

Wyoming Department of Education Required Virtual Education Course Syllabus

BIG HORN COUNTY SCHOOL DISTRICT#1

Program Name	WYCA	Content Area	Math
Course ID	CAEL77903	Grade Level	K
Course Name	Math K A	# of Credits	0.5
SCED Code	NoCourseSCED	Curriculum Type	Connections Academy

COURSE DESCRIPTION

In this first semester course, mathematical thinking and problem solving are introduced. Students explore topics and apply mathematical practices outlined in the Common Core State Standards and other state standards. The first few units focus on counting and sorting. Then, lessons introduce addition and subtraction. 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
<p>Unit 1: Let's Learn Math! In this unit, your student will learn about the activities she will do in math class. The first lesson, intended for Learning Coaches, provides advice for using the Lesson Guide to support your student, and details the resources found in the course. It also offers helpful tips for building your student's math skills. The second lesson is intended for students and their Learning Coaches. This lesson will introduce your student to the concept of math, and describe the structure of math lessons.</p>		
<p>Unit 2: One to Five Your student will learn to count 1–5. He will learn that the number of objects remains the same even if the order changes. He will be taught to write and read the numbers 1–5. The lessons will introduce the idea that each item is only counted once. Your student will be given strategies to encourage counting with one-to-one correlation. Using what he has learned, he will make a book about his state that he will submit as a portfolio assessment.</p>	K.CC.3, K.CC.4a, K.CC.4b, K.CC.5	<ul style="list-style-type: none"> • Represent and count the quantities 1 to 5 • Identify the total number of objects in a set regardless of arrangement • Recognize and write the numerals 1 to 5 • Solve problems by using objects • Evaluate surroundings to create a number book
<p>Unit 3: Comparing and Ordering 0 to 5 In this unit, your student will learn to compare numbers 0–5. She will use comparison words such as more, fewer, same, and as many to explain the relationships between numbers. By recognizing differences of 1 and 2 fewer and more, your student will continue to develop strength in counting and comparing. The student will be introduced to reading and writing the number 0. She will understand that zero means none. She will also have the chance to describe and evaluate equal groups. Your student will explore ordinal numbers first through fifth. She will have the opportunity to use ordinal numbers to describe positions of objects in a group.</p>	K.CC.4b, K.CC.3, K.CC.4, K.CC.4a, K.CC.4b, K.CC.5, K.CC.6, K.OA.1	<ul style="list-style-type: none"> • Recognize and compare groups of objects to identify which group has more, fewer, the same number as, as many, more, or fewer • Use zero to represent a set of objects when there are none and recognize and write the numeral 0 • Sequence numbers 0 to 5 • Identify ordinal positions • Solve problems by using objects to act out the problem
<p>Unit 4: Six to Ten Your student will be introduced to the numbers 6 to 10. He will use these numbers to count, evaluate, and manipulate. Writing the numbers 6 to 10 will be taught and evaluated in this unit with particular attention to the orientation of the numbers. Your student will be introduced to patterning. He will pattern using number of objects.</p>	K.CC.4c, K.CC.3, K.CC.4a, K.CC.4b, K.CC.5	<ul style="list-style-type: none"> • Represent and count the quantities 1 to 10 • Identify the total number of objects in a set regardless of arrangement • Recognize and write the numerals 6 to 10 • Solve problems by predicting and identifying patterns • Evaluate surroundings to create a number book
<p>Unit 5: Comparing and Ordering Numbers 0 to 10 Your student will learn to compare numbers. She will learn when evaluating two numbers the greater number is more and the smaller number is less. The student will understand that it is helpful to use 5 or 10 as a benchmark. She will compare numbers that are 1 and 2 more as well as 1 and 2 less. All of these skills will be used to help order the numbers through 10. She will continue to order while being exposed to using a number line.</p>	K.CC.4c, K.CC.3, K.CC.2, K.CC.4, K.CC.6, K.CC.7, K.OA.1	<ul style="list-style-type: none"> • Analyze two different sets of objects to determine which set is greater and which set is less • Apply 1 to 1 correspondence to determine quantity of a set of objects • Analyze a number 0 to 12 and identify if it is greater or less than 5 or 10 • Identify a number that is 1 or 2 more or 1 or 2 less than another number • Analyze numbers from 1 to 10 and put them in the correct order

<p>Unit 6: Numbers to 20 Your student will learn to count, read, and write numbers from 11–20. Your student will learn to use logical reasoning to solve word problems.</p>	<p>K.CC.3, K.CC.2, K.CC.4b</p>	<ul style="list-style-type: none"> • Recognize and represent with manipulatives the quantities 11 to 20 • Recognize and write the numerals 11 to 20 • Solve problems in an ascending or descending sequence of numbers by using logical reasoning
<p>Unit 7: Numbers to 100 In this unit, your student will explore numbers up to 100. She will learn how to count to 100 and will write numbers to 100. She will use ten-frames, a hundred chart, and counters to help visualize numbers up to 100 in terms of groups of 10. To reinforce the concept of 100, your student will use on-screen manipulatives as well as physical manipulatives. In addition, she will use and reference the hundreds chart.</p>	<p>K.CC.4b, K.CC.A3, K.CC.2, K.CC.A.1, K.CC.5</p>	<ul style="list-style-type: none"> • Recognize, count, write, and represent with manipulatives quantities to 100 • Analyze groups of objects to estimate quantities • Count and write numbers to 100 using a hundred chart • Use a hundred chart to count by 2s and 10s • Solve problems by identifying a pattern
<p>Unit 8: Understanding Addition In this unit, your student will be exposed to addition in a developmentally appropriate manner using storytelling and manipulatives. He will understand that when two groups join, the individual groups no longer exist. Instead, there is a newly formed group that now represents the total. He will be introduced to the addition sign, the equal sign, and the horizontal format of addition. Your student will be asked to tell an addition story by representing the statement with a picture.</p>	<p>K.OA.1, K.OA.2, K.OA.5</p>	<ul style="list-style-type: none"> • Evaluate joining stories using manipulatives and images to help solve the problem • Write numbers and apply the concept of altogether to the joining stories • Recognize and use the plus sign when reading and recording joining stories • Evaluate and solve addition sentences that represent joining stories • Evaluate data by drawing pictures to solve the addition problem
<p>Unit 9: Understanding Subtraction The student will be exposed to subtraction in a developmentally appropriate manner using storytelling and manipulatives. She will understand that when you take away something from the larger group, a new, smaller group is formed, which is the number left. She will be introduced to the subtraction sign and the formal horizontal format of subtraction. The student will be asked to tell a subtraction story by pictorially representing the statement.</p>	<p>K.OA.1, K.OA.2, K.OA.5</p>	<ul style="list-style-type: none"> • Evaluate separating stories using manipulatives and images to help solve the problem • Write and solve subtraction sentences that represent separating stories • Recognize and use the minus sign when reading and recording separating stories • Identify an equal sign and use it to reflect the difference of the separating of two groups • Evaluate data by drawing pictures to solve the addition or subtraction problems