

Wyoming Department of Education Required Virtual Education Course Syllabus

[District] County School District # X

Program Name	Sheridan County School District #1 Virtual School	Content Area	MA
Course ID	AC02032-2	Grade Level	2
Course Name	Grade 2 Math-CCSS	# of Credits	1
SCED Code	02032	Curriculum Type	Acellus

COURSE DESCRIPTION

Grade 2 Math CCSS course emphasizes base-ten notation, fluency with addition and subtraction, using standard units of measure, and describing and analyzing shapes. Courses typically continue to build a conceptual foundation in number, operation, and quantitative reasoning; patterns, relationships, and algebraic thinking; geometry and spatial reasoning; and measurement. These courses require students to develop their numerical fluency, particularly in addition and subtraction, and to solve problems using those operations as well as estimation. Students practice, emphasizing base-ten notation, fluency with addition and subtraction, using standard units of measure, and describing and analyzing shapes.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
2.OA.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
2.OA.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
2.NBT.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens — called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
2.NBT.2	Count within 1000; skip-count by 5s, 10s, and 100s.
2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
2.NBT.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
2.NBT.7	Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
2.NBT.8	Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)
2.MD.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2.MD.2	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
2.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.

2.MD.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	
2.MD.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ... , and represent whole-number sums and differences within 100 on a number line diagram.	
2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	
2.MD.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ (dollars) and ¢ (cents) symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?	
2.MD.10	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	
2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (Sizes are compared directly or visually, not compared by measuring.)	
2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	
2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	
UNIT OUTLINE	STANDARD#	OUTCOMES/OBJECTIVES/STUDENT CENTERED GOALS
UNIT 1- Addition Facts	2.OA.1; 2.NBT.5	Students review basic addition facts and transition into reading and analyzing word problems, counting on, calculating doubles and near doubles, making a ten and adding a zero, changing the order of addends, distinguish number patterns, and calculate adding three numbers. Students also review math facts and practice problems in order to become proficient.
Unit 2 – Subtraction Facts	2.OA.1; 2.NBT.5; 2.NBT.7; 2.NBT.8	Students review and practice basic subtraction, then analyze and calculate word problems, counting back, completing fact families. Students then participate in virtual lessons and class activities using addition to find differences, and practice identify missing addends.
Unit 3 – Place Value	2.NBT.1; 2.NBT.9; 2.MD.5	Students are introduced to and practice identifying place value. Through virtual lessons and on site lessons, students gain understanding and practice the place value of ones and tens, the expanded form of numbers, identifying number words to 100, and demonstrate how to model numbers in different ways.
Unit 4 – Compare & Order Numbers/Number Concepts	2.OA.3; 2.NBT.4; 2.NBT.2; 2.NBT.3; 2.MD.5; 2.MD.6	Students practice determining and displaying ordinal numbers. Through virtual lessons, students compare numbers with greater than, less than, and equals symbols; in addition to ordering numbers, rounding to the nearest ten, identifying odd and even numbers, completing number patterns on hundreds charts, and practice skip counting by ten from any number.

Unit 5 – Two-digit Addition	2.NBT.8; 2.NBT.4	Students practice adding multiples of ten and regrouping when adding. Students then participate in modeling, recording, and practicing two-digit addition.
Unit 6 – Two-digit Addition II	2.OA.2; 2.OA.4; 2.NBT.3; 2.NBT.5; 2.NBT.8	Students review and calculate adding two-digit numbers, and practice rewriting two-digit addition. Students then exercise adding tens (mental math), estimating sums, and analyzes ways of using a table.
Unit 7 – Two-digit Subtraction I	2.NBT.5; 2.NBT.7	Students practice subtracting in multiples of ten and regrouping when subtracting. Students then experience modeling, recording, and practicing two-digit subtraction.
Unit 8 – Two-digit Subtraction II	2.OA.2; 2.NBT.5; 2.NBT.7; 2.NBT.8; 2.NBT.9	Students review and practice subtracting two-digit numbers through virtual lessons and class activities. Students are then introduced to rewriting two-digit subtraction, subtracting tens (mental math), checking subtraction using addition, and estimating differences. The final component of this unit incorporates students solving real world situations and ongoing additional practice and mastery of two-digit addition and subtraction.
Unit 9 – Collect and Graph Data	2.OA.4; 2.MD.9; 2.MD.9; 2.MD.10	Students participate in methods of how to take a survey, use bar graphs, pictographs, and line plots. Students also experience how to describe and locate points on grids.
Unit 10 – Exploring Probability	2.NBT.4	Students explore determining certain or impossible events and concepts. Students then determine what is more likely compared with less likely, equally likely events, and possible outcomes.
Unit 11 – Money I	2.MD.8	Students review and practice determining the value of dimes, nickels, pennies, half dollars, and quarters. Students practice counting money and using coins to show the same value with different combinations.

Unit 12 – Money II	2.MD.8	Students compare various amounts of money, practice scenarios of using money to buy objects, adding and subtracting money, and making change. Students analyze and applying the value of a dollar.
Unit 13 – Time	2.MD.7	Students practice calculating and reading time to the minute and hour. Students are then exposed to telling time to fifteen minutes and to five minutes, recognizing minutes before the hour, using a.m. and p.m., and determining how much time has passed. Students then review days, weeks, months, years, and the function of calendars.
Unit 14 – Geometric Solids	2.G.1; 2.G.2	Students review and practice identifying solid figures; which solid figures slide and roll; identifying faces, edges, and vertices of solid figures; and practice distinguishing solid and plane figures.
Unit 15 – Plane Figures and Transformations	2.G.3	Students identify plane figures and determine its slides and vertices. Students further practice combining and separating plane figures, slides, flips, and turns. In conclusion, students experience identifying congruent plane figures, and symmetry.
Unit 16 – Exploring Patterns	2.OA.1	Students practice identifying, extending, and creating patterns. Students participate in virtual lessons whereby they find pattern's with missing pieces, patterns that grow and are challenged to extend growing patterns.
Unit 17 – Exploring Length	2.MD.1; 2.MD.2; 2.MD.3; 2.MD.4; 2.MD.5	Students explore identifying and measuring inches, feet, yards, centimeters, meters, and estimating length in both the US Customary and the Metric Systems. Students are introduced to finding perimeter and area, the difference between a shorter and a longer length, and word problems having to measure and calculate length.
Unit 18 – Measure Weight, Mass, Capacity, and Temperature	2.MD.1; 2.MD.3; 2.MD.4; 2.MD.5	Students practice determining the correct tool for measuring, as well as measuring in ounces, pounds, grams and kilograms, cups, pints, quarts, gallons, liters, degrees Fahrenheit, and degrees Celsius
Unit 19 – Exploring Fractions	2.G.3	Students are introduced to fractions that describe just one of the equal parts of a whole, comparing these "one-equal-part" fractions, fractions that describe multiple equal parts of a whole, fractions that describe one whole, and fractions that describe parts of a group.

Unit 20 – Understanding Place Value	2.NBT.7;	Students practice identifying ones, tens, and hundreds, identifying place value, the expanded form of three-digit numbers, and modeling numbers in different ways.
Unit 21 – Compare and Order Numbers II	2.NBT.3; 2.NBT.7	Students practice comparing and ordering 3-digit numbers, and counting by fives and tens.
Unit 22 – 3-Digit Addition	2.OA.1; 2.NBT.1; 2.NBT.3	Students practice and are assessed in adding multiples of 100, regrouping ones and tens in 3-digit addition, estimating 3-digit sums, and practice calculating 3-digit addition.
Unit 23 – 3-Digit Subtraction	2.OA.1; 2.NBT.1; 2.NBT.7; 2.NBT.3	Students practice subtracting multiple of 100, regrouping tens and hundreds in 3-digit subtraction, estimating 3-digit differences, and practice calculating 3-digit addition and subtraction problems.
Unit 24 – Multiplication and Division	2.NBT.2; 2.OA.4; 2.G.2	Students are introduced to multiplication and division, including skip-counting to finding a total. Students then are exposed to the relationship between addition and multiplication, multiplying numbers using an array, and implementing the commutative property of multiplication.

