

Wyoming Department of Education Required Virtual Education Course Syllabus

Sheridan County School District # 1

Program Name	Sheridan County School District #1 Virtual School	Content Area	MA
Course ID	AC02033-3	Grade Level	3
Course Name	Grade 3 Math-CCSS	# of Credits	1
SCED Code	02033	Curriculum Type	Acellus

COURSE DESCRIPTION

Acellus Grade 3 Math-CCSS focuses on multiplication and division up to the number 100, fractions, the structure of rectangular arrays and area, and two-dimensional shapes. Students practice number, operation, and quantitative reasoning; patterns, relationships, and algebraic thinking; geometry and spatial reasoning; and measurement. Students practice and master numerical fluency, adding multiplication and division to addition and subtraction operations, using whole numbers and parts (quarters, thirds, halves), and estimation.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
3.OA.1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .
3.OA.2	Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.
3.OA.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
3.OA.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \div 3$, $6 \times 6 = ?$.
3.OA.5	Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ then $15 \times 2 = 30$, or by $5 \times 2 = 10$ then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.) (Students need not use formal terms for these properties.)
3.OA.6	Understand division as an unknown-factor problem. For example, divide $32 \div 8$ by finding the number that makes 32 when multiplied by 8.
3.OA.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of one-digit numbers.
3.OA.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).)
3.OA.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.
3.NBT.1	Use place value understanding to round whole numbers to the nearest 10 or 100.
3.NBT.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (A range of algorithms may be used.)

3.NBT.3	Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations. (A range of algorithms may be used.)
3.NF.1	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.2a	Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.2b	Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.3a	Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.3b	Recognize and generate simple equivalent fractions (e.g., $1/2 = 2/4$, $4/6 = 2/3$), Explain why the fractions are equivalent, e.g., by using a visual fraction model. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.3c	Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.NF.3d	Compare two fractions with the same numerator or the same denominator, by reasoning about their size, Recognize that valid comparisons rely on the two fractions referring to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model. (Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.)
3.MD.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
3.MD.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). (Excludes compound units such as cm^3 and finding the geometric volume of a container.) Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Excludes multiplicative comparison problems (problems involving notions of "times as much."))
3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.
3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement. a.A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
3.MD.7	Relate area to the operations of multiplication and addition.

3.MD.7a	Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
3.MD.7b	Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
3.MD.7c	Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
3.MD.7d	Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
3.MD.8	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different area or with the same area and different perimeter.
3.G.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
3.G.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part is $\frac{1}{4}$ of the area of the shape.

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Unit 1 – Addition and Subtraction Basic Facts	3.NBT.2	Students learn about addition and subtractions basic facts.
Unit 2 - Multiplication and Division – Part 1	3.OA.1; 3.OA.2; 3.OA.3; 3.OA.7	Students learn about multiplications and division.
Unit 3 - Place Value and Counting	3.NBT.1	Students learn about place value and counting.
Unit 4 - Multiplication and Division – Part 2	3.OA.1; 3.OA.2; 3.OA.7	Students learn more about multiplication and division.
Unit 5 - Comparing Numbers and Rounding Numbers	3.NBT.1	Students learn about comparing numbers and rounding
Unit 6 - Multiplication and Division – Part 3	3.OA.3; 3.OA.7	Students learn more about multiplication and division.
Unit 7 - Estimating Sums and Differences	3.OA.8	Students learn about estimating sums and differences.
Unit 8 - Multiplication and Division – Part 4	3.OA.3; 3.OA.7	Students learn about multiplications and division.
Unit 9 - Addition Skills	3.NBT.2	Students learn about addition skills.
Unit 10 - Multiplication and Division – Part 5	3.OA.5; 3.OA.7	Students learn about multiplications and division.
Unit 11 - Regrouping with Addition	3.NBT.2	Students learn about regrouping with addition.
Unit 12 - Regrouping with Subtraction	3.NBT.2	Students learn about regrouping with subtraction.
Unit 13 - Working with Addition and Subtraction	3.NBT.2	Students learn about working with addition and
Unit 14 - Multiplication and Division – Part 6	3.OA.3; 3.OA.4; 3.OA.5; 3.OA.6; 3.OA.7	Students learn about multiplications and division.
Unit 15 - More Regrouping with Subtraction	3.NBT.2	Students learn more about regrouping with subtraction.
Unit 16 - Fractions	3.NF.1; 3.NF.2; 3.NF.2a; 3.NF.2b; 3.NF.3; 3.NF.3a; 3.NF.3b; 3.NF.3c	Students learn about fractions
Unit 17 - Multiplication and Division – Part 7	3.OA.1; 3.OA.3; 3.OA.7; 3.OA.9	Students learn about multiplications and division.
Unit 18 - More Fractions	3.NF.3d	Students learn more about fractions.
Unit 19 - Measurement and Geometry	3.MD.4; 3.G.1; 3.G.2	Students learn about measurement and geometry.
Unit 20 - Multiplication and Division – Part 8	3.OA.2; 3.OA.3; 3.OA.7	Students learn about multiplications and division.
Unit 21 - Telling Time and Money	3.OA.9; 3.MD.1	Students learn about telling time and money.
Unit 22 - Data and Graphs	3.MD.3; 3.MD.4	Students learn about data and graphs.

Unit 23 - Area	3.MD.5; 3.MD.6; 3.MD.7; 3.MD.7a; 3.MD.7b; 3.MD.7c; 3.MD.7d	Students learn about area.
Unit 24 - Perimeter	3.MD.24	Students learn about perimeter.
Unit 25 - Liquid Volume and Mass	3.MD.2	Students learn about liquid volume and mass.
Unit 26 - Multiplication and Division Skills	3.OA.3; 3.OA.8; 3.OA.9; 3.NBT.3	Students learn about multiplication and division skills.
Unit 27 - Working with Unknowns	3.OA.3; 3.OA.4; 3.OA.8	Students learn about working with unknowns.