

Wyoming Department of Education Required Virtual Education Course Syllabus

BIG HORN COUNTY SCHOOL DISTRICT #1

Program Name	WYCA	Content Area	Math
Course ID	CAEL77911	Grade Level	K
Course Name	Math K B	# of Credits	0.5
SCED Code	NoCourseSCED	Curriculum Type	Connections Academy

COURSE DESCRIPTION

In this second semester course, students continue to engage in mathematical thinking and problem solving. Students explore topics and apply mathematical practices outlined in the Common Core State Standards and other state standards. Students have opportunities to describe, sort, and compare objects and explore basic shapes. Stories and activities teach students about money, time, fractions, and measurement. Throughout the course, students engage in hands on and online activities to master basic skills.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK
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 0-20 (with 0 representing a count of no objects).
K.CC.4	Understand the relationship between numbers and quantities; connect counting to cardinality.
K.CC.4a	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.
K.CC.4b	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.
K.CC.4c	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 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, e.g., 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.
K.OA.1	Represent addition and subtraction with objects, fingers, mental images, drawings (drawings need not show details, but should show the mathematics in the problem), sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
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.
K.NBT.1	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.
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.
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 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?"

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES
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<p>Unit 1: Composing and Decomposing Numbers to 10 In this unit, your student will demonstrate his understanding of the rules of a number sentence by composing and decomposing numbers to 10. He will do this by showing that there is more than one way to show a number. Manipulatives and activities will be used to make the idea of number conservation concrete. The vocabulary words, whole and part, will be mastered during this unit. To put these words into practice, your student will demonstrate how to join parts in various ways to make a whole when showing addition. Finally, he will be able to explain the purpose of a graph and use information gathered in a graph to solidify his understanding of number conservation.</p>	<p>K.CC.3, K.OA.3, K.OA.4, K.MD.3</p>	<ul style="list-style-type: none"> • Compose and decompose numbers 0 to 10 • Use objects to show numbers 4 to 10 in two parts • Write number sentences that add up to numbers 4 to 10 • Construct a graph
<p>Unit 2: Composing Numbers 11 to 19 In this unit, your student will compose numbers from 10–19. She will be able to utilize her understanding of number conservation to create addition sentences where 11–19 can be represented by 10 and another addend. Furthermore, by exploring place value, your student will begin to build more concrete number sense for numbers in the teens. Finally, she will explore number patterns using the first two rows of the hundreds chart.</p>	<p>K.CC.4b, K.OA.1, K.NBT.1</p>	<ul style="list-style-type: none"> • Compose numbers 11–19 • Identify a number sentence whose parts match those in a picture • Compose number sentences that correlate with pictures on a ten-frame • Construct number sentences using 10 and some more
<p>Unit 3: Decomposing Numbers 11 to 19 In this unit, your student will continue to show number conservation by creating numbers from 10–19 in a variety of ways. He will begin by making sets of numbers between 10 and 19 on a double ten-frame. Gradually your student will grow his number sense by decomposing numbers between 10 and 19. As your student becomes more familiar with the double ten-frame, he will be able to see a teen number as a set of 10 and another addend. To reinforce the concept of number decomposition, your student will use counters, number cards, and connecting cubes. Finally, patterns in the decomposition of teen numbers will be explored to solidify his understanding further.</p>	<p>K.OA.1, K.NBT.1</p>	<ul style="list-style-type: none"> • Use objects to create sets up to 19 • Write equations that represent the decomposition of 11 to 19 as a ten and some ones • Solve problems by identifying repeating elements • Identify patterns in the hundreds chart
<p>Unit 4: Measurement In this unit, your student will explore the measurements of length. Exploration will begin by having your student identify the measurable qualities of different objects. She will then explore length by using the words: shorter, shortest, longer, longest, and as long as. Your student will begin by comparing the length of two objects and move on to comparing three or more objects. She will continue the same process when exploring the measurement of height and correctly use the vocabulary words: taller, as tall as, and tallest. Overall, your student will make connections to her environment and understand that objects can be compared in a variety of ways using measurement. Finally, she will utilize the guess and check method to solve problems.</p>	<p>K.MD.1, K.MD.2</p>	<ul style="list-style-type: none"> • Compare objects by length and height • Problem solve by trying, checking, and revising • Describe attributes of objects

<p>Unit 5: Sort, Classify, Count, and Categorize Data In this unit, your student will classify two- and three-dimensional objects according to their attributes. Your student will begin by comparing objects according to characteristics that are the same and different. He will first demonstrate how to sort objects according to one distinct characteristic, such as color, and then sort the same set of objects according to a different attribute, such as size. Next, your student will explore sorting by categorizing a set of objects by color and size. In order to solidify his learning, he will perform an activity using the sorting rule. Finally, your student will use real graphs and picture graphs to record data that he sorts.</p>	<p>K.CC.4a, K.MD.3</p>	<ul style="list-style-type: none"> • Sort objects based on their attributes • Sort a variety of objects, including two- and three-dimensional geometric figures, according to their attributes • Describe how objects are sorted; interpret graphs of real objects and pictures • Construct a picture graph
<p>Unit 6: Identifying and Describing Shapes In this unit, your student will begin to build a foundation of geometric concepts and spatial relations. Your student will learn about the specific attributes of the rectangle, square, circle, triangle, and hexagon. She will be able to identify these shapes in her environment, as well as in written activities.</p>	<p>K.G.1, K.G.2, K.G.3, K.G.4</p>	<ul style="list-style-type: none"> • Correctly name shapes regardless of their orientation or overall size
<p>Unit 7: Position and Location of Shapes In this unit, your student will explore the topical characteristics of shapes and continue to build his spatial sense which will aid him in identifying specific shapes. He will be able to identify objects according to the specific attributes of inside, outside, above, below, on, in front of, behind, next to, beside, left, and right. Finally, your student will use tactile manipulatives to physically show spatial understanding.</p>	<p>K.G.1</p>	<ul style="list-style-type: none"> • Describe one object in relation to another
<p>Unit 8: Geometry In this unit, your student will continue to explore three-dimensional or solid figures. She will further investigate the attributes of three-dimensional figures in order to solidify each shape's name and characteristics. Both real-world examples and thoughtful questions will reinforce these essential concepts. Congruency will be introduced and your student will be able to identify objects that are the same size and shape. More abstract concepts will also be explored. Your student will be able to create new shapes by combining other shapes. To reinforce her understanding of spatial relations, your student will act as a detective and identify two- and three-dimensional shapes when given clues.</p>	<p>K.G.2, K.G.3, K.G.4, K.G.5, K.G.6</p>	<ul style="list-style-type: none"> • Analyze and compare two- and three-dimensional shapes • Model shapes in the world using components or drawings • Compose simple shapes to form larger shapes • Examine the attributes of real-world objects