Grade Level:	2nd Grade
Standard	
	KY.2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or sides. Identify triangles, quadrilaterals, pentagons, hexagons and cubes (identify number of faces).
SMP	MP.4, MP.7

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Recognize	Triangles
Draw shapes	Quadrilaterals
Angles	Pentagons
Sides	Hexagons
	cubes

2. Key Implementation Questions and Answers:

How do I recognize different shapes based on their attributes?

How do I draw different shapes based on their attributes?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to recognize triangles based on the number of angles or sides.

I am learning to recognize quadrilaterals based on the number of angles or sides.

I am learning to recognize pentagons based on the number of angles or sides.

I am learning to recognize hexagons based on the number of angles or sides.

I am learning to recognize cubes based on the number of faces.

I am learning to draw triangles based on the number of angles or sides.

I am learning to draw quadrilaterals based on the number of angles or sides.

I am learning to draw pentagons based on the number of angles or sides.

I am learning to draw hexagons based on the number of angles or sides.

I am learning to draw cubes based on the number of faces. I am learning to recognize triangles based on the number of angles or sides.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"*

I will know that I learned it when I can recognize triangles based on the number of angles or sides. I will know that I learned it when I can recognize quadrilaterals based on the number of angles or sides.

I will know that I learned it when I can recognize pentagons based on the number of angles or sides.

I will know that I learned it when I can recognize hexagons based on the number of angles or sides.

I will know that I learned it when I can recognize cubes based on the number of faces.

I will know that I learned it when I can draw triangles based on the number of angles or sides.

I will know that I learned it when I can draw quadrilaterals based on the number of angles or sides.

I will know that I learned it when I can draw pentagons based on the number of angles or sides.

I will know that I learned it when I can draw hexagons based on the number of angles or sides.

I will know that I learned it when I candraw cubes based on the number of faces. I am learning to recognize triangles based on the number of angles or sides.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because I will use these skills as an adult.

Grade Level:	2nd Grade
Standard	KY.2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
SMP	MP.6, MP.8

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Partition

Rectangle

Rows & columns Same-size squares

Count

Find

Total number

2. Key Implementation Questions and Answers:

How do I partition a rectangle into rows?

How do I partition a rectangle into columns?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to partition rectangles into rows.

I am learning to partition rectangles into columns.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common*

misconceptions. "I will know that I learned it when"

I will know that I have learned it when I can partition rectangles into rows. I will know that I have learned it when I can partition rectangles into columns.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because it is a foundational skill for multiplication.

I am learning this because I will use these skills as an adult.

Grade Level:	1
Standard	
	KY.2.G.3 Partition circles and rectangles into two, three, or four equal shares; 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 shares of identical wholes need not have the same shape.
SMP	MP.2, MP.3

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Partition

Circles

Rectangles

Equal shares

Halves

Thirds

Forths

Whole

Identical

Equal

2. Key Implementation Questions and Answers:

How do I partition circles into two equal shares?

How do I partition circles into three equal shares?

How do I partition circles into four equal shares?

How do I partition rectangles into two equal shares?

How do I partition rectangles into three equal shares?

How do I partition rectangles into four equal shares?

How do I describe the whole as two halves?

How do I describe the whole as three thirds? How do I describe the whole as four fourths?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to partition circles into two equal shares.

I am learning to partition circles into three equal shares.

I am learning to partition circles into four equal shares.

I am learning to partition rectangles into two equal shares.

I am learning to partition rectangles into three equal shares.

I am learning to partition rectangles into four equal shares.

I am learning to describe the whole as two halves.

I am learning to describe the whole as three thirds.

I am learning to describe the whole as four fourths.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I have learned it when I can partition circles into two equal shares.

I will know that I have learned it when I can partition circles into three equal shares.

I will know that I have learned it when I can partition circles into four equal shares.

I will know that I have learned it when I can partition rectangles into two equal shares.

I will know that I have learned it when I can partition rectangles into three equal shares.

I will know that I have learned it when I can partition rectangles into four equal shares.

I will know that I have learned it when I can describe the whole as two halves.

I will know that I have learned it when I can describe the whole as three thirds.

I will know that I have learned it when I can describe the whole as four fourths.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because it is a foundational skill for multiplication.

I am learning this because I will use these skills as an adult.

Grade Level:	2nd Grade
Standard	KY.K.MD.1 Describe measurable attributes (length, height, weight, width, depth) of an object or a set of objects using appropriate vocabulary.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Describe Appropriate
Using Vocabulary
Measurable
Attributes
Object

2. Key Implementation Questions and Answers:

What is the appropriate tool to measure this object?
What are the different tools I can use to measure an object?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to select the right tool to measure an object.

I am learning to use the right tool to measure an object.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* **"I will know that I learned it when"**

I will know that I learned it when I can select the right tool to measure an object. I will know that I learned it when I can use the right tool to measure an object.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me measure objects using different tools. I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.K.MD.1 Describe measurable attributes (length, height, weight, width, depth) of an object or a set of objects using appropriate vocabulary.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision

Object

- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Describe Appropriate
Using Vocabulary
Measurable
Attributes

2. Key Implementation Questions and Answers:

What is the appropriate tool to measure this object?
What are the different tools I can use to measure an object?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to select the right tool to measure an object.

I am learning to use the right tool to measure an object.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* **"I will know that I learned it when"**

I will know that I learned it when I can select the right tool to measure an object. I will know that I learned it when I can use the right tool to measure an object.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me measure objects using different tools. I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.1.MD.2 Express the length of an object as a whole number of same size length units, by laying multiple copies of a shorter object (the length unit) end to end with no gaps or overlaps.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Express Units

Laying Multiple copies
Length Shorter object
Whole number Gaps

Whole number Gaps
Size Overlaps

2. Key Implementation Questions and Answers:

How do I measure the length of an object twice?

How do I measure using different units?

How do I describe how the two measurements relate to the size of the unit?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to measure the length of an object twice.

I am learning to measure using different units.

I am learning to describe how the two measurements relate to the size of the unit.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I have learned it when I can measure the length of an object twice.

I will know that I have learned it when I can measure using different units.

I will know that I have learned it when I can describe how the two measurements relate to the size of the unit.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because it will help me measure different objects.

Grade Level:	2nd Grade
Standard	KY.2.MD.3 Estimate lengths using units of inches, feet, yards, centimeters and meters.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Estimate Feet
Length Yards
Units Centimeters
inches meters

2. Key Implementation Questions and Answers:

What unit do I need to use to estimate? Is this a responsible estimate?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to estimate lengths using inches.

I am learning to estimate lengths using feet.

I am learning to estimate lengths using yards.

I am learning to estimate lengths using centimeters.

I am learning to estimate lengths using meters.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common*

misconceptions. "I will know that I learned it when"

I will know that I learned it when I can estimate lengths using inches.

I will know that I learned it when I can estimate lengths using feet.

I will know that I learned it when I can estimate lengths using yards.

I will know that I learned it when I can estimate lengths using centimeters.

I will know that I learned it when I can estimate lengths using meters.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me understand how to make reasonable estimates when I do not have a measuring tool.

I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of either a customary or metric standard length unit.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Measure Either
Determine Customary
Expressing Metric

Length Standard length unit

Differences terms

2. Key Implementation Questions and Answers:

What is the difference between lengths of objects?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to find the difference between lengths of objects.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"*

I will know that I learned it when I can find the difference between lengths of objects.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me in the real world when I am measuring objects. I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units by using drawings and equations with a symbol for the unknown number to represent the problem.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

AdditionDrawingsSubtractionEquationsSolveSymbol

Word problems Unknown Number

Lengths Represent Units

2. Key Implementation Questions and Answers:

Which operation do I need to use to solve this real world measurement problem?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to use addition within 100 to solve word problems about length.

I am learning to use subtraction within 100 to solve word problems about length.

I am learning to use drawings to solve word problems about length.

I am learning to use equations to solve word problems about length.

4. Establish success criteria by identifying strong and weak work. Identify the characteristics

of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"

I will know that I learned it when I can add within 100 to solve word problems about length. I will know that I learned it when I can subtract within 100 to solve word problems about length. I will know that I learned it when I can use drawings to solve word problems about length. I will know that I learned it when I can use equations to solve word problems about length.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it relates to real world experiences I will have with measuring. I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KV2 MD 6 Penrocent whole numbers as lengths from 0 on a number line with
	KY.2.MD.6 Represent whole numbers as lengths from 0 on a number line with equally spaced points corresponding to the numbers 0, 1, 2, and represent whole-number sums and differences within 100 on a number line
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Represent Whole-number
Whole numbers Differences
Lengths Number line
Equally spaced points
corresponding

2. Key Implementation Questions and Answers:

How can I represent whole numbers on a number line?

How can I add on a number line?

How can I subtract on a number line?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to represent whole numbers on a number line correctly.

I am learning to add within 100 on a number line.

I am learning to subtract within 100 on a number line.

4. Establish success criteria by identifying strong and weak work. Identify the characteristics

of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"

I will know that I learned it when I can represent whole numbers on a number line correctly.

I will know that I learned it when I can add within 100 on a number line.

I will know that I learned it when I can subtract within 100 on a number line.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me show my thinking when I am adding and subtracting. I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Tell Write A.M & P.M. Nearest

Time

Analog & Digital Clocks

2. Key Implementation Questions and Answers:

How do I tell time on an analog clock?

How do I tell time on a digital clock?

How do I write the time of day?

How do I determine if it is a.m. or p.m.?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to tell time to the nearest 5 minute on an analog clock.

I am learning to tell time to the nearest 5 minute on a digital clock.

I am learning to write the time to the nearest 5 minute.

I am learning to tell if the time is a.m. or p.m..

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I can tell time to the nearest 5 minute on an analog clock.

I will know that I learned it when I can tell time to the nearest 5 minute on a digital clock.

I will know that I learned it when I can write the time to the nearest 5 minute

I will know that I learned it when I can tell if the time is a.m. or p.m..

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it is a real world skill.

I am learning this so I know the time and when events start and end.

I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.2.MD.8 Solve word problems with adding and subtracting within 100, (not using dollars and cents simultaneously) using the \$and \$\psi\$ symbols appropriately (not including decimal notation).
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Solve
Word problems
Adding
Subtracting
Dollars & cents

Simultaneously \$ and ¢ symbols Appropriately

2. Key Implementation Questions and Answers:

What operation do I need to use for this problem? How do I add dollars and cents?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to solve word problems using addition using dollars.

I am learning to solve word problems using subtraction using dollars.

I am learning to solve word problems using addition using cents.

I am learning to solve word problems using subtraction using cents.

4. Establish success criteria by identifying strong and weak work. Identify the characteristics

of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"

I will know that I learned it when I can solve word problems using addition using dollars.

I will know that I learned it when I can solve word problems using subtraction using dollars.

I will know that I learned it when I can solve word problems using addition using cents.

I will know that I learned it when I can solve word problems using subtraction using cents.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because I will use money in the real world.

I am learning this because I will be buying and selling items and will need to know how to count money.

Grade Level:	2nd Grade
Standard	
	KY.2.MD.9 Investigate questions involving measurements.
	a. Identify a statistical question focused on measurements. b. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. c. Show the measurements by making a dot plot, where the horizontal scale is marked off in whole-number units.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision

Whole unit

- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Investigate Repeated measurements

Measurements Dot plot

Identify Horizontal scale
Statistical question Whole-number units

Statistical question Whole-number un Generate
Lengths

2. Key Implementation Questions and Answers:

How can I use measurement data to ask a question?

How can I use measurement data to make a line plot?

How can I generate measurement data?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to identify an investigating question about measurement.

I am learning to use data about measurement to make a line plot.

I am learning to gather data from measuring lengths of different objects.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"*

I will know that I learned it when I can identify an investigating question about measurement. I will know that I learned it when I can use data about measurement to make a line plot. I will know that I learned it when I can gather data from measuring lengths of different objects.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	
	KY.2.MD.10 Create a pictograph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart and compare problems using information presented in a bar graph.
SMP	MP.2, MP.6

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Create Take-apart
Pictograph Compare
Bar graph Bar graph
Single-unit
Data set
simple

2. Key Implementation Questions and Answers:

How can I create a pictograph using data with up to 4 categories?

How can I create a bar graph using data with up to 4 categories?

How can I solve simple put together, take-apart and compare problems using information in a bar graph?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. "I am learning"

I am learning to create a pictograph using data with up to 4 categories.

I am learning to create a bar graph using data with up to 4 categories.

I am learning to solve simple put together, take-apart and compare problems using information in a bar graph.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I can create a pictograph using data with up to 4 categories. I will know that I learned it when I can create a bar graph using data with up to 4 categories. I will know that I learned it when I can solve simple put together, take-apart and compare problems using information in a bar graph.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because I will use graphs in the real world.

Grade Level:	2nd Grade
Standard	
	KY.2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens and ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens — called a "hundred." b. 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).
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Understand Represents

2. Key Implementation Questions and Answers:

- 1. How many bundles of ten are in 100?
- 2. How many hundreds are in the numbers 100-900?
- **3. Develop "Learning Intention" statements.** Describe the standard and/or element(s) as statements of intended learning. "I am learning"

I am learning that 100 is a bundle of ten tens.

I am learning that the numbers 100-900 show the number of hundreds.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I understand 100 is a bundle of ten tens. I will know that I learned it when I understand that numbers 100-900 show the number of hundreds.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it is a building block for other things I will learn in 2nd grade and beyond.

Grade Level:	2nd Grade
Standard	
	KY.2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens and ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens — called a "hundred." b. 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).
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Understand Represents

2. Key Implementation Questions and Answers:

- 1. How many bundles of ten are in 100?
- 2. How many hundreds are in the numbers 100-900?
- **3. Develop "Learning Intention" statements.** Describe the standard and/or element(s) as statements of intended learning. "I am learning"

I am learning that 100 is a bundle of ten tens.

I am learning that the numbers 100-900 show the number of hundreds.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I understand 100 is a bundle of ten tens. I will know that I learned it when I understand that numbers 100-900 show the number of hundreds.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it is a building block for other things I will learn in 2nd grade and beyond.

Grade Level:	2nd Grade
Standard	KY.2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names and expanded form.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Base-ten Numerals

Expanded form

2. Key Implementation Questions and Answers:

What are the base-ten numerals for the given number?

What is the number name for the given number?

What is the expanded form for the given number?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to read numbers to 1000 using base-ten numerals.

I am learning to write numbers to 1000 using base-ten numerals.

I am learning to read numbers to 1000 in the number name.

I am learning to write numbers to 1000 in the number name.

I am learning to read numbers to 1000 in expanded form.

I am learning to write numbers to 1000 in expanded form.

4. Establish success criteria by identifying strong and weak work. Identify the characteristics

of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"

I will know that I learned it when I can read numbers to 1000 using base-ten numerals.

I will know that I learned it when I can write numbers to 1000 using base-ten numerals.

I will know that I learned it when I can read numbers to 1000 in the number name.

I will know that I learned it when I can write numbers to 1000 in the number name.

I will know that I learned it when I can read numbers to 1000 in expanded form.

I will know that I learned it when I can write numbers to 1000 in expanded form.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because it will help me find totals more quickly using a base-ten strategy. I am learning this because it will help me to read and write personal checks.

Grade Level:	2nd grade
Standard	KY.2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens and ones digits, using >, =, and < symbols to record the results of comparisons.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critica	l vocabu	lary and	l questi	ions as	it re	lates	to t	he st	tand	ard	•
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Compare

Meanings

Digits

Symbols

Record

Results

comparisons

2. Key Implementation Questions and Answers:

How do I compare numbers?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to compare 3 digit numbers using >, =, and < symbols.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* **"I will know that I learned it when"**

I will know that I learned it when I can compare 3 digit numbers using >, =, and < symbols.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me add large numbers more quickly in real life situations, including purchases, sorting quantities of items, etc.

I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations and/or the relationship between addition and subtraction
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Fluently

Add

Subtract

Strategies

Place value

Properties

Operations

Relationship

2. Key Implementation Questions and Answers:

What operation do I need to use to solve this problem?

What strategy would be best to solve this problem?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to fluently add within 100 using place value.

I am learning to fluently subtract within 100 using place value.

I am learning to fluently subtract within 100 using properties of operations.

I am learning to fluently add within 100 using properties of operations.

I am learning to fluently add within 100 using the relationship between addition and subtraction I am learning to fluently subtract within 100 using the relationship between addition and subtraction

4. Establish success criteria by identifying strong and weak work. Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"

I will know that I learned it when I can fluently add within 100 using place value.

I will know that I learned it when I can fluently subtract within 100 using place value.

I will know that I learned it when I can fluently subtract within 100 using properties of operations.

I will know that I learned it when I can fluently add within 100 using properties of operations.

I will know that I learned it when I can fluently add within 100 using the relationship between addition and subtraction

fluently subtract within 100 using the relationship between addition and subtraction

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because it will help me more quickly add or subtract when purchasing items within \$100.

Grade Level:	2nd grade
Standard	
	KY.2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the st	andard.
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Add

Digit

Strategies

Place value

Properties

operations

2. Key Implementation Questions and Answers:

What strategy would be best to solve these four 2-digit numbers?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to add four 2-digit numbers using place value.

I am learning to add four 2-digit numbers using properties of operations.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"*

I will know that I learned it when I can add four 2-digit numbers using place value.
I will know that I learned it when I can add four 2-digit numbers using properties of operations.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd grade
Standard	
	KY.2.NBT.7 Add and subtract within 1000.
	 a. Represent and solve addition and subtraction problems using concrete models or drawings; strategies based on place value; • properties of operations; the relationship between addition and subtraction and; relate drawings and strategies to expressions or equations. b. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Represent Relationship Solve Relate Addition Expression Subtraction **Equations** Concrete **Necessary** Models Compose **Strategies** Decompose

Place value

Properties of operation

2. Key Implementation Questions and Answers:

How do I represent and solve an addition problem?

How do I represent and solve a subtraction problem?

What strategy am I using to solve this problem?

What operation am I using to solve this problem?

What representation am I using to solve this problem?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to use concrete models or drawings to solve addition problems.

I am learning to use concrete models or drawings to solve subtraction problems.

I am learning to use place value to solve addition problems.

I am learning to use place value to solve subtraction problems.

I am learning to use properties of operations to solve addition problems.

I am learning to use properties of operations to solve subtraction problems.

I am learning to use the relationship between addition and subtraction to solve a problem.

I am learning to relate drawings and strategies to expressions or equations in addition and subtraction.

I am learning to understand that in adding or subtracting three-digit numbers, you add or subtract hundreds and hundreds, tens and tens, ones and ones.

I am learning that sometimes you need to make or take apart tens or hundreds.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"*

I will know that I learned it when I can use concrete models or drawings to solve addition problems. I will know that I learned it when I can use concrete models or drawings to solve subtraction problems.

I will know that I learned it when I can use place value to solve addition problems.

I will know that I learned it when I can use place value to solve subtraction problems.

I will know that I learned it when I can use properties of operations to solve addition problems.

I will know that I learned it when I can use properties of operations to solve subtraction problems.

I will know that I learned it when I can use the relationship between addition and subtraction to solve a problem.

I will know that I learned it when I can relate drawings and strategies to expressions or equations in addition and subtraction.

I will know that I learned it when I can understand that in adding or subtracting three-digit numbers, you add or subtract hundreds and hundreds, tens and tens, ones and ones.

I will know that I learned it when I can make or take apart tens or hundreds.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this because it will help me add and subtract when looking at concrete models and drawings, like what can be found in instruction manuals.

Grade Level:	2nd Grade
Standard	KY.2.NBT.8 Mentally add 10 or 100 to a given number 100–900 and mentally subtract 10 or 100 from a given number 100–900.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Add

Subtract

Mentally

Given number

2. Key Implementation Questions and Answers:

What operation do I need to use to solve this problem?

Do I need to add 10 or 100 to this number to solve the problem?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to mentally add 10 to a given number 100-900.

I am learning to mentally add 100 to a given number 100-900.

I am learning to mentally subtract 10 to a given number 100-900.

I am learning to mentally subtract 100 to a given number 100-900.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I can mentally add 10 to a given number 100-900. I will know that I learned it when I can mentally add 100 to a given number 100-900. I will know that I learned it when I can mentally subtract 10 to a given number 100-900. I will know that I learned it when I can mentally subtract 100 to a given number 100-900.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it will help me add and subtract quicker when I get to bigger numbers. I am learning this because it will help me with other standards in 2nd grade and other grade levels.

Grade Level:	2nd Grade
Standard	KY.2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Explain why
Using
Addition
subtraction

Place value Properties of Operations

2. Key Implementation Questions and Answers:

Why does this addition strategy work? Why does this subtraction strategy work?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to explain why the addition strategies work. I am learning to explain why the subtraction strategies work.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"*

I will know that I learned it when I can explain why the addition strategy works. I will know that I learned it when I can explain why the subtraction strategy works.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it will help me with other standards in 2nd grade and other grade levels. I am learning this so that I can explain to other how to solve an addition and subtraction problem.

Grade Level:	2nd Grade
Standard	KY.2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions, by using drawings and equations with a symbol for the unknown number to represent the problem.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Addition

Subtraction

Adding to

Taking from

Putting together

Taking apart

Comparing

Equations

2. Key Implementation Questions and Answers:

- 1. What operation should I use to solve this one step problem?
- 2. What operation should I use to solve this two step problem?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to add within 100 to solve one-step word problems.

I am learning to subtract within 100 to solve one-step word problems.

I am learning to add within 100 to solve two-step word problems. I am learning to subtract within 100 to solve two-step word problems.

4. Establish success criteria by identifying strong and weak work. Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions. "I will know that I learned it when"

I will know that I learned it when I can add within 100 to solve one-step word problems I will know that I learned it when I can subtract within 100 to solve one-step word problems. I will know that I learned it when I can add within 100 to solve two-step word problems. I will know that I learned it when I can subtract within 100 to solve two-step word problems.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because I will use this in the real world.

I am learning this because it is a building block to what I will learn in other grades.

Grade Level:	2
Standard	
	KY.2.OA.2 Fluently add and subtract within 20 using mental strategies.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Fluently

Mental strategies

Add

Subtract

2. Key Implementation Questions and Answers:

What mental strategies can I use to add within 20 fluently? What mental strategies can I use to subtract within 20 fluently?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. "I am learning"

I am learning to add fluently within 20.

I am learning to subtract fluently within 20.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I can fluently add within 20.

I will know that I learned it when I can fluently subtract within 20.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it is a building block for other grade levels.

Grade Level:	2nd Grade
Standard	KY.2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members; write an equation to express an even number as a sum of two equal addends.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Determine Write

express

2. Key Implementation Questions and Answers:

- 1. How do I determine if a number is odd or even?
- 2. How do I write an equation to show an even number as two parts of a whole?
- **3. Develop "Learning Intention" statements.** Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to determine if a number is odd or even.

I am learning to write an equation to show an even number as two parts of a whole.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I can determine if a number is odd or even.

I will know that I learned it when I can write an equation to show an even number as two parts of a whole.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) *"I am learning this because"*

I am learning this because it is a building block to things I will learn in other grades.

Grade Level:	2
Standard	
	KY.2.OA.4 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 addends.
SMP	

Standard for Mathematical Practice (select and highlight)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of the structure
- 8. Look for and express regularity in repeated reasoning

1. Critical vocabulary and questions as it relates to the standard.

Addition

Arranged

Rectangular arrays

Rows

Columns

Equation

Sum

Equal

Addends

2. Key Implementation Questions and Answers:

How can I add to find the total of objects in an array?

What is an equation I can write that shows the total of two parts?

3. Develop "Learning Intention" statements. Describe the standard and/or element(s) as statements of intended learning. **"I am learning"**

I am learning to use addition to find the total number of objects in an array.

I am learning to write an equation to show the sum of equal addends.

4. Establish success criteria by identifying strong and weak work. *Identify the characteristics of strong and weak work related to the standard and/or element(s). Identify common misconceptions.* "I will know that I learned it when"

I will know that I learned it when I can use addition to find the total number of objects in an array. I will know that I learned it when I can write an equation to show the sum of equal addends.

5. Ideas for Relevance (Authentic Work with a Connection to Real-World) "I am learning this because"

I am learning this because it is the foundation of multiplication.