers.</li> <li>• Identify the additive inverse.</li> <li>• Multiply and divide rational numbers.</li> </ul> |   |  |
| <b>n2y Differentiated Tasks</b>  |   |  |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>• Students will apply use of fractional representations of <math>\frac{1}{4}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{2}</math>, <math>\frac{1}{8}</math> and <math>\frac{1}{10}</math> in the context of real-world problems and scenarios.</li> <li>• Students will use objects or a model to add or subtract two fractional units (e.g., <math>\frac{1}{4}</math> cup + <math>\frac{1}{4}</math> cup is the same as <math>\frac{1}{2}</math> cup).</li> <li>• Students will use appropriate operations to solve real-world problems.</li> <li>• Students will compare two numbers and use symbols to indicate <math>&gt;</math>, <math>&lt;</math> or <math>=</math>.</li> </ul>   | <ul style="list-style-type: none"> <li>• Students will recognize appropriate use of <math>\frac{1}{2}</math>, <math>\frac{1}{3}</math> and <math>\frac{1}{4}</math> in the context of real-world problems and scenarios.</li> <li>• Students will combine two fractional units to make a new unit of measure.</li> <li>• Students will model addition and subtraction of two sets of objects in the context of a real-world scenario.</li> <li>• Students will compare two groups of objects and determine that one group is larger than the other or that the groups are equal.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will select fractional units as part of a real-world problem or scenario.</li> <li>• Students will match fractional parts of an object to make a whole.</li> <li>• Students will count a set of objects in an addition or subtraction problem through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>• Students will count objects in a group through an active participation response (e.g., voice output device, eye gaze choice board).</li> </ul> |

| Math Standards for Life Skills for Measurement  |  | Grades 6–8  |
|---|--|---|
| Indiana Mathematics Standards   |  | Indiana Connectors  |
|   |  | Life Skills for Measurement are not addressed in The Indiana Connectors for this grade band.  |
| n2y Instructional Targets   | n2y Middle School Grade Band Lessons and Activities  | n2y Supporting Activities   |
| <b>Life Skills for Measurement</b> <ul style="list-style-type: none"> <li>Select units and accurately use measurement tools in the context of a daily living activity.</li> <li>Solve problems involving measurement.</li> <li>Apply knowledge of time skills to real-world problem-solving situations and scenarios.</li> <li>Apply knowledge of money skills to real-world problem-solving situations and scenarios.</li> </ul>   | <b>Unique</b><br>Lesson 20: Measure It!<br>Lesson 22: Money Applications<br>Lesson 23: Schedules and Time<br>Core Task 1.1: Daily Schedules<br>Core Task 1.2: Monthly Calendars<br>Core Task 2.2: Calendar<br>Core Task 2.5: Snack Basket  | <b>Unique</b><br>ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Money<br>ULS Instructional Tools: Math Pack/Time<br>Standards Connection   |
|   | <b>New-2-You</b>   |   |
|   | Recipe Page Standards Connection   |   |
| <b>n2y Differentiated Tasks</b>   |  |   |
| <b>Level 3</b>  | <b>Level 2</b>   | <b>Level 1</b>  |
| <ul style="list-style-type: none"> <li>Students will independently use measurement tools in daily living skill activities.</li> <li>Students will calculate the amount of money needed for a purchase and then determine the coins and bills necessary to complete that purchase.</li> <li>Students will read time and apply it to a real-world activity.</li> <li>Students will record personal events on a monthly calendar and use the information as it applies to daily activities.</li> </ul> | <ul style="list-style-type: none"> <li>Students will identify and use measurement tools appropriate for a supported daily living task.</li> <li>Students will match coins and bills to a given price.</li> <li>Students will represent times for morning, afternoon and evening in the context of a real-world scenario.</li> <li>Students will follow a schedule to complete daily activities.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select measurement tools for a daily living task.</li> <li>Students will exchange money for a purchase.</li> <li>Students will select a time for a personal activity of the day.</li> <li>Students will actively participate in a daily schedule based on timed activities.</li> </ul> |

| Math Standards for Geometry  |   | Grades 6–8   |
|--|---|--|
| Indiana Mathematics Standards  |   | Indiana Connectors   |
| <p><b>GRADE 6</b><br/>6.GM.1: Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.</p> <p>6.GM.3: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate; apply these techniques to solve real-world and other mathematical problems.</p> <p><b>GRADE 7</b><br/>7.GM.1: Draw triangles (freehand, with ruler and protractor, and using technology) with given conditions from three measures of angles or sides, and notice when the conditions determine a unique triangle, more than one triangle, or no triangle.</p> <p>7.GM.4: Solve real-world and other mathematical problems that involve vertical, adjacent, complementary, and supplementary angles.</p> <p><b>GRADE 8</b><br/>8.GM.3: Verify experimentally the properties of rotations, reflections, and translations, including: lines are mapped to lines, and line segments to line segments of the same length; angles are mapped to angles of the same measure; and parallel lines are mapped to parallel lines.</p> |   | <p><b>GRADE 6</b><br/>6.GM.1.a.1: Complete a conversion table for length and time.</p> <p>6.GM.3.a.1: Know the attributes of a polygon.</p> <p><b>GRADE 7</b><br/>7.GM.1.a.1: Students will be able to name if the triangle is obtuse, acute, or right.</p> <p>7.GM.4.a.1: Identify adjacent and vertical in a real-world situation.</p> <p><b>GRADE 8</b><br/>8.GM.3.a.1: Recognize a rotation, reflection, or translation of a figure.</p> |
| n2y Instructional Targets  | n2y Middle School Grade Band Lessons and Activities                           | n2y Supporting Activities  |
| <p><b>Building Blocks to Geometry</b></p> <ul style="list-style-type: none"> <li>Sort and label shapes by multiple defining attributes.</li> <li>Identify and plot points on a coordinate plane.</li> </ul> <p><i>Solve real-world and mathematical problems involving area, surface area and volume; solve real-life and mathematical problems involving angle measure, area, surface area and volume; solve real-world and mathematical problems involving volume of cylinders, cones and spheres.</i></p> <ul style="list-style-type: none"> <li>Use measurement units to determine the perimeter of a rectangular figure or area.</li> <li>Determine the area of a rectangle by positioning rows and counting unit squares that do not overlap.</li> <li>Determine the area of a rectangle by measuring and multiplying whole number side lengths (area = length x width).</li> <li>Solve real-world problems involving scaled drawings on a coordinate plane.</li> </ul>  | <p><b>Unique</b></p> <p>Lesson 20: Measure It!</p> <p>Lesson 24: Geometry</p> | <p><b>Unique</b></p> <p>ULS Instructional Guides: Mathematics</p> <p>ULS Instructional Tools: Math Pack/Shapes Standards Connection</p>  |
|  |   |  |

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|---|---|--|
| <ul style="list-style-type: none"> <li>Solve real-world problems involving area, surface area and volume of three-dimensional objects, including cubes, rectangular prisms and cylinders.</li> <li>Apply understanding of the area and circumference of a circle to real-world problems.</li> </ul>   |   |  |
| <b>n2y Differentiated Tasks</b>   |   |  |
| <i>Level 3</i>  | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will sort and identify shapes by multiple attributes.</li> <li>Students will use standard measurement tools and units to measure sides of a rectangular object or area.</li> <li>Students will arrange rows of unit squares in a rectangular area and solve for an area measurement by multiplying length by width.</li> <li>Students will connect multiple points on a coordinate plane and compare distances.</li> <li>Students will use a model to solve real-world problems representing two- and three-dimensional objects.</li> </ul> | <ul style="list-style-type: none"> <li>Students will sort and match shapes on the basis of multiple attributes.</li> <li>Students will identify the number of inches and feet in a supported measurement of length.</li> <li>Students will arrange unit squares in a rectangular pattern and solve for area measurement by counting the units.</li> <li>Students will connect the points on a coordinate plane that represent locations.</li> <li>Students will arrange two-dimensional figures on a model of a real-world scenario.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select a named shape (errorless choice).</li> <li>Students will compare two measured lengths to determine which is longer.</li> <li>Students will count unit squares in a row through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will select a location that is indicated on a coordinate plane.</li> <li>Students will match two-dimensional figures on a model of a real-world scenario.</li> </ul> |

## Math Standards for Ratios and Proportional Relationships

Grades 6–8

### Indiana Mathematics Standards

#### GRADE 6

6.NS.3: Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements or order for rational numbers in real-world contexts.

6.NS.5: Know commonly used fractions (halves, thirds, fourths, fifths, eighths, tenths) and their decimal and percent equivalents. Convert between any two representations (fractions, decimals, percent's) of positive rational numbers without the use of a calculator.

6.NS.9: Understand the concept of a unit rate and use terms related to rate in the context of a ratio relationship.

6.NS.10: Use reasoning involving rates and ratios to model real-world and other mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).

#### GRADE 7

7.NS.2: Understand the inverse relationship between squaring and finding the square root of a perfect square integer. Find square roots of perfect square integers.

7.NS.3: Know there are rational and irrational numbers. Identify, compare, and order rational and common irrational numbers ( $\sqrt{2}$ ,  $\sqrt{3}$ ,  $\sqrt{5}$ ,  $\pi$ ) and plot them on a number line.

#### GRADE 8

8.NS.2: Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.

### Indiana Connectors

#### GRADE 6

6.NS.3.a.1: Plot positive and negative integers on a number line.  
6.NS.3.a.2: Compare/order a given set of integers.

6.NS.5.a.1: Identify equivalent fractions, decimals, and percent's.

6.NS.9.a.1: Determine the unit rate in a variety of contextual situations.

6.NS.10.a.1: Solve one step real-world problems involving unit rates with ratios of whole numbers when given the unit rate (3 inches of snow falls per hour, how much in 6 hours).

#### GRADE 7

7.NS.2.a.1: Identify the square of a whole number.

7.NS.3.a.1: Understand the definition of rational and irrational numbers.  
7.NS.3.a.2: Order or compare rational and irrational numbers.

#### GRADE 8

8.NS.2.a.1: Use approximations of irrational numbers to locate them on a number line.

| n2y Instructional Targets  | n2y Middle School Grade Band Lessons and Activities   | n2y Supporting Activities  |
|--|---|--|
| <p><i>Understand ratio concepts and use ratio reasoning to solve problems.</i><br/><i>Analyze proportional relationships and use them to solve real-world and mathematical problems.</i></p> <ul style="list-style-type: none"> <li>Identify and write a ratio to compare part-to-part and part-to-whole relationships. (e.g., If for every lollipop in the bag, there are two candy bars, a 1:2 ratio exists.)</li> <li>Solve real-world problems involving unit rate. (e.g., If it takes one hour to make one pillow, how long will it take to make four pillows?)</li> <li>Apply understanding of percentages in real-world scenarios (10% tip, 30% sale, etc.).</li> </ul> | <p>Unique</p> <p>Lesson 23: Schedules and Times<br/>Lesson 22: Money Applications</p>   | <p>Unique</p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Time<br/>ULS Instructional Tools: Math Pack/Money<br/>Standards Connection</p>   |
| <b>n2y Differentiated Tasks</b>  |   |  |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will identify and write a ratio to describe part-to-part and part-to-whole relationships in the context of a real-world scenario.</li> <li>Students will solve whole number, time and money problems involving unit rate.</li> <li>Students will calculate percentages in real-world scenarios.</li> </ul>   | <ul style="list-style-type: none"> <li>Students will model part-to-part and part-to-whole relationships in the context of a real-world scenario.</li> <li>Students will identify whole number, time or money amounts in the context of a unit rate scenario.</li> <li>Students will locate a percentage amount from a chart.</li> </ul> | <ul style="list-style-type: none"> <li>Students will match objects represented in part-to-part and part-to-whole relationships in the context of a real-world scenario.</li> <li>Students will select a whole number, time or money amount in the context of a unit rate scenario.</li> <li>Students will identify a number that represents a percentage.</li> </ul> |

| Math Standards for Statistics and Probability  |   | Grades 6–8   |  |
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| Indiana Mathematics Standards  |   | Indiana Connectors   |  |
| <p><b>GRADE 6</b><br/>6.DS.3: Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).</p> <p>6.DS.4: Summarize numerical data sets in relation to their context in multiple ways, such as: report the number of observations; describe the nature of the attribute under investigation, including how it was measured and its units of measurement; determine quantitative measures of center (mean and/or median) and spread (range and interquartile range), as well as describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered; and relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered.</p> <p><b>GRADE 7</b><br/>7.DSP.6: Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its relative frequency from a large sample.</p> <p><b>GRADE 8</b><br/>8.DSP.1: Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantitative variables. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.</p> |   | <p><b>GRADE 6</b><br/>6.DS.3.a.1: Collect and graph data: bar graph, line plots.</p> <p>6.DS.4.a.1: Select statement that matches mean, mode, and spread of data for 1 measure of central tendency for a given data set.</p> <p><b>GRADE 7</b><br/>7.DSP.6.a.1: Make a prediction regarding the probability of an event occurring; conduct simple probability experiments.</p> <p><b>GRADE 8</b><br/>8.DSP.1.a.1: Graph bivariate data using scatter plots and identify possible associations between the variables.</p> |  |
| n2y Instructional Targets  | n2y Middle School Grade Band Lessons and Activities | n2y Supporting Activities  |  |
| <p><b>Building Blocks to Statistics and Probability</b></p> <ul style="list-style-type: none"> <li>Compare data and explain meaning.</li> <li>Read, construct and interpret tables and graphs.</li> </ul> <p><b>Develop understanding of statistical variability.</b></p> <ul style="list-style-type: none"> <li>Design questions and conduct a survey to gather data.</li> </ul> <p><b>Summarize and describe distributions.</b></p> <ul style="list-style-type: none"> <li>Display, analyze and report data on a graph.</li> </ul> <p><b>Use random sampling to draw inferences about a population.</b></p> <ul style="list-style-type: none"> <li>Use samples to gain information and make inferences about a group or population. (e.g., According to the preferences shown by 9/10s of the students in class, most teens like pizza).</li> </ul> <p><b>Draw informal comparative inferences about two populations.</b></p> <ul style="list-style-type: none"> <li>Analyze data from two graphs to compare two groups or populations.</li> </ul> <p><b>Investigate chance processes and develop, use and evaluate probability models.</b></p>  | <p><b>Unique</b><br/>Lesson 21: Read This Chart</p> | <p><b>Unique</b><br/>ULS Instructional Guides: Mathematics</p>   |  |
|  |   | <b>News-2-You</b>  |  |
|  |   | <p>Activities: Graphing</p>  |  |

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| <ul style="list-style-type: none"> <li>Determine the probability of an event's occurring as likely, unlikely, certain or impossible (probability in weather conditions based on reports, etc.).</li> </ul>   |  |  |
| n2y Differentiated Tasks   |  |  |
| <i>Level 3</i>   | <i>Level 2</i>   | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will design survey questions and collect, organize and report data presented on a graph.</li> <li>Students will compare data from tables and graphs to report specific information.</li> <li>On the basis of gathered information, students will determine the probability that something is likely or unlikely to occur.</li> </ul> | <ul style="list-style-type: none"> <li>Students will ask questions to gather data and display it on a graph.</li> <li>Students will identify specific data from a table or graph.</li> <li>Students will use data to determine that something is likely to occur.</li> </ul> | <ul style="list-style-type: none"> <li>Students will ask a question and select pictures as part of a data-gathering process.</li> <li>Students will report data that is presented in a table or graph.</li> <li>Students will select an activity that is likely to occur.</li> </ul> |



| Math Standards for Algebra–Seeing Structure in Expressions  |  | Grade 9–12  |
|---|--|---|
| Indiana Mathematics Standards   |  | Indiana Connectors  |
| GRADES 9–12   |  | GRADES 9–12<br>Algebra–Seeing Structure in Expressions is not addressed in The Indiana Content Connectors for this grade band.  |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities  | n2y Supporting Activities   |
| <p><i>Building Blocks to Algebra</i></p> <ul style="list-style-type: none"> <li>Understand and use +, - and = in problems.</li> <li>Solve addition and subtraction problems.</li> <li>Model and solve problems involving multiplication or division.</li> <li>Indicate positive and negative numbers (using a number line, temperatures including negative numbers, etc.) in a real-world scenario.</li> <li>Add and subtract rational numbers.</li> <li>Identify the additive inverse.</li> <li>Multiply and divide rational numbers.</li> </ul> <p><i>Interpret the structure of expressions.</i></p> <ul style="list-style-type: none"> <li>Identify the different parts of an expression that represents a real-world situation and explain meaning.</li> </ul> <p><i>Write expressions in equivalent forms to solve problems.</i></p> <ul style="list-style-type: none"> <li>Write and simplify an expression that represents a real-world situation.</li> </ul> | <p>Unique</p> <p>Lesson 19: Math Story Problems<br/>Lesson 25: Algebra<br/>Core Task 2.5: Snack Basket<br/>Core Task 2.1: Attendance</p>   | <p>Unique</p> <p>Instructional Guide: Mathematics<br/>Instructional Tools: Math Pack/Numbers<br/>Instructional Tools: Math Pack/Arrays<br/>Standards Connection</p> <p>News-2-You</p> <p>Activities: Word Problems</p>  |
|   | <b>n2y Differentiated Tasks</b>  |   |
| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>In the context of a real-world scenario, students will calculate addition and subtraction problems.</li> <li>In the context of a real-world scenario, students will model multiplication and division with objects and numbers that show equal groups.</li> <li>Students will identify and label positive and negative numbers in the context of a real-world scenario.</li> </ul>   | <ul style="list-style-type: none"> <li>In the context of a real-world scenario, students will model addition and subtraction of two sets of objects.</li> <li>Students will count equal numbers of objects in selected groups or an array.</li> <li>Students will select positive and negative numbers in a real-world scenario with support.</li> <li>Students will add or subtract positive and negative numbers in a real-world scenario (e.g., using a number line) with support.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count a set of objects in an addition or subtraction problem using an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will count a set of objects in a group using an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will participate in labeling positive and negative numbers using an active response mode.</li> </ul> |

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| <ul style="list-style-type: none"> <li>• Students will use appropriate operations to add and subtract positive and negative numbers in a real-world scenario (e.g., using a number line).</li> <li>• Students will independently identify the opposite of a number and understand the sum of the numbers equals 0 (e.g., -2 and 2; <math>-2 + 2 = 0</math>).</li> <li>• Students will use appropriate operations to multiply and divide positive and negative numbers.</li> <li>• Students will identify and explain the parts of an expression.</li> <li>• In the context of a real-world scenario, students write and simplify an expression.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will select the opposite of a number (e.g. -2 and 2; <math>-2 + 2 = 0</math>) with support.</li> <li>• Students will multiply or divide positive and negative numbers in a real-world scenario (e.g., using a number line) with support.</li> <li>• Students will identify the parts of an expression with support.</li> <li>• In the context of a real-world scenario, students will select numbers to write and simplify an expression with support.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will count a set of objects in an addition or subtraction real-world problem involving positive and negative numbers through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>• Students will make a selection (may be errorless) to identify the opposite of a number (e.g., -2 and 2; <math>-2 + 2 = 0</math>).</li> <li>• Students will count a set of objects in a multiplication or division real-world problem involving positive and negative numbers through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>• Students will select a part (errorless choice) of an expression.</li> <li>• In the context of a real-world scenario, students will select numbers to write an expression (may be errorless choice).</li> </ul> |
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| Math Standards for Algebra–Creating Equations   |  | Grade 9–12   |
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| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |  | Indiana Connectors<br><i>GRADES 9–12</i><br>Algebra–Creating Equations is not addressed in The Indiana Content Connectors for this grade band.   |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities  | n2y Supporting Activities  |
| <p><i>Building Blocks to Algebra</i></p> <ul style="list-style-type: none"> <li>Graph positive and negative numbers (using a number line, temperatures including negative numbers, etc.) in a real-world scenario.</li> </ul> <p><i>Create equations that describe numbers or relationships</i></p> <ul style="list-style-type: none"> <li>Represent a real-world situation with an algebraic expression.</li> </ul> <p><i>Graph equations on coordinate axes</i></p> <ul style="list-style-type: none"> <li>Graph coordinate points of an equation.</li> </ul> | <p>Unique</p> <p>Lesson 19: Math Story Problems<br/>Lesson 25: Algebra</p>   | <p>Unique</p> <p>ULS Instructional Guides: Mathematics<br/>ULS Instructional Tools: Math Pack/Numbers<br/>ULS Instructional Tools: Math Pack/Arrays<br/>Standards Connection</p> <p><b>News-2-You</b></p> <p>Activities: Word Problems</p>   |
| <b>n2y Differentiated Tasks</b>   |  |  |
| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>In the context of a real-world scenario, students will calculate addition and subtraction problems.</li> <li>Students will read, write and solve a math sentence.</li> <li>In the context of a real-world scenario, students will use a combination of operations to solve multi-step problems.</li> <li>In the context of a real-world scenario, students will model multiplication and division with objects and numbers that show equal groups.</li> </ul>  | <ul style="list-style-type: none"> <li>In the context of a real-world scenario, students will model addition and subtraction of two sets of objects.</li> <li>Students will select pictures and numbers to model a math sentence.</li> <li>In the context of a real-world scenario, students will use operations and models to solve a two-step problem.</li> <li>Students will count equal numbers of objects in selected groups or in an array.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count a set of objects in an addition or subtraction problem through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will select a number (errorless choice) within a math problem.</li> <li>In the context of a real-world scenario, students will select numbers and count within a two-step problem.</li> <li>Students will count a set of objects in a group through an active participation response (e.g., voice output device, eye gaze choice board).</li> </ul> |

| Math Standards for Algebra–Reasoning with Equations and Inequalities  |   | Grade 9–12   |
|---|---|--|
| Indiana Mathematics Standards   |   | Indiana Connectors   |
| <b>GRADES 9–12</b><br>A.I.L.1: Understand that the steps taken when solving linear equations create new equations that have the same solution as the original. Solve fluently linear equations and inequalities in one variable with integers, fractions, and decimals as coefficients. Explain and justify each step in solving an equation, starting from the assumption that the original equation has a solution. Justify the choice of a solution method.<br><br>A.I.L.11: Solve equations and formulas for a specified variable, including equations with coefficients represented by variables.<br><br>SEI.1: Understand the relationship between a solution of a pair of linear equations in two variables and the graphs of the corresponding lines. Solve pairs of linear equations in two variables by graphing; approximate solutions when the coordinates of the solution are non-integer numbers. |   | <b>GRADES 9-12</b><br>A.I.L.1.a.1: Solve equations with one or two variables using equations or graphs.<br><br>A.I.L.11.a.1: Solve linear equations with 1 variable.<br><br>SEI.1.a.1: Identify the solution to a system of linear equations given a graph.  |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities  |
| <b>Building Blocks to Algebra</b><br><ul style="list-style-type: none"> <li>Recognize and compare numbers showing the symbols <math>&gt;</math>, <math>&lt;</math>, or <math>=</math>.</li> </ul> <i>Understand solving equations as a process of reasoning and explain the reasoning.</i><br><ul style="list-style-type: none"> <li>Order a sequence of steps to solve an equation.</li> </ul> <i>Solve equations and inequalities in one variable.</i><br><ul style="list-style-type: none"> <li>Use equations to solve real-world problems when a part is unknown.</li> <li>Use inequalities (e.g., <math>&lt;</math> and <math>&gt;</math>) to solve real-world problems in which a part is unknown.</li> </ul> <i>Represent and solve equations and inequalities graphically.</i><br><ul style="list-style-type: none"> <li>Interpret the meaning of a point on the graph of a line.</li> </ul>            | <b>Unique</b><br>Lesson 19: Math Story Problems<br>Lesson 25: Algebra   | <b>Unique</b><br>ULS Instructional Guides: Mathematics<br>Instructional Tools: Math Pack/Numbers<br>Instructional Tools: Math Pack/Arrays<br>Instructional Tools: Number Journal<br>Standards Connection<br><b>News-2-You</b><br>Activities: Which is Greater?<br>Activities: Which is Less?<br>Activities: Word Problems  |
| <b>n2y Differentiated Tasks</b>   |   |  |
| <b>Level 3</b>  | <b>Level 2</b>  | <b>Level 1</b>   |
| <ul style="list-style-type: none"> <li>Students will compare two numbers and use symbols to indicate <math>&gt;</math>, <math>&lt;</math> or <math>=</math>.</li> <li>In the context of a real-world scenario students will use a combination of operations to solve an equation.</li> <li>Students will solve a real-world problem using equations involving one variable.</li> <li>Students will solve a real-world problem using inequalities involving one variable.</li> <li>Students will identify and explain the point on a graph of a line.</li> </ul>   | <ul style="list-style-type: none"> <li>Students will compare two groups of objects and determine which group is bigger, smaller or equal in amount.</li> <li>In the context of a real-world scenario, students will use operations and models to solve an equation.</li> <li>Students will solve real-world problems using equations involving one variable and models with support.</li> <li>Students will solve a real-world problem using inequalities involving one variable and models with support.</li> <li>Students will identify the point on a graph of a line with support.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count a set of objects in an addition or subtraction problem using an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>In the context of a real-world scenario, students will select numbers (may be errorless) and count within an equation through an active participation response.</li> <li>Students will select numbers (errorless choice) and count to solve a real-world problem involving one variable.</li> <li>Students will select numbers (errorless choice) to count and compare sets of objects to determine more or less with support.</li> <li>Students will select a point (errorless choice) on a graph of a line.</li> </ul> |

| Math Standards for Geometry–Congruence   |   | Grade 9–12  |
|--|---|---|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>  |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Geometry-Congruence is not addressed in The Indiana Content Connectors for this grade band.   |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities   |
| <i>Experiment with transformations in the plane.</i> <ul style="list-style-type: none"> <li>Identify points, lines, line segments and angles (right, acute, obtuse) within the context of real-world situations.</li> <li>Establish congruency by applying a turn (rotation), a flip (reflection), or a slide (translation) to match items of similar size and shape.</li> </ul> | <b>Unique</b><br>Lesson 24: Geometry  | <b>Unique</b><br>ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Shapes<br>Standards Connection               |
| <b>n2y Differentiated Tasks</b>  |   |   |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>Students will use lines and angles within shapes to solve a real-world problem.</li> </ul>  | <ul style="list-style-type: none"> <li>Students will match like shapes in the context of a real-world problem.</li> </ul> | <ul style="list-style-type: none"> <li>In the context of a real-world problem, students will select objects of the same shape.</li> </ul> |

| Math Standards for Geometry–Similarity, Right Triangles and Trigonometry   |   | Grade 9–12   |
|--|---|--|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>  |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Geometry–Similarity, Right Triangles and Trigonometry are not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities  |
| <i>Understand similarity in terms of similarity transformations.</i>   | Unique  | Unique   |
| <ul style="list-style-type: none"> <li>Identify shapes by similar attributes (e.g., similar angles).</li> <li>Identify parts of a right triangle (right angle, legs) in real-world objects and areas.</li> </ul> | Lesson 24: Geometry   | ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Shapes Standards Connection  |
| n2y Differentiated Tasks   |   |  |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will identify properties of shapes to solve a real-world problem.</li> </ul>   | <ul style="list-style-type: none"> <li>Students will identify shapes in the context of a real-world problem.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select shapes in the context of a real-world problem.</li> </ul>  |

| Math Standards for Geometry–Circles   |  | Grade 9–12   |
|---|--|--|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |  | Indiana Connectors<br><i>GRADES 9–12</i><br>Geometry–Circles is not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities  | n2y Supporting Activities  |
| <i>Understand and apply theorems about circles.</i>   | Unique   | Unique   |
| <ul style="list-style-type: none"> <li>Identify parts of a circle (radius, circumference, diameter) in real objects and areas.</li> </ul> | Lesson 24: Geometry  | ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Shapes Standards Connection                              |
| n2y Differentiated Tasks  |  |  |
| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will use circles and circle measurements to solve a real-world problem.</li> </ul>        | <ul style="list-style-type: none"> <li>Students will match like circles in the context of a real-world problem.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select real-world objects with circle shapes.</li> </ul>                        |

| Math Standards for Geometry–Geometric Measurement and Dimension   |  | Grade 9–12  |
|---|--|---|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |  | Indiana Connectors<br><i>GRADES 9–12</i><br>Statistics and Probability–Interpreting Categorical and Quantitative Data is not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities  | n2y Supporting Activities   |
| <i>Visualize relationships between two-dimensional and three-dimensional objects.</i> <ul style="list-style-type: none"> <li>Identify and compare three-dimensional objects that have volume.</li> </ul>                      | Unique   | Unique  |
|   | Lesson 24: Geometry  | ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Shapes<br>Standards Connection  |
|   |  | News-2-You  |
|   |  | Recipe Page Standards Connection  |
| n2y Differentiated Tasks  |  |   |
| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>Students will use standard measurement tools and units to measure the volume of an object.</li> <li>Students will apply use of volume measurements in real-world scenarios.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select a volume measurement tool appropriate to a real-world task.</li> <li>Students will match objects having the same volume measurements.</li> </ul> | <ul style="list-style-type: none"> <li>Students will compare two measured volumes to determine which is larger.</li> <li>Students will match objects of the same size and shape.</li> </ul>   |

| Math Standards for Geometry–Modeling with Geometry  |  | Grade 9–12  |
|---|--|---|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |  | Indiana Connectors<br><i>GRADES 9–12</i><br>Geometry-Modeling with Geometry is not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities  | n2y Unique Supporting Activities  |
| <i>Apply geometric concepts in modeling situations.</i> <ul style="list-style-type: none"> <li>Identify the shape in real-world two and three-dimensional objects.</li> </ul> | Unique   | Unique  |
|   | Lesson 24: Geometry  | ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Shapes<br>Standards Connection  |
|   |  |   |
|   |  |   |
| n2y Differentiated Tasks  |  |   |
| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>Students will use a model representing two- and three-dimensional objects to solve real-world problems.</li> </ul>                     | <ul style="list-style-type: none"> <li>Students will arrange two-dimensional figures on a model of a real-world scenario.</li> </ul> | <ul style="list-style-type: none"> <li>Students will match two-dimensional figures on a model of a real-world scenario.</li> </ul>                  |

| Math Standards for Statistics and Probability–Interpreting Categorical and Quantitative Data   |   | Grade 9–12   |
|--|---|--|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>  |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Statistics and Probability–Interpreting Categorical and Quantitative Data are not addressed in The Indiana Content Connectors for this grade band.   |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities  |
| <p><i>Summarize, represent, and interpret data on a single count or measurement variable.</i></p> <ul style="list-style-type: none"> <li>• Create a bar graph to represent data.</li> <li>• Interpret data from a bar graph.</li> <li>• Compute the mean (average) and median of a data set.</li> </ul> <p><i>Summarize, represent and interpret data on two categorical and quantitative variables.</i></p> <ul style="list-style-type: none"> <li>• Compare data on a graph to show the relationship between two sets of data.</li> </ul> <p><i>Interpret linear models.</i></p> <ul style="list-style-type: none"> <li>• Describe a rate of change based on a line on a graph.</li> </ul> | <p>Unique</p> <p>Lesson 21: Read This Chart</p>   | <p>Unique</p> <p>ULS Instructional Guides: Mathematics</p>   |
|  |   |  |
| <b>n2y Differentiated Tasks</b>  |   |  |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>• Students will design survey questions and collect, organize and report data presented on a graph.</li> <li>• Students will compare data from tables and graphs to report specific information.</li> <li>• Students will calculate an average (mean) from data.</li> </ul>   | <ul style="list-style-type: none"> <li>• Students will ask questions to gather data and display the data on a graph.</li> <li>• Students will identify specific data from a table or graph.</li> <li>• Students will identify a middle point (average) in a set of data.</li> </ul> | <ul style="list-style-type: none"> <li>• Students will ask a question and select pictures as part of a data-gathering process.</li> <li>• Students will report data that is presented in a table or graph.</li> <li>• Students will communicate data information that describes an average.</li> </ul> |

| Math Standards for Statistics and Probability–Making Inferences and Justifying Conclusions  |   | Grade 9–12  |
|---|---|---|
| Indiana Mathematics Standards   |   | Indiana Connectors  |
| GRADES 9–12   |   | GRADES 9–12<br>Statistics and Probability–Making Inferences and Justifying Conclusions are not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities   |
| <i>Understand and evaluate random processes underlying statistical experiments.</i> <ul style="list-style-type: none"> <li>Determine the likelihood of an outcome by using a data-generating device (spinner, coin, dice).</li> <li>Evaluate reports based on data.</li> </ul>            | Unique<br>Lesson 21: Read This Chart  | Unique<br>ULS Instructional Guides: Mathematics   |
| n2y Differentiated Tasks  |   |   |
| <i>Level 3</i>  | <i>Level 2</i>  | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>On the basis of information gathered, students will determine the probability that something is likely or unlikely to occur.</li> <li>Students will conduct and report outcomes on the basis of material gathered from a random sample.</li> </ul> | <ul style="list-style-type: none"> <li>On the basis of available information, students will determine that something is likely to happen.</li> <li>Students will gather data to contribute to a random sample.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select an activity that is likely to occur.</li> <li>Students will ask a question in a survey.</li> </ul>  |

| Math Standards for Life Skills for Measurement  |  | Grade 9–12   |
|---|--|--|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |  | Indiana Connectors<br><i>GRADES 9–12</i><br>Life Skills for Measurement are not addressed in The Indiana Content Connectors for this grade band.   |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities  | n2y Supporting Activities  |
| <b>Life Skills for Measurement</b> <ul style="list-style-type: none"> <li>Select units and use measurement tools accurately in the context of a daily living activity.</li> <li>Solve problems involving measurement.</li> <li>Apply knowledge of time skills to real-world problem-solving situations and scenarios.</li> <li>Apply knowledge of money skills to real-world problem-solving situations and scenarios.</li> </ul>   | <b>Unique</b><br>Lesson 20: Measure It!<br>Lesson 22: Money Applications<br>Lesson 23: Schedules and Time<br>Core Task 1.1: Daily Schedules<br>Core Task 1.2: Monthly Calendars<br>Core Task 2.2: Calendar<br>Core Task 2.5: Snack Basket  | <b>Unique</b><br>ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Money<br>ULS Instructional Tools: Math Pack/Time Standards Connection   |
|   |  | <b>News-2-You</b><br>Recipe Page Standards Connection  |
| <b>n2y Differentiated Tasks</b>   |  |  |
| <b>Level 3</b>  | <b>Level 2</b>   | <b>Level 1</b>   |
| <ul style="list-style-type: none"> <li>Students will independently use measurement tools in daily living skill activities.</li> <li>Students will calculate the amount of money needed for a purchase and ascertain the coins and bills required to complete that purchase.</li> <li>Students will read time and apply it to a real-world activity.</li> <li>Students will record personal events on a monthly calendar and use the information as it applies to daily activities.</li> </ul> | <ul style="list-style-type: none"> <li>Students will identify and use measurement tools appropriate for a supported daily living task.</li> <li>Students will match coins and bills to a given price.</li> <li>Students will represent times for morning, afternoon and evening in the context of a real-world scenario.</li> <li>Students will follow a schedule to complete daily activities.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select a measurement tool for a daily living task.</li> <li>Students will exchange money for a purchase.</li> <li>Students will select a time for a personal activity of the day.</li> <li>Students will actively participate in a daily schedule based on timed activities.</li> </ul> |

| Math Standards for Life Skills for Ratio and Proportional Relationships   |   | Grade 9–12   |
|---|---|--|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Life Skills for Ratio and Proportional Relationships are not addressed in The Indiana Content Connectors for this grade band.  |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities  |
| <i>Life Skills for Ratio and Proportional Relationships</i> <ul style="list-style-type: none"> <li>Identify and write a ratio to compare part-to-part and part-to-whole relationships. (e.g., If for every lollipop in the bag, there are two candy bars, a 1:2 ratio exists.)</li> <li>Solve real-world problems involving unit rate. (e.g., If it takes one hour to make one pillow, how long will it take to make four pillows?)</li> <li>Apply understanding of percentages in real-world scenarios (10% tip, 30% sale, etc.).</li> </ul> | Unique<br>Lesson 22: Money Applications (Standards Connection)  | Unique<br>ULS Instructional Guides: Mathematics<br>ULS Instructional Tools: Math Pack/Money Standards Connection   |
| n2y Differentiated Tasks  |   |  |
| <i>Level 3</i>  | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will identify and write a ratio to describe part-to-part and part-to-whole relationships in the context of a real-world scenario.</li> <li>Students will solve whole number, time and money problems involving unit rate.</li> <li>Students will calculate percentages in real-world scenarios.</li> </ul>  | <ul style="list-style-type: none"> <li>Students will model part-to-part and part-to-whole relationships in the context of a real-world scenario.</li> <li>Students will identify whole number, time or money amounts in the context of a unit rate scenario.</li> <li>Students will locate a percentage amount from a chart.</li> </ul> | <ul style="list-style-type: none"> <li>Students will match objects represented in part-to-part and part-to-whole relationships in the context of a real-world scenario.</li> <li>Students will select a whole number, time or money amount in the context of a unit rate scenario.</li> <li>Students will identify a number that represents a percentage.</li> </ul> |

| Math Standards for Number and Quantity-The Real Number System  |   | Grade 9–12   |
|--|---|--|
| Indiana Mathematics Standards  |   | Indiana Connectors   |
| <p><b>GRADE 9-12</b><br/>           AI.RNE.2: Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.</p> <p>AI.RNE.3: Rewrite and evaluate numeric expressions with positive rational exponents using the properties of exponents.</p> <p>AI.RNE.4: Simplify square roots of non-perfect square integers and algebraic monomials.</p> |   | <p><b>GRADE 9-12</b><br/>           AI.RNE.2.a.1: Identify the pattern for the sum or product for combinations of rational numbers.</p> <p>AI.RNE.3.a.1: Use properties of integer exponents to produce equivalent expressions.</p> <p>AI.RNE.4.a.1: Solve equations using square root properties.</p> |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities  |
| <p><i>Extend the properties of exponents to rational exponents</i></p> <ul style="list-style-type: none"> <li>Determine the value of a quantity that is squared or cubed.</li> </ul>   | Lesson 19c: Math Story Problems   | ULS Instructional Guides: Mathematics<br>Instructional Tools: Math Pack/Numbers<br>Instructional Tools: Number Journal<br>Standards Connection   |
| n2y Differentiated Tasks   |   |  |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will identify perfect squares from 0 to 100.</li> </ul>  | <ul style="list-style-type: none"> <li>Students will create a representation of a perfect square with support.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select blocks to build a model of the perfect square through an active participation response (e.g., voice output device, eye gaze choice board).</li> </ul>  |

| Math Standards for Number and Quantity/Quantities  |   | Grade 9–12  |
|--|---|---|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>  |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Number and Quantity/Quantities are not addressed in The Indiana Content Connectors for this grade band.   |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities   |
| <i>Reason quantitatively and use units to solve problems</i> <ul style="list-style-type: none"> <li>Express quantities to the appropriate precision of measurement.</li> </ul> | Lesson 20: Measure It!  | Standards Connection  |
| n2y Differentiated Tasks   |   |   |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>Students will independently use measurement tools in daily living skill activities.</li> </ul>  | <ul style="list-style-type: none"> <li>Students will identify and use measurement tools appropriate for a supported daily living task.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select measurement tools for a daily living task through an active participation response (e.g., voice output device, eye gaze choice board).</li> </ul> |

| Math Standards for Number and Quantity/The Complex Number System  |   | Grade 9–12   |
|---|---|--|
| Indiana Mathematics Standards:<br><i>GRADES 9–12</i>  |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Number and Quantity/The Complex Number System is not addressed in The Indiana Content Connectors for this grade band.  |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities  |
| <p><i>Perform arithmetic operations with complex numbers</i></p> <ul style="list-style-type: none"> <li>Use the commutative, associative and distributive properties to add, subtract and multiply whole numbers.</li> <li>Solve real-world problems involving addition and subtraction of decimals, using models when needed.</li> <li>Solve real-world problems involving multiplication of decimals and whole numbers, using models when needed.</li> </ul>  | Lesson 25a: Algebra   | ULS Instructional Guides: Mathematics<br>Instructional Tools: Math Pack/Numbers<br>Instructional Tools: Number Journal<br>Standards Connection   |
| n2y Differentiated Tasks  |   |  |
| <i>Level 3</i>  | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>In the context of a real-world scenario, students will use the commutative, associative, or distributive properties to add, subtract or multiply whole numbers.</li> <li>In the context of a real-world scenario, students will calculate addition and subtraction problems involving decimals.</li> <li>In the context of a real-world scenario, students will model multiplication and division with objects and numbers that show equal groups involving decimals.</li> </ul> | <ul style="list-style-type: none"> <li>In the context of a real-world scenario, students will model addition, subtraction or multiplication of sets of objects.</li> <li>In the context of a real-world scenario, students will model addition and subtraction of two sets of objects involving decimals.</li> <li>Students will count equal numbers involving decimals of objects in selected groups or an array.</li> </ul> | <ul style="list-style-type: none"> <li>Students will count a set of objects in an addition, subtraction or multiplication problem through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will count a set of objects in an addition or a subtraction problem involving decimals through an active participation response (e.g., voice output device, eye gaze choice board).</li> <li>Students will count a set of objects in a group involving decimals through an active participation response (e.g., voice output device, eye gaze choice board).</li> </ul> |

| Math Standards for Number and Quantity/Vector and Matrix Quantities |   | Grade 9–12  |
|---|---|---|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>                 |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Number and Quantity/Vector and Matrix Quantities are not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities | n2y Supporting Activities   |
| NOT DIRECTLY ADDRESSED IN UNIQUE LEARNING SYSTEM                    |   |   |

| Math Standards for Algebra/Arithmetic with Polynomials and Rational Expressions   |  | Grade 9–12   |
|---|--|--|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |  | Indiana Connectors<br><i>GRADES 9–12</i><br>Algebraic/Arithmetic with Polynomials and Rational Expressions are not addressed in The Indiana Content Connectors for this grade band.                                |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities  | n2y Supporting Activities  |
| <i>Perform arithmetic operations on polynomials.</i> <ul style="list-style-type: none"> <li>Add and subtract polynomials.</li> </ul>  | Lesson 25b: Algebra  | ULS Instructional Guides: Mathematics<br>Instructional Tools: Math Pack/Numbers<br>Instructional Tools: Number Journal   |
| <b>n2y Differentiated Tasks</b>   |  |  |
| <i>Level 3</i>  | <i>Level 2</i>   | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will independently solve equations involving adding and subtracting polynomials in the context of real-world problems.</li> </ul> | <ul style="list-style-type: none"> <li>Students will solve equations involving adding and subtracting polynomials in the context of real-world problems with support.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select numbers (errorless choice) and count to solve equations involving adding and subtracting polynomials in the context of real-world problems.</li> </ul> |

| Math Standards for Functions/Interpreting Functions  |   | Grade 9–12   |
|--|---|--|
| Indiana Mathematics Standards  |   | Indiana Connectors   |
| <p><b>GRADES 9-12</b><br/>           A1.F.1: Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. Understand that if <math>f</math> is a function and <math>x</math> is an element of its domain, then <math>f(x)</math> denotes the output of <math>f</math> corresponding to the input <math>x</math>. Understand the graph of <math>f</math> is the graph of the equation <math>y = f(x)</math>.</p> |   | <p><b>GRADES 9-12</b><br/>           A1.F.1.a.1: Distinguish between functions and non-functions, graphs, or tables.</p>   |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities  |
| <p><i>Understand the concept of a function and use function notation</i></p> <ul style="list-style-type: none"> <li>Use functions to solve real-world problems.</li> </ul> <p><i>Interpret functions that arise in applications in terms of the context</i></p> <ul style="list-style-type: none"> <li>Describe the rate of change of a function using words and numbers.</li> </ul>   | Lesson 25b: Algebra   | ULS Instructional Guides: Mathematics<br>Instructional Tools: Math Pack/Numbers<br>Instructional Tools: Number Journal<br>Standards Connection   |
| n2y Differentiated Tasks   |   |  |
| <i>Level 3</i>   | <i>Level 2</i>  | <i>Level 1</i>   |
| <ul style="list-style-type: none"> <li>Students will solve a real-world problem using a function.</li> <li>Students will identify and explain the rate of change of a function.</li> </ul>   | <ul style="list-style-type: none"> <li>Students will solve a real-world problem using a function and models with support.</li> <li>Students will identify the rate of change of a function with support.</li> </ul> | <ul style="list-style-type: none"> <li>Students will select numbers (errorless choice) to solve real-world problems.</li> <li>Students will select a rate of change (errorless choice) of a function.</li> </ul> |

| Math Standards for Functions/Building Functions   |   | Grade 9–12  |
|---|---|---|
| Indiana Mathematics Standards<br><i>GRADES 9–12</i>   |   | Indiana Connectors<br><i>GRADES 9–12</i><br>Functions/Building Functions are not addressed in The Indiana Content Connectors for this grade band.   |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities   | n2y Supporting Activities   |
| <i>Build functions that model a relationship between two quantities.</i> <ul style="list-style-type: none"> <li>• Create a function that represents the relationship between two quantities.</li> <li>• Construct a graph that represents a defined change in a function.</li> </ul>      | Lesson 25b: Algebra   | ULS Instructional Guides: Mathematics<br>Instructional Tools: Math Pack/Numbers<br>Instructional Tools: Number Journal<br>Standards Connection  |
| n2y Differentiated Tasks  |   |   |
| <i>Level 3</i>  | <i>Level 2</i>  | <i>Level 1</i>  |
| <ul style="list-style-type: none"> <li>• In the context of a real-world scenario, students will complete a function table to represent the relationship between two quantities.</li> <li>• Students will plot points on a graph to represent the rate of change of a function.</li> </ul> | <ul style="list-style-type: none"> <li>• In the context of a real-world scenario, students will complete a function table with support.</li> <li>• With support, students will plot points on a graph using coordinate points.</li> </ul> | <ul style="list-style-type: none"> <li>• In the context of a real-world scenario, students will select numbers (errorless choice) to fill in a function table.</li> <li>• Students will select plotted points on a graph (errorless choice).</li> </ul> |

| Math Standards for Functions/Linear, Quadratic and Exponential Models  |   | Grade 9–12  |
|--|---|---|
| Indiana Mathematics Standards  |   | Indiana Connectors  |
| <p><i>GRADES 9–12</i></p> <p>AI.QE.3: Graph exponential and quadratic equations in two variables with and without technology.</p> <p>AI.QE.6: Use the process of factoring to determine zeros, lines of symmetry, and extreme values in real-world and other mathematical problems involving quadratic functions; interpret the results in the real-world contexts.</p> <p>AI.QE.7: Describe the relationships among the solutions of a quadratic equation, the zeros of the function, the x-intercepts of the graph, and the factors of the expression.</p> |   | <p><i>GRADES 9–12</i></p> <p>AI.QE.3.a.1: Determine if the points lie on a graph of an exponential or quadratic function.</p> <p>AI.QE.6.a.1: Identify zeros of a quadratic function.</p> <p>AI.QE.7.a.1: Identify zeros of a quadratic function.</p> |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities | n2y Supporting Activities   |
| NOT ADDRESSED IN UNIQUE LEARNING SYSTEM  |   |   |

| Math Standards for Functions/Trigonometric Functions |   | Grade 9–12  |
|--|---|---|
| Indiana Mathematics Standards                        |   | Indiana Connectors  |
| <p><i>GRADES 9–12</i></p>                            |   | <p><i>GRADES 9–12</i></p> <p>Functions/Trigonometric Functions are not addressed in The Indiana Content Connectors for this grade band.</p> |
| n2y Instructional Targets                            | n2y High School Grade Band Lessons and Activities | n2y Supporting Activities   |
| NOT ADDRESSED IN UNIQUE LEARNING SYSTEM              |   |   |

| Math Standards for Geometry/Expressing Geometric Properties with Equations |   | Grade 9–12   |
|--|---|--|
| Indiana Mathematics Standards  |   | Indiana Connectors   |
| <b>GRADES 9–12</b><br>\  |   | <b>GRADES 9–12</b><br>Geometry/Expressing Geometric Properties with Equations are not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities | n2y Supporting Activities  |
| NOT DIRECTLY ADDRESSED IN UNIQUE LEARNING SYSTEM                           |   |  |

| Math Standards for Statistics and Probability/Conditional Probability and the Rules of Probability   |   | Grade 9–12   |
|--|---|--|
| Indiana Mathematics Standards  |   | Indiana Connectors   |
| <b>GRADES 9–12</b><br>AI.DS.5: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns (including joint, marginal, and conditional relative frequencies) to describe possible associations and trends in the data. |   | <b>GRADES 9–12</b><br>AI.DS.5.a.1: Examine the study using categorical data. |
| n2y Instructional Targets  | n2y High School Grade Band Lessons and Activities | n2y Supporting Activities  |
| NOT DIRECTLY ADDRESSED IN UNIQUE LEARNING SYSTEM   |   |  |

| Math Standards for Statistics and Probability/Using Probability to Make Decisions |   | Grade 9–12  |
|---|---|---|
| Indiana Mathematics Standards   |   | Indiana Connectors  |
| <b>GRADES 9–12</b>  |   | <b>GRADES 9–12</b><br>Statistics and Probability/Using Probability to Make Decisions are not addressed in The Indiana Content Connectors for this grade band. |
| n2y Instructional Targets   | n2y High School Grade Band Lessons and Activities | n2y Supporting Activities   |
| NOT DIRECTLY ADDRESSED IN UNIQUE LEARNING SYSTEM                                  |   |   |