Trinity Area School District Template for Curriculum Mapping

| Course: Math Grade: K | Overview of Course: | | | | |
|----------------------------|--|---|--|--|--|
| Designer(s): Math Comm | nittee | | | | |
| | | | | | |
| | Overarching Big Ideas, En | during Understandings, and Essential Question | S | | |
| Make sense of pro | blems and persevere in solving them. | | | | |
| - | and quantitatively. | | | | |
| | rguments and critique the reasoning of others. | | | | |
| Model with mathe | | | | | |
| Use appropriate to | | | | | |
| Attend to precisio | | | | | |
| Look for and mak | | | | | |
| • Look for and expr | ess regularity in repeated reasoning. Standard(s) Addressed | Enduring Understanding(s) | Essential Question(s) | | |
| (A Big Idea is typically a | (What Common Core Standard(s) and/or PA | (SAS refers to Enduring Understandings as | (Essential Question(s) (Essential Questions are broad and open ended. | | |
| noun and always | Standard(s) addresses this Big Idea?) | "Big Ideas." EUs are the understandings we | Sometimes, EQs can be debated. A student's | | |
| transferable within and | | want students to carry with them after they | answer to an EQ will help teachers determine if | | |
| among content areas.) | | graduate. EUs will link Big Ideas together. | he/she truly understands. Consider having | | |
| | | Consider having only one or two EUs per Big | only one or two EQs per Enduring | | |
| | | Idea.) | Understanding.) | | |
| | Common Core Standards: | 1. Numbers are counted in a specific | 1. Why do numbers need to be in a | | |
| • Order | K.CC.1 Count to 100 by ones and by tens. K.CC.2 | sequence. | sequential order? What would happen | | |
| | Count forward beginning from a given number | | if numbers were out of order? | | |
| | within the known sequence (instead of having | | | | |
| | to begin at 1). | | | | |
| | PA Standards: 2.11.K.A. Order whole numbers, 0 to 20 with | | | | |
| | least to greatest value. | | | | |
| | Common Core Standards: | 1. There is a unique symbol that goes | 1. When can you use number symbols to | | |
| | K.CC.3 Write numbers from 0 to 20. Represent a | with each number word. | tell about a set of objects? | | |
| Correlations | number of objects with a written numeral 0-20 | 2. Numerals represent a set of objects. | 2. How does counting tell how many? | | |

| (with 0 representing a count of no objects). K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger. K.CC.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number for 0-20, count out that many objects. K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects. K.CC.7 Compare two numbers between 1 and 10 presented as written numerals. PA Standards: 2.1.K.A. Demonstrate the relationship between numbers and quantities, including rote counting, one-to-one correspondence, and counting by tens, and comparing values of whole numbers up to 20. | Counting tells how many are in a set not matter which order the objects are counted or arranged. The last number said when counting a set is the total. Counting is cumulative. In a pair of numbers, the number that shows more is greater. The number that shows fewer is less. If two numbers are exactly the same amount, they are equal. When can you use number symbols to tell about a set of objects? How can you determine if a number is greater than, less than, or equal to another number? In a pair of numbers, the number that shows more is greater. The number that shows fewer is less. If two numbers are exactly the same amount, they are equal. |
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| | 2.1.K.B. Represent equivalent forms of the same number through the use of pictures and concrete objects (including penny, nickel, and dime), up to 20. 2.1.K.C. Use concrete objects, drawings, diagrams or models to group objects into sets of ten; separate objects in to equal parts. 2.8.K.A. Use concrete objects to demonstrate understanding of equal and not equal. | | |
|---------------|--|---|---|
| • Production | Common Core Standards K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. K.G.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. K.G.6 Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?" PA Standards 2.1.K.D. Use concrete objects to demonstrate regrouping ones to tens, with adult assistance. | There is more than one way to show a number. Numbers can be decomposed in different ways. Two-dimensional shapes have width and length. Three-dimensional or solid figures have length, width, and height. Many everyday objects closely approximate standard geometric solids. Solid figures can be compared in different ways. Some solid figures can be compared by their flat surfaces and vertices. The flat surfaces of many solid figures have specific shapes. Shapes can be formed and drawn using knowledge of their specific attributes. Shapes can be combined to make other shapes. | Why can you show the same number in different ways? How can number decompositions be represented? How can decomposing numbers help build better number sense? How do you know when shapes are exactly the same? What do you look for when you describe and match shapes? What kinds of figures roll, slide, and stack? How can you describe flat surfaces of solids? What do you need to know about a shape's attributes in order to recreate that shape? How can you use smaller shapes to make a larger shape? How can you use smaller shapes to make a different shape? |
| Relationships | Common Core Standards: K.OA.1 Represent addition and subtraction with | 1. Addition is putting together and adding to. | 1. How can you represent addition and subtraction scenarios in a variety of |

| | objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.) K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). | 2. 3. 4. 5. 6. 7. 8. | number. Numbers can be decomposed in different ways. Different combinations of number pairs can produce the same sum. A knowledge of the base ten system is key to a strong foundation in both addition and subtraction. Automaticity of addition and subtraction facts is an important | 5. | different ways? |
|-------------------------------------|---|--|--|----|--|
| | in the Standards.) K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by | | .Numbers can be decomposed in different ways. | 5. | How can you use base ten knowledge to fluently solve both addition and |
| | K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition | | A knowledge of the base ten system is key to a strong foundation in both addition and subtraction. | 6. | |
| | | 8. | | | |
| | K.OA.5 Fluently add and subtract within 5.PA Standards:2.1.K.F. Use concrete objects to solve addition | | | | |
| | and subtraction problems. 2.2.K.B. Represent and explain the results of adding and subtracting sets of objects up to and including ten, using math vocabulary. | | | | |
| Characteristics | Common Core Standards: K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. | | Objects can be compared and ordered by length, capacity, and weight. Measurement is a process of comparing a unit to the object being | | How can you decide which object is larger and which object is smaller? How can you compare and order the length of three objects? |
| | K. MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly | 3. | measured. Attributes can be used to compare objects. Attributes such as color, shape, or size | | |
| | compare the heights of two children and describe one child as taller/shorter. | 1. | can be used to sort the same set of objects in different ways. | 5. | What does looking at the color, shape, and size of objects help you know |

| K.MD.3 Classify objects into given cat count the numbers of objects in each and sort the categories by count. Limit category counts to be less than 10. K.G.1 Describe objects in the environm names of shapes, and describe the relat of these objects using terms such as abbeside, in front of, behind, and next to. K.G.2 Correctly name shapes regardles orientations or overall size. K.G.3 Identify shapes as two-dimension a plane, "flat") or three-dimensional ("SAnalyze and compare two- and three dimensional shapes, in different sizes orientations, using informal language their similarities, differences, parts (of sides and vertices/"corners") and attributes (e.g., having sides of equal PA Standards: 2.3.K.A. Identify and describe commod dimensional shapes. 2.6.K.A. Gather data in response to quiposed to learners. 2.6.K.D. Answer questions based on congraphs or charts. 2.6.K.D. Answer comparative questior epresentations of data. 2.6.K.E. Draw conclusions about infor shown on a graph or chart. | gory uul to uul toaccording to a combination of attributes.6.What are some ways you can sort objects?uul to in various ways.6.Data can be collected and represented in various ways.7.The position of objects can be determined in relation to surrounding objects and described using words.8.Basic shapes can be used to describe objects in the environment.9.Shapes have attributes.10.Two-dimensional shapes are flat.10.Two-dimensional shapes are solid.11.Three dimensional shapes are solid.11.How can you describe where something is using the words, inside, and outside, over, under, and on, top, middle, and bottom, or left and right.h)13.How can you tell if a shape is a rectangle, square, circle, triangle, or hexagon?howmset on oon |
|---|---|
| oPatternsPA Standards:2.8.K.C. Recognize, describe, extend, 1 | 1. Patterns are made up of units that repeat in a predictable way.1. How can you tell what comes next in a pattern? |

| 0 | | | | Patterns can be alike or different depending on how they repeat. Numbers can be even or odd. | | | | |
|--|---|--|---|---|--|--|---|--|
| Mont h of Instru ction (In what month (s) will you teach this unit?) | Title of Unit | Big Idea(s) (A Big Idea is a noun and always transferable within and among content areas.) | Standard(s) Addressed (What Common Core Standard(s) and/or PA Standard(s) addresses this Big Idea?) | Enduring Understanding(s) (SAS refers to Enduring Understandings as "Big Ideas." EUs are the understandings we want students to carry with them after they graduate. EUs will link Big Ideas together. Consider having only one or two EUs per Big Idea.) | Essential Question (Essential Question broad and open end Sometimes, EQs can debated. A student answer to an EQ wil teachers determine he/she truly unders Consider having onl or two EQs per End Understanding.) | s are ded. 1 be 's ll help f stands. ly one | Common Assessment(s)* (What assessments will all teachers of this unit use to determine if students have answered the Essential Questions?) | Common Resource(s)* Used (What resources will all teachers of this unit use to help students understand the Big Ideas?) |
| Sept. | Counting and Cardinality (0 – 10) and Graphing | Characteristics Order Correlations | <u>Counting and Cardinality</u> Common Core Standards K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1). K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). | <u>Counting and Cardinality</u> 1. Numbers are counted in a specific sequence. 2. There is a unique symbol that goes with each number word. 3. Numerals represent a set of objects. | Counting and Cardin1.Why do numed to beneed to besequentialWhat woulhappen ifnumbers wof order?2.When can ynumber syntto tell about | mbers in a order? d vere out you use mbols | Topics 1, 2, 3, and 4 Tests Topics 1-4 Benchmark Tests | <u>Counting and</u> <u>Cardinality</u> *Text *Manipulatives *Online Resources *Vocabulary: -one -two -three -count |

| K.CC.4 Understand the | 4 | Counting tolla hour | | of objects? | numbor |
|---------------------------------|---------|---------------------|---------------|---------------------|---------------|
| | 4. | Counting tells how | 2 | | -number |
| relationship between numbers | | many are in a set | 3. | How does | -four |
| and quantities; connect | | not matter which | | counting tell how | -five |
| counting to cardinality. | | order the objects | | many? | -zero |
| d. When counting objects, | | are counted or | 4. | When can you use | -whole |
| say the number | | arranged. | | number symbols | -part |
| names in the standard | 5. | The last number | | to tell about a set | -more/greater |
| order, pairing each | | said when counting | | of objects? | -less/fewer |
| object with one and | | a set is the total. | 5. | How can you | -same as |
| only one number name | 6. | Counting is | | determine if a | -1 more |
| and each number name | | cumulative. | | number is greater | -2more |
| with one and only one | 7. | In a pair of | | than, less than, or | -1 fewer |
| object. | | numbers, the | | equal to another | -2 fewer |
| e. Understand that the | | number that shows | | number? | -counting on |
| last number name said | | more is greater. | <u>Graphi</u> | <u>ng</u> | -total |
| tells the number of | | The number that | 1. | What are some | -survey |
| objects counted. The | | shows fewer is | | ways you can sort | -graph |
| number of objects is the | | less. If two | | objects? | -most |
| same regardless of | | numbers are | 2. | How can data be | -fewest |
| their arrangement or | | exactly the same | | represented? | |
| the order in which they | | amount, they are | 3. | What data can you | |
| were counted. | | equal. | | gain from looking | |
| f. Understand that each | Graphir | | | at a graph? | |
| successive number | 1. | - | | | |
| name refers to a | 11 | used to compare | | | |
| quantity that is one | | objects. | | | |
| larger. | 2. | Data can be | | | |
| K.CC.5 Count to answer "how | | collected and | | | |
| many?" questions about as | | represented in | | | |
| many as 20 things arranged in a | | various ways. | | | |
| | | various ways. | | | |
| line, a rectangular array, or a | | | | | |
| circle, or as many as 10 things | | | | | |
| in a scattered configuration; | | | | | |
| given a number from 1-20, | | | | | |
| count out that many objects. | | | | | |
| K.CC.6 Identify whether the | | | | | |

| · · · · · | |
|-----------|------------------------------------|
| | number of objects in one group |
| | is greater than, less than, or |
| | equal to the number of objects |
| | in another group, by using |
| | matching and counting |
| | strategies. |
| | Include groups |
| | with up to ten |
| | objects. |
| | K.CC.7 Compare two numbers |
| | between 1 and 10 presented as |
| | written numerals. |
| | PA Standards: |
| | 2.11.K.A. Order whole numbers, |
| | 0 to 20 with least to greatest |
| | value. |
| | 2.1.K.A. Demonstrate the |
| | relationship between numbers |
| | and quantities, including rote |
| | counting, one-to-one |
| | correspondence, and counting |
| | by tens, and comparing values |
| | of whole numbers up to 20. |
| | 2.1.K.B. Represent equivalent |
| | forms of the same number |
| | through the use of pictures and |
| | concrete objects (including |
| | penny, nickel, and dime), up to |
| | 20. |
| | 2.1.K.C. Use concrete objects, |
| | drawings, diagrams or models |
| | to group objects into sets of ten; |
| | separate objects in to equal |
| | parts. |
| | 2.8.K.A. Use concrete objects to |
| | demonstrate understanding of |
| | |

| | | | equal and not equal. <u>Graphing</u> Common Core Standards: K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10. PA Standards: 2.6.K.A. Gather data in response to questions posed to learners. 2.6.K.B. Organize and display objects by one or more attributes. 2.6.K.C. Answer questions based on data shown on graphs or charts. 2.6.K.D. Answer comparative questions based on representations of data. 2.6.K.E. Draw conclusions about information shown on a graph or chart. | | | | |
|------|---|---|--|---|---|-------------------------|--|
| Oct. | Counting and Cardinality (Larger Numbers) | Order Correlations Production Patterns | <u>Counting and Cardinality</u> Common Core Standards: K.CC.1 Count to 100 by ones and by tens. K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1). K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral | Counting and Cardinality1.Numbers are counted in a specific sequence.2.There is a unique symbol that goes with each number word.3.Numerals represent a set of objects. | Counting and Cardinality1.Why do numbers need to be in a sequential order? What would happen if numbers were out of order?2.When can you use number symbols to tell about a set | Topics 5 and 6 Tests | <u>Counting and</u> <u>Cardinality</u> *Text *Manipulatives *Online Resources *Vocabulary: -eleven -twelve -thirteen -fourteen |

| 0-20 (with 0 representing a | 4. Counting tells how | of objects? | -fifteen |
|---------------------------------|-----------------------|--------------------------|-----------------|
| count of no objects). | many are in a set | 3. How does | -sixteen |
| K.CC.4 Understand the | not matter which | counting tell how | -seventeen |
| relationship between numbers | order the objects | many? | -eighteen |
| and quantities; connect | are counted or | 4. When can you use | -nineteen |
| counting to cardinality. | arranged. | number symbols | -twenty |
| | 5. The last number | to tell about a set | -twenty -odd |
| a. When counting objects, | | | |
| say the number | said when counting | of objects? | -even |
| names in the standard | a set is the total. | 5. How can you | -hundred |
| order, pairing each | 6. Counting is | determine if a | chart |
| object with one and | cumulative. | number is greater | -row |
| only one number name | 7. In a pair of | than, less than, or | -column |
| and each number name | numbers, the | equal to another | -count by 10's |
| with one and only one | number that shows | number? | -skip counting |
| object. | more is greater. | 6. Why can you | |
| b. Understand that the | The number that | show the same | |
| last number name said | shows fewer is | number in | |
| tells the number of | less. If two | different ways? | |
| objects counted. The | numbers are | 7. How can number | |
| number of objects is | exactly the same | decompositions | |
| the same regardless of | amount, they are | be represented? | |
| their arrangement or | equal. | 8. How can | |
| the order in which they | 8. There is more than | decomposing | |
| were counted. | one way to show a | numbers help | |
| c. Understand that each | number. | build better | |
| successive number | 9. Numbers can be | number sense? | |
| name refers to a | decomposed in | 9. How can you tell | |
| quantity that is one | different ways. | what comes next | |
| larger. | 10. Patterns are made | in a pattern? | |
| K.CC.5 Count to answer "how | up of units that | 10. What do you need | |
| many?" questions about as | repeat in a | to know about a | |
| many as 20 things arranged in a | predictable way. | pattern in order | |
| line, a rectangular array, or a | 11. Patterns can be | to extend the | |
| circle, or as many as 10 things | alike or different | pattern? | |
| in a scattered configuration; | depending on how | How can you determine if | |
| given a number from 1-20, | they repeat. | a number is even or odd? | |
| given a number nom 1-20, | they repeat. | | |

| | (0.) | | |
|---------------------------------------|--------------------|--|--|
| count out that many objects. | 12. Numbers can be | | |
| K.NBT.1 Compose and | even or odd. | | |
| decompose numbers from 11 to | | | |
| 19 into ten ones and some | | | |
| further ones, each composition | | | |
| or decomposition by a drawing | | | |
| or equation (such as 18 = 10 + | | | |
| 8); understand that these | | | |
| numbers are composed of ten | | | |
| ones and one, two, three, four, | | | |
| five, six, seven, eight, or nine | | | |
| ones. | | | |
| PA Standards: | | | |
| 2.11.K.A. Order whole numbers, | | | |
| 0 to 20 with least to greatest | | | |
| value. 2.1.K.A. Demonstrate the | | | |
| relationship between numbers | | | |
| and quantities, including rote | | | |
| counting, one-to-one | | | |
| correspondence, and counting | | | |
| by tens, and comparing values | | | |
| of whole numbers up to 20. | | | |
| 2.1.K.B. Represent equivalent | | | |
| forms of the same number | | | |
| through the use of pictures and | | | |
| concrete objects (including | | | |
| penny, nickel, and dime), up to | | | |
| 20. | | | |
| 20. 2.1.K.C. Use concrete objects, | | | |
| | | | |
| drawings, diagrams or models | | | |
| to group objects into sets of ten; | | | |
| separate objects in to equal | | | |
| parts. | | | |
| 2.8.K.A. Use concrete objects to | | | |
| demonstrate understanding of | | | |
| equal and not equal. | | | |

| | | | 2.1.K.D. Use concrete objects to demonstrate regrouping ones to tens, with adult assistance. 2.8.K.C. Recognize, describe, extend, replicate and transfer number and geometric patterns. 2.1.K.E. Recognize even and odd number patterns. | | | | |
|------|----------|-----------------------------|--|--|---|----------|---|
| Nov. | Addition | Production Relationships | Addition Common Core Standards: K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Drawings need not show details, but should show the mathematics in the problem. (This applies | Addition There is more than one way to show a number. Numbers can be decomposed in different ways. Addition is putting together and adding to. Addition and subtraction scenarios can be represented in a variety of ways. There is more than one way to show a number. Numbers can be decomposed in different ways. There is more than one way to show a number. Numbers can be decomposed in different ways. Bifferent combinations of number pairs can produce the same sum. A knowledge of the | Addition1.Why can you show the same number in different ways?2.How can number decompositions be represented?3.How can decomposing numbers help build better number sense?4.How can you represent addition and subtraction scenarios in a variety of ways?5.Why can you show the same number in different ways?6.How can number decompositions be represented?7.How can | Topics 7 | Addition *Text *Manipulatives *Online Resources *Vocabulary: -number story -join -in all -altogether -add -plus sign -equal sign -sum -addition sentence - decomposition -addition facts -base ten |

| | | | wherever drawings are mentioned in the Standards.) K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. K.OA.5 Fluently add and subtract within 5. PA Standards: 2.1.K.D. Use concrete objects to demonstrate regrouping ones to tens, with adult assistance. 2.1.K.F. Use concrete objects to solve addition and subtraction problems. 2.2.K.B. Represent and explain the results of adding and subtracting sets of objects up to and including ten, using math vocabulary. | base ten system is key to a strong foundation in both addition and subtraction. Automaticity of addition and subtraction facts is an important foundation for the building of more complex mathematical concepts. | 9. | decomposing numbers help build better number sense? How can you use base ten knowledge to fluently solve both addition and subtraction scenarios? Why is automaticity of basic addition and subtraction facts important? | | |
|------|-------------|---------------|---|--|----------------|---|--------------|--------------------|
| Dec. | Subtraction | Relationships | <u>Subtraction</u> | <u>Subtraction</u> | <u>Subtrac</u> | <u>ction</u> | Topic 8 Test | <u>Subtraction</u> |

| Jan. | More | Production | not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.) K.OA.2 Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. K.OA.5 Fluently add and subtract within 5. PA Standards: 2.1.K.F. Use concrete objects to solve addition and subtraction problems. 2.2.K.B. Represent and explain the results of adding and subtracting sets of objects up to and including ten, using math vocabulary. Addition | base ten system is key to a strong foundation in both addition and subtraction. Automaticity of addition and subtraction facts is an important foundation for the building of more complex mathematical concepts. | Additic | fluently solve both addition and subtraction scenarios? Why is automaticity of basic addition and subtraction facts important? | Topic 9 Test | Addition |
|------|--------------|---------------|--|---|---------|--|--------------|----------|
| - | Addition and | Relationships | Common Core Standards: | 9. There is more than | | . Why can you | | *Text |

| Subtraction | | | | *Manimulations - |
|-------------|-----------------------------------|------------------------------------|-------------------------------------|------------------|
| Subtraction | K.NBT.1 Compose and | one way to show a | show the same | *Manipulatives |
| | decompose numbers from 11 to | number. | number in | *Online |
| | 19 into ten ones and some | 10. Numbers can be | different ways? | Resources |
| | further ones, each composition | decomposed in | 11. How can number | *Vocabulary: |
| | or decomposition by a drawing | different ways. | decompositions | -number story |
| | or equation (such as 18 = 10 + | 11. Addition is putting | be represented? | -join |
| | 8); understand that these | together and | 12. How can | -in all |
| | numbers are composed of ten | adding to. | decomposing | -altogether |
| | ones and one, two, three, four, | 12. Addition and | numbers help | -add |
| | five, six, seven, eight, or nine | subtraction | build better | -plus sign |
| | ones. | scenarios can be | number sense? | -equal sign |
| | K.OA.1 Represent addition and | represented in a | 13. How can you | -sum |
| | subtraction with objects, | variety of ways. | represent | -addition |
| | fingers, mental images, | 13. There is more than | addition and | sentence |
| | drawings, sounds (e.g., claps), | one way to show a | subtraction | - |
| | acting out situations, verbal | number. | scenarios in a | decomposition |
| | explanations, expressions, or | 14Numbers can be | variety of ways? | -addition facts |
| | equations. | decomposed in | 14. Why can you | -base ten |
| | Drawings need | different ways. | show the same | |
| | not show | 15. Different | number in | Subtraction |
| | details, but | combinations of | different ways? | *Text |
| | should show the | number pairs can | 15. How can number | *Manipulatives |
| | mathematics in | produce the same | decompositions | *Online |
| | the problem. | sum. | be represented? | Resources |
| | (This applies | 16. A knowledge of the | 16. How can | *Vocabulary: |
| | wherever | base ten system is | decomposing | (same as above |
| | drawings are | key to a strong | numbers help | for subtraction) |
| | mentioned in | foundation in both | build better | ior subtraction; |
| | the Standards.) | addition and | number sense? | |
| | K.OA.2 Solve addition and | subtraction. | 17. How can you use | |
| | subtraction word problems, and | 17. Automaticity of | base ten | |
| | add and subtract within 10, e.g., | addition and | | |
| | by using objects or drawings to | subtraction facts is | knowledge to fluently solve both | |
| | represent the problem. | | addition and | |
| | K.OA.3 Decompose numbers less | an important foundation for the | subtraction | |
| | than or equal to 10 into pairs in | | | |
| | more than one way, e.g., by using | building of more | scenarios? | |
| | more than one way, e.g., by doing | | | |

| objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). K.OA.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. K.OA.5 Fluently add and subtract within 5. PA Standards: 2.1.K.D. Use concrete objects to demonstrate regrouping ones to tens, with adult assistance. 2.1.K.F. Use concrete objects to solve addition and subtraction problems. 2.2.K.B. Represent and explain the results of adding and subtracting sets of objects up to and including ten, using math vocabulary. <u>Subtraction</u> Common Core Standards: K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal | 2. 3. | complex mathematical concepts. <u>ction</u> Subtraction is taking apart and taking from. Addition and subtraction scenarios can be represented in a variety of ways. A knowledge of the base ten system is key to a strong foundation in both addition and subtraction. Automaticity of addition and subtraction facts is an important foundation for the building of more complex mathematical concepts. | Subtra 1. 2. Why is basic a | How can you represent addition and subtraction scenarios in a variety of ways? How can you use base ten knowledge to fluently solve both addition and subtraction scenarios? automaticity of addition and ction facts | |
|--|----------|---|---|--|--|
| | | | | | |

| | 1 | | · · · · | 1 | | 1 | | | 1 1 |
|------|------------|---------------|-----------------------------------|-------|---------------------|-------|----------------------------|------------------|-----------------|
| | | | mathematics in | | | | | | |
| | | | the problem. | | | | | | |
| | | | (This applies | | | | | | |
| | | | wherever | | | | | | |
| | | | drawings are | | | | | | |
| | | | mentioned in | | | | | | |
| | | | the Standards.) | | | | | | |
| | | | K.OA.2 Solve addition and | | | | | | |
| | | | subtraction word problems, and | | | | | | |
| | | | add and subtract within 10, e.g., | | | | | | |
| | | | by using objects or drawings to | | | | | | |
| | | | represent the problem. | | | | | | |
| | | | K.OA.5 Fluently add and subtract | | | | | | |
| | | | within 5. | | | | | | |
| | | | PA Standards: | | | | | | |
| | | | 2.1.K.F. Use concrete objects to | | | | | | |
| | | | solve addition and subtraction | | | | | | |
| | | | problems. | | | | | | |
| | | | 2.2.K.B. Represent and explain | | | | | | |
| | | | the results of adding and | | | | | | |
| | | | subtracting sets of objects up to | | | | | | |
| | | | and including ten, using math | | | | | | |
| | | | vocabulary. | | | | | | |
| Feb. | Composing | Production | Composing and Decomposing | Comno | sing and | Comno | sing and | Topics 10 and 11 | <u>Addition</u> |
| 100. | and | Relationships | Numbers | | posing Numbers | - | posing Numbers | Tests | *Text |
| | Decomposin | Relationships | Common Core Standards: | | There is more than | | Why can you | 10303 | *Manipulatives |
| | σ | | K.NBT.1 Compose and | 1. | one way to show a | 1. | show the same | | *Online |
| | Numbers | | decompose numbers from 11 to | | number. | | number in | | Resources |
| | Numbers | | 19 into ten ones and some | 2. | Numbers can be | | different ways? | | *Vocabulary: |
| | | | further ones, each composition | 2. | decomposed in | 2. | How can number | | (same as above |
| | | | or decomposition by a drawing | | different ways. | ۷. | decompositions | | for addition) |
| | | | or equation (such as 18 = 10 + | 3. | Addition is putting | | | | Subtraction |
| | | | 8); understand that these | з. | together and | 3. | be represented? How can | | *Text |
| | | | | | 0 | 3. | | | |
| | | | numbers are composed of ten | Α | adding to. | | decomposing | | *Manipulatives |
| | | | ones and one, two, three, four, | 4. | Addition and | | numbers help | | *Online |
| | | | five, six, seven, eight, or nine | | subtraction | | build better | | Resources |

| | | 1 2 | 1 T T T T |
|------------------------------------|---|---------------------|--------------|
| ones. | scenarios can be | number sense? | *Vocabulary: |
| K.OA.1 Represent addition and | <u>^</u> | 4. How can you | -left |
| subtraction with objects, | variety of ways. | represent | -separate |
| fingers, mental images, | 5. There is more than | addition and | -take away |
| drawings, sounds (e.g., claps), | one way to show a | subtraction | -minus sign |
| acting out situations, verbal | number. | scenarios in a | -subtract |
| explanations, expressions, or | 6Numbers can be | variety of ways? | -difference |
| equations. | decomposed in | 5. Why can you | -subtraction |
| Drawings nee | l different ways. | show the same | sentence |
| not show | 7. Different | number in | |
| details, but | combinations of | different ways? | |
| should show t | ne number pairs can | 6. How can number | |
| mathematics | r i Fri - i i | decompositions | |
| the problem. | sum. | be represented? | |
| (This applies | 8. A knowledge of the | 7. How can | |
| wherever | base ten system is | decomposing | |
| drawings are | key to a strong | numbers help | |
| mentioned in | foundation in both | build better | |
| the Standards | | number sense? | |
| K.OA.2 Solve addition and | subtraction. | 8. How can you use | |
| subtraction word problems, and | Automaticity of addition | base ten | |
| add and subtract within 10, e.g. | and subtraction facts is an | knowledge to | |
| by using objects or drawings to | important foundation for | fluently solve both | |
| represent the problem. | the building of more | addition and | |
| K.OA.3 Decompose numbers le | s complex mathematical | subtraction | |
| than or equal to 10 into pairs in | concepts. | | |
| more than one way, e.g., by usin | g <u>Subtraction</u> | scenarios? | |
| objects or drawings, and record | 5 <u>Subtraction</u> 1. Subtraction is | 9. Why is | |
| each decomposition by a drawin | a | automaticity of | |
| or equation (e.g., $5 = 2 + 3$ and | taking apart anu | basic addition and | |
| = 4 + 1 | taking nom. | subtraction facts | |
| K.OA.4 For any number from 1 | 2. Addition and | important? | |
| to 9, find the number that make | subtraction | <u>Subtraction</u> | |
| 10 when added to the given | scenarios can be | 1. How can you | |
| number, e.g., by using objects of | represented in a | represent | |
| drawings, and record the answe | variety of ways. | addition and | |
| with a drawing or equation. | 3. A knowledge of the | subtraction | |
| white a drawing of equation. | | | |

| K.OA.5 Fluently add and subtract within 5. PA Standards: 2.1.K.D. Use concrete objects to demonstrate regrouping ones to tens, with adult assistance. 2.1.K.F. Use concrete objects to solve addition and subtraction problems. 2.2.K.B. Represent and explain the results of adding and subtracting sets of objects up to and including ten, using math vocabulary. <u>Subtraction</u> Common Core Standards: K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal | 4. | base ten system is key to a strong foundation in both addition and subtraction. Automaticity of addition and subtraction facts is an important foundation for the building of more complex mathematical concepts. | 2. 3. | base ten knowledge to fluently solve both addition and subtraction scenarios? | |
|--|----|--|----------|--|--|
| acting out situations, verbal explanations, expressions, or equations. • Drawings need | | | | | |
| not show details, but should show the mathematics in | | | | | |
| the problem. (This applies wherever drawings are | | | | | |
| mentioned in the Standards.) K.OA.2 Solve addition and subtraction word problems, and | | | | | |
| add and subtract within 10, e.g., | | | | | |

| | | | by using objects or drawings to represent the problem. K.OA.5 Fluently add and subtract within 5. PA Standards: 2.1.K.F. Use concrete objects to solve addition and subtraction problems. 2.2.K.B. Represent and explain the results of adding and subtracting sets of objects up to and including ten, using math vocabulary. | | | | | | |
|-------|-----------------|-----------------|---|---------------------------|--|---------------------------------------|---|---|--|
| March | Measuremen t | Characteristics | Measurement Common Core Standards: K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. K. MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter. PA Standards: 2.3.K.A. Identify similarities and differences in measurement of objects. | <u>Measur</u> 1. 2. | <u>erement</u> Objects can be compared and ordered by length, capacity, and weight. Measurement is a process of comparing a unit to the object being measured. | <u>Measur</u> 1. 2. 3. 4. | How can you decide which object is larger and which object is smaller? How can you compare and order the length of three objects? How can you tell if a container holds the same or more or less than another? | Topic 12 Test Topics 9-12 Benchmark Tests | Measurement *Text *Manipulatives *Online Resources *Vocabulary: -large -larger -largest -small -smaller -smallest -medium -big -bigger -biggest -size -as long as (same length as) -as short as -as tall as -longer than |

| | | | | | | | | -shorter than -taller than -longest -shortest -tallest -measure -estimate -check -holds more -holds less -empty -full -most -least -about the same -heavier -lighter -balance -weight -weighs more |
|-------|---|-----------------|--|----|---|--|---------------|--|
| April | Sorting and Classifying and Position and Location | Characteristics | Sorting and Classifying Common Core Standards: K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10. PA Standards: 2.6.K.B. Organize and display objects by one or more attributes. Position and Location | 2. | <i>and Classifying</i> Attributes can be used to compare objects. Attributes such as color, shape, or size can be used to sort the same set of objects in different ways. A set of objects can be sorted according to a combination of | Sorting and Classifying1.What are someways you can sortobjects?2.In order to make agroup of objectsthat are exactlyalike in two ways,what should younotice about theobjects?Position and LocationHow can youdescribe where | Topic 13 Test | -weighs less <u>Sorting and</u> <u>Classifying</u> *Text *Manipulatives *Online Resources *Vocabulary: -same -different -sort -does not belong -sorting rule <u>Position and</u> |

| | | | Common Core Standards: K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. | attributes. <u>Position and Location</u> The position of objects can be determined in relation to surrounding objects and described using words. | something is using the words, inside, and outside, over, under, and on, top, middle, and bottom, or left and right. | | Location *Text *Manipulatives *Online Resources *Vocabulary: -inside -outside -outside -over -under -on -top -middle -bottom -before -after -left -right |
|-----|----------|-------------------------------|--|--|---|--|---|
| May | Geometry | Production Characteristics | <u>Geometry</u> Common Core Standards K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10. K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. K.G.2 Correctly name shapes | Geometry1.Two-dimensional shapes have width and length.2.Three-dimensional or solid figures have length, width, and height.3.Many everyday objects closely approximate standard geometric solids.4.Solid figures can be compared in different ways.5.Some solid figures | Geometry1.How do you know when shapes are exactly the same?2.What do you look for when you describe and match shapes?3.What kinds of figures roll, slide, and stack?4.How can you describe flat surfaces of solids?5.What do you need to know about a shape's attributes | Topics 14, 15, and 16 Tests Topics 13-16 Benchmark Test | Geometry *Text *Manipulatives *Online Resources *Vocabulary: -square -rectangle -circle -triangle -hexagon -same size -same shape -sphere -cube -cylinder -corner |

| Iune | Review of | Order | regardless of their orientations or overall size. K.G.3 Identify shapes as two- dimensional (lying in a plane, "flat") or three-dimensional ("solid"). K.G.4 Analyze and 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). K.G.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. K.G.6 Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?" PA Standards: 2.9.K.A. Identify and describe common 2-dimensional shapes. | many solid figures have specific shapes. Shapes can be formed and drawn using knowledge of their specific attributes. Shapes can be combined to make other shapes. | 6. 7. 8. 9. | in order to recreate that shape? How can you use smaller shapes to make a larger shape? How can you use smaller shapes to make a different shape? How can you describe objects in the environment using shapes? How can you tell if a shape is a rectangle, square, circle, triangle, or hexagon? How can you tell if a shape is flat or solid? | TBA | -edge -side -roll -stack -slide -flat surface |
|------|---|---|---|--|----------------------|--|-----|--|
| June | Review of Previously Taught Units | Order Correlations Production Relationships Characteristics Patterns | All Common Core and PA Standards | All Essential Understandings | All E | ssential Questions | | *Text *Manipulatives *Online Resources |

* Some teachers may need to think about the assessments and resources used in order to determine the Big Ideas, Enduring Understandings, and Essential Questions embedded in their courses. At this point in your curriculum mapping, you might want to ignore the "Common Assessments" and "Common Resources Used" columns. However, you may use them if you wish.