

WGSD Curriculum – Math Kindergarten

In Kindergarten, instructional time will focus on two critical areas: (1) representing and comparing whole numbers, initially with sets of objects and (2) describing shapes and space. More learning time in Kindergarten should be devoted to number sense than to other topics.

While the content learning goals describe the mathematics students should be able to understand and do, the first eight learning goals (The Standards for Mathematical Practice) describe how students should engage with these mathematical concepts and skills as they grow in mathematical maturity and expertise. Teachers will connect the mathematical practices to mathematical content in all mathematics instruction. These learning goals merit the most time, resources, innovation, and focus necessary to qualitatively improve the instruction, assessment, and student achievement in mathematics.

WGSD Curriculum – Math Kindergarten

Students will be able to make sense of problems and persevere in solving them.

Students will be able to reason abstractly and quantitatively.

Students will be able to construct viable arguments and critique the reasoning of others.

Students will be able to model with mathematics.

Students will be able to use appropriate tools strategically.

Students will be able to attend to precision.

Students will be able to look for and make use of structure.

Students will be able to look for and express regularity in repeated reasoning.

Students will know number names and the count sequence.

Students will be able to count to tell the number of objects.

Students will be able to compare numbers.

Students will work with numbers 11-19 to gain foundations for place value.

Students will understand addition and subtraction.

Students will be able to describe and compare measurable attributes.

Students will be able to classify objects and count the number of objects in each category.

Students will be able to identify and describe shapes.

Students will be able to analyze, compare, create, and compose shapes.

Students will be able to work with time and money.

WGSD Curriculum – Math Kindergarten
Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP1	
<p><u>Learning Goal</u></p> <p>Students will be able to make sense of problems and persevere in solving them.</p>	<p><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by:</p> <ul style="list-style-type: none"> ● Thinking about and explaining problems. ● Developing plans to solve problems. ● Struggling with various problem solving attempts over time. ● Double checking their answers to problems. <p>Approaching: Student demonstrates they are nearing proficiency by performing processes such as:</p> <ul style="list-style-type: none"> ● Explaining his/her thought processes when solving a problem. ● Trying several approaches to solve a problem, and only asking for help when needed. ● Using concrete objects or pictures to represent and solve a problem. <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by:</p> <ul style="list-style-type: none"> ● Explaining a problem and a possible strategy for solving the problem with help. ● Staying with a challenging problem for more than one attempt with prompting.
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Explain the meaning of a problem and look for ways to solve it ● Use concrete objects or pictures to help conceptualize and solve problems ● Check their thinking by asking, “Does this make sense?” ● Listen to the strategies of others and try different approaches ● Take time to thoughtfully consider problems 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Provide time and facilitate discussions around problem solving so that students hear the approaches of others ● Provide opportunities for students to explain themselves, the meaning of a problem, and connect concepts to “their” world ● Provide students time to think and become “patient” problem solvers ● Encourage students to check their answers (using different methods when appropriate) ● Offer multiple manipulatives for students to represent and solve problems 	

WGSD Curriculum – Math Kindergarten
Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP2	
<p><u>Learning Goal</u></p> <p>Students will be able to reason abstractly and quantitatively.</p>	<p><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by:</p> <ul style="list-style-type: none"> ● Converting situations into symbols (numbers and operation signs) to solve problems. ● Converting mathematical equations into meaningful situations. <p>Approaching: Student demonstrates they are nearing proficiency by performing a process such as translating situations into symbols to solve problems.</p> <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by reasoning with models or pictorial representations to solve problems.</p>
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Recognize that a number represents a specific quantity ● Connect the quantity to written symbols and create a logical representation of the problem at hand ● Consider the appropriate units involved and the meaning of quantities 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Provide a range of representations of math problem situations ● Provide opportunities for students to make sense of quantities and their relationships in problem situations ● Provides problems that require flexible use of properties of operations and objects 	

WGSD Curriculum – Math Kindergarten
Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP3	
<p><u>Learning Goal</u></p> <p>Students will be able to construct viable arguments and critique the reasoning of others.</p>	<p style="text-align: center;"><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by:</p> <ul style="list-style-type: none"> ● Justifying and explaining, with accurate language and vocabulary, his/her solution and strategy using objects, drawings, or actions. ● Comparing his/her strategy to other students’ strategies, asking questions, and making connections with his/her own thinking. <p>Approaching: Student demonstrates they are nearing proficiency by performing processes such as:</p> <ul style="list-style-type: none"> ● Explaining his/her strategy with accurate vocabulary. ● Checking other students’ solutions for accuracy. <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by:</p> <ul style="list-style-type: none"> ● Explaining his/her solution. ● Discussing other ideas, approaches, and strategies.
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Explain problem solving using objects, pictures, drawings, and actions ● Develop mathematical communication skills by answering questions like “How do you know?” and “Can you show me another way?” ● Develop mathematical discourse by asking others questions like “How do you know?” and “How did you get that?” ● Explain their thinking to others and respond to others’ thinking 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Encourage students to listen to or read the problem solving strategies of classmates ● Ask questions such as “How do you know?” and “Can you show me another way?” ● Encourage students to explain their reasoning ● Use accurate mathematical vocabulary regularly ● Encourage student to use accurate mathematical vocabulary 	

WGSD Curriculum – Math Kindergarten
Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP4	
<p><u>Learning Goal</u></p> <p>Students will be able to model with mathematics.</p>	<p style="text-align: center;"><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by:</p> <ul style="list-style-type: none"> ● Recognizing math in everyday situations. ● Using math to represent and solve real life problems. <p>Approaching: Student demonstrates they are nearing proficiency by performing processes such as:</p> <ul style="list-style-type: none"> ● Recognizing math in everyday situations, when prompted. ● Beginning to model and represent real life problems with mathematics. <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by recognizing math in everyday situations, when prompted.</p>
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Represents problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart, list, or graph, creating equations, etc. And use these representations as needed ● Connect different representations and explain the connections <ul style="list-style-type: none"> ○ For example, in the situation, “4 birds are in a tree. 2 birds flew away. How many are left?” model with pictures, manipulatives, mathematical symbols, and words ● Evaluate solutions in the context of the situation and determine if the solutions make sense 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Provide problem situations that apply to everyday life ● Engage students in mathematical situations as they arise and model problem solving with mathematics 	

WGSD Curriculum – Math Kindergarten
Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP5	
<p><u>Learning Goal</u></p> <p>Students will be able to use appropriate tools strategically.</p>	<p style="text-align: center;"><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by combining various tools to explore and solve a problem as well as justifying their tool selection and problem solution.</p> <p>Approaching: Student demonstrates they are nearing proficiency by performing processes such as selecting from a variety of tools the ones that can be used to solve a problem and explaining their reasoning for the selection.</p> <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by using a given appropriate tool, when provided, to find a solution.</p>
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Consider the available tools (including, but not limited to ten-frames, hundreds charts, number lines, manipulatives, geometric solids, shapes software, etc.) when solving a mathematical problem and decide when certain tools might be helpful <ul style="list-style-type: none"> ○ For example, kindergarteners may decide to use connecting cubes to represent two quantities and then compare the two representations side-by-side 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Provide a variety of tools and technology for students to explore mathematical concepts ● Provide problem solving tasks that require students to consider a variety of tools for solving (tools might include ten-frames, hundreds charts, number lines, manipulatives, geometric solids, shapes software, etc.) 	

WGSD Curriculum – Math Kindergarten
Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP6	
<p><u>Learning Goal</u></p> <p>Students will be able to attend to precision.</p>	<p style="text-align: center;"><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by using appropriate symbols, vocabulary, and labeling to communicate effectively and exchange ideas.</p> <p>Approaching: Student demonstrates they are nearing proficiency by performing a process such as incorporating appropriate vocabulary and symbols in most mathematical communications.</p> <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by communicating his/her reasoning and solution to others, with support.</p>
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Use clear and precise language in their discussions with others and in their own reasoning ● Specify units of measure and state the meaning of the symbols used ● Report answers that appropriately address the context of a problem 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Facilitate, encourage and expect precision in communication ● Provide opportunities for students to explain and/or write their reasoning to others 	

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Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP7	
<p><u>Learning Goal</u></p> <p>Students will be able to look for and make use of structure.</p>	<p style="text-align: center;"><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by:</p> <ul style="list-style-type: none"> ● Composing and decomposing shapes and numbers. ● Using mathematical generalizations to make predictions about or solve mathematical situations. <p>Approaching: Student demonstrates they are nearing proficiency by performing processes such as:</p> <ul style="list-style-type: none"> ● Composing and decomposing shapes and numbers. ● Noticing mathematical generalizations. <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by composing and decomposing shapes and numbers.</p>
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Look closely to discover a pattern or structure <ul style="list-style-type: none"> ○ For instance, students may recognize the patterns that exists in teen numbers (every teen number is written with a 1, representing one ten, and ends with the digit that is first stated). ○ They also may recognize that $3+2$ is the same amount as $2+3$ 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Provide opportunities and time for students to explore patterns and relationships to solve problems ● Provide rich tasks and facilitates pattern seeking and understanding of relationships in numbers rather than following a set of steps and/or procedures 	

WGSD Curriculum – Math Kindergarten
Mathematical Practices

High Priority Standards CCSS.Math.Practice.MP8	
<p><u>Learning Goal</u></p> <p>Students will be able to look for and express regularity in repeated reasoning.</p>	<p><u>Proficiency Scale</u></p> <p>Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.</p> <p>Meeting: Student demonstrates mastery with the learning goal as evidenced by noticing patterns, making generalizations and predicting patterns.</p> <p>Approaching: Student demonstrates they are nearing proficiency by performing processes such as finding and explaining patterns.</p> <p>Beginning: Student demonstrates a limited understanding or skill with the learning goal by connecting prior knowledge to new situations and noticing patterns with prompting from a teacher or peer.</p>
<p><u>Learning Targets</u></p> <ul style="list-style-type: none"> ● Notice repetitive actions in counting and computation <ul style="list-style-type: none"> ○ For example, they may notice that the next number in a counting sequence is one more and when counting by tens, the next number in the sequence is “ten more” (or one more group of ten) ● Notice similar attributes with geometric shapes and solids ● Begin using patterns to create shortcuts <ul style="list-style-type: none"> ○ For example, instead of counting objects to 100 by ones, students may notice that they could make groups of tens and count to the objects by tens 	
<p><u>Learning Design</u></p> <ul style="list-style-type: none"> ● Provide problem situations that allow students to explore regularity and repeated reasoning ● Provide rich tasks that encourage students to use repeated reasoning to form generalizations and provides opportunities for students to communicate these generalizations ● Ask questions such as “What do you think will happen next?”, “What do you notice about all of these?”, and “What do all of these have in common?” 	

WGSD Curriculum – Math Kindergarten

Number Sense & Operations

High Priority Standards

- K.NS.A.1 Count to 100 by ones and tens.
 K.NS.A.2 Count forward beginning from a given number between 1 and 20.
 K.NS.A.3 Count backward from a given number between 10 and 1.
 K.NS.A.4 Read and write numerals and represent a number of objects from 0 to 20.

Learning Goal

Students will know number names
and the count sequence.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Counting forward beginning from a given number within the known sequence.
- Representing a number of objects between 0 and 20 with a written numeral.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: count, number, numeral, ones, tens, sequence, represent.
- Performing processes such as:
 - Counting to 100 by ones and tens.
 - Counting backward from a given number between ten and one.
 - Writing numbers from 0 to 100.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by counting to 100 with help and writing some numerals.

Learning Targets

- Count to 100 by ones and by tens
- Count forward beginning from a given number within the known sequence (instead of having to begin at 1)
- Write numbers from 0 to 100. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects)

Learning Design

Investigations Units 1, 2, 4, and 6

WGSD Curriculum – Math Kindergarten

Number Sense & Operations

High Priority Standards

- K.NS.B.5 Say the number names when counting objects, in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- K.NS.B.6 Demonstrate that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.NS.B.7 Demonstrate that each successive number name refers to a quantity that is one larger than the previous number.
- K.NS.B.8 Recognize, without counting, the quantity of groups up to 5 objects arranged in common patterns.
- K.NS.B.9 Demonstrate that a number can be used to represent “how many” are in a set.

Learning Goal

Students will be able to count to tell the number of objects.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Counting groups of objects up to 20.
- Given a number from one to 20, counting out that many objects.
- Recognize, without counting, the quantity of groups up to 5 objects arranged in common patterns.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: count, larger, smaller, first, last, order, number, number name, amount, greater than, less than.
- Performing processes such as:
 - Saying the number names in standard order.
 - Counting objects by pairing one object with one number name.
 - Using the last number said to determine the number of objects counted.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by counting a number of objects less than 20 with help.

Learning Targets

- Understand the relationship between numbers and quantities and connect counting to cardinality
 - 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.
 - 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
 - Understand that each successive number name refers to a quantity that is one larger
- 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 from 1–20, count out that many objects

Learning Design

Investigations Units 1 – 8

WGSD Curriculum – Math Kindergarten

Number Sense & Operations

High Priority Standards

K.NS.C.10 Compare two or more sets of objects and identify which set is equal to, more than or less than the other.

K.NS.C.11 Compare two numerals, between 1 and 10, and determine which is more than or less than the other.

Learning Goal

Students will be able to compare numbers.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Comparing two numbers between one and 10 presented as written numerals.
- Identifying a written numeral as greater than, less than, or equal to another numeral.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: compare, counting strategy, equal to, matching, greater than, and less than.
- Performing a process such as identifying sets of objects as greater than, less than, or equal to another set of objects using matching and counting strategies.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by comparing numbers between one and 10 with help.

Learning Targets

- Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies
- Compare two numbers between 1 and 10 presented as written numerals

Learning Design

Investigations Units 2, 4, and 6

WGSD Curriculum – Math Kindergarten
Number & Operations in Base Ten

High Priority Standards

K.NBT.A.1 Compose and decompose numbers from 11 to 19 into sets of tens with additional ones.

Learning Goal

Students will work with numbers
 11-19 to gain foundations for place
 value.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Composing numbers from 11 to 19 into ten ones and further ones (using objects or drawings).
- Decomposing numbers from 11 to 19 into ten ones and further ones (using objects or drawings).
- Recording compositions and decompositions using a drawing or equation.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: add, compose, decompose, equation, number, ones, record.
- Performing processes such as:
 - Decomposing numbers (less than or equal to 10) in more than one way (using objects or drawings) and record using a drawing or equation.
 - Finding a number that makes 10 when added to any numbers from one to 10 (using objects or drawings) and record the answer with a drawing or equation.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by composing and decomposing numbers less than 20 with help.

Learning Targets

- Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record 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

Learning Design

Investigations Unit 8

WGSD Curriculum – Math Kindergarten

Relationships and Algebraic Thinking

High Priority Standards

- K.RA.A.1 Represent addition and subtraction within 10.
 K.RA.A.2 Demonstrate fluency for addition and subtraction within 5.
 K.RA.A.3 Decompose numbers less than or equal to 10 in more than one way.
 K.RA.A.4 Make 10 for any number from 1 to 9.

Learning Goal

Students will understand addition and subtraction.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Solving addition and subtraction word problems.
- Solving addition and subtraction within 10 (using objects or drawings).
- Adding and subtracting within 5 fluently.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: add, addition, equation, explanation, represent, subtract, subtraction, word problem.
- Performing processes such as:
 - Recognizing symbols, such as +, -, and =.
 - Representing addition and subtraction (using objects, fingers, mental images, drawings, sounds, acting out, verbal explanations, expressions, or equations).

Beginning: Student demonstrates a limited understanding or skill with the learning goal by representing addition and subtraction with help.

Learning Targets

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations
- Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem
- 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 $5 = 4 + 1$)
- 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
- Fluently add and subtract within 5

Learning Design

Investigations Units 4, 6, and 8

WGSD Curriculum – Math Kindergarten
Data & Statistics

High Priority Standards

K.GM.A.1 Describe several measurable attributes of objects.
K.GM.A.2 Compare the measurable attributes of two objects.

Learning Goal

Students will be able to describe and compare measurable attributes.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by comparing and describing the difference between two objects with a measurable attribute in common.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: attribute, compare, length, measure, weight, longer, taller, shorter, heavier, and lighter.
- Performing a process such as describing several measurable attributes of an object.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by describing attributes of an object.

Learning Targets

- Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object
- 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*

Learning Design

Investigations Units 2, 4, and 8

WGSD Curriculum – Math Kindergarten
Data & Statistics

High Priority Standards

K.DS.A.2 Compare category counts using appropriate language.

K.DS.A.1 Classify objects into given categories; count the number of objects in each category.

Learning Goal

Students will be able to classify objects and count the number of objects in each category.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Classifying and sorting objects into given categories (each category with 10 or fewer objects).
- Comparing category counts based on a graphical representation using greater than, less than or equal to.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: category, classify, sort, group, greater than, less than, equal to.
- Performing a process such as recognizing the appropriate category for an object when given options.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by sorting objects into categories with help.

Learning Targets

- Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (counts to be less than or equal to 10)

Learning Design

Investigations Units 1 and 7

WGSD Curriculum – Math Kindergarten

Geometry & Measurement

High Priority Standards

K.GM.C.6 Identify shapes and describe objects in the environment using names of shapes, recognizing the name stays the same regardless of orientation or size.

K.GM.C.7 Describe the relative positions of objects in space.

K.GM.C.8 Identify and describe the attribute of shapes, and use the attributes to sort a collection of shapes.

Learning Goal

Students will be able to identify
and describe shapes.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Naming and describing shapes in the environment.
- Describing shapes and objects as two-dimensional or three-dimensional.
- Describing the relative positions of objects in space using terms such as above, below, beside, in front of, behind and next to.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: triangle, circle, rectangle, square, hexagon, cube, cone, cylinder, sphere, flat, solid, above, below, beside, in front of, behind, and next to.
- Performing processes such as:
 - Naming shapes regardless of orientation or size.
 - Describing shapes and objects as flat or solid.
 - Describing relative position of objects.
 - Identifying attributes of two- and three-dimensional shapes.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by recognizing triangles, circles, rectangles, and squares.

Learning Targets

- 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*
- Correctly name shapes regardless of their orientations or overall size
- Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”)

Learning Design

Investigations Units 3 and 5

WGSD Curriculum – Math Kindergarten

Geometry & Measurement

High Priority Standards

K.GM.C.9 Draw or model simple two-dimensional shapes.

K.GM.C.10 Compose simple shapes to form larger shapes using manipulatives.

Learning Goal

Students will be able to analyze, compare, create, and compose shapes.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Comparing a variety of two- and three-dimensional shapes using informal language to describe similarities, differences, component parts and other attributes.
- Composing simple shapes to form larger shapes.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: attribute, compare, corner, difference, part, shape, side, two-dimensional, three-dimensional, build, compose, and larger.
- Performing a process such as modeling shapes in the real world by drawing shapes or building with objects.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by naming shapes and identifying as two- or three-dimensional.

Learning Targets

- 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)
- Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes
- Compose simple shapes to form larger shapes
 - For example, “Can you join these two triangles with full sides touching to make a rectangle?”

Learning Design

Investigations Units 3 and 5

WGSD Curriculum – Math Kindergarten

Geometry & Measurement

High Priority Standards

K.GM.B.3 Demonstrate an understanding of concepts of time and devices that measure time.

K.GM.B.4 Name the days of the week.

K.GM.B.5 Identify pennies, nickels, dimes and quarters.

Learning Goal

Students will be able to work with
time and money.

Proficiency Scale

Innovating: In addition to score 3.0 performance, the student demonstrates an in-depth inference or advanced application, or innovates with the learning goal.

Meeting: Student demonstrates mastery with the learning goal as evidenced by:

- Describing events in relation to time (i.e. morning, afternoon, evening, today, yesterday, tomorrow, week, month and year).
- Identifying pennies, nickels, dimes and quarters.

Approaching: Student demonstrates they are nearing the learning goal by:

- Recognizing and recalling specific vocabulary, such as: clock, calendar, penny, nickel, dime, quarter, time, morning, afternoon, evening, today, yesterday, tomorrow, week, month and year.
- Performing a process such as naming the days of the week.

Beginning: Student demonstrates a limited understanding or skill with the learning goal by identifying devices that measure time (e.g. clock or calendar).

Learning Targets

- Demonstrate an understanding of the concepts of time (e.g., morning, afternoon, evening, today, yesterday, tomorrow, week and year) and tools that measure time. (e.g., clock or calendar)
- Verbally name the days of the week by rote and by cueing from a calendar or schedule.
- Verbally name (identify) pennies, nickels, dimes and quarters; and identify these coins from pictures and manipulatives.

Learning Design

Investigations Units 1-7 Classroom Routines

*need to supplement identifying coins

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Sources:

<https://dese.mo.gov/sites/default/files/curr-math-mls%20expanded-expectaions-kindergarten.pdf>

<https://dese.mo.gov/sites/default/files/cur-mls-crosswalk-ma-grk.pdf>

<http://www.smarterbalanced.org/wordpress/wp-content/uploads/2012/11/Smarter-Balanced-Math-ALDs.pdf>

<http://www.corestandards.org/Math>

http://itembank.marzanoresearch.com/search_details.aspx

<http://www.mathleadership.com/sitebuildercontent/sitebuilderfiles/standardsoftudentpracticeinmathematicsproficiencymatrix.pdf>

<http://www.ixl.com/standards/georgia/math/kindergarten>

Standards for Mathematical Practices Observation Tool created by Melisa Hancock for KATM/KSDE CCSS Summer Academy 2011