



# Wyoming Department of Education Required Virtual Education Course Syllabus

## Park County School District #1

### Course Information

<b>Program Name</b>	Park #1 Online
<b>Course ID</b>	OL2420 B
<b>Course Name</b>	Math-06 B
<b>SCED Code</b>	02036
<b>Content Area</b>	Math
<b>Grade Level</b>	6
<b># of Credits</b>	0.5
<b>Curriculum Type</b>	District Developed

**Please give a concise description of this course including the purpose and what students will demonstrate and/or gain from this course.**

#### **Unit 4: Geometry**

Students in Mathematics 6 build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, student discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface area they can determine. They reason about right rectangular prisms with fractional side lengths to extend formulas for the volume of a right rectangular prism to fractional side lengths. They prepare for work on scale drawings and constructions in Grade 7 by drawing polygons in the coordinate plane.

#### **Unit 5: Statistics and Probability**

Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range or mean absolute deviation) can also be useful for summarizing data because two very different sets of data can have the same mean and median yet be distinguished by their variability. Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry, considering the context in which the data were collected.

## Wyoming Content and Performance Standards

Standard	<b><u>BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets</u></b>
<b>6.RP</b>	<b>Ratios and Proportional relationships</b>
<b>6.G</b>	<b>Geometry</b>
6.G.A.1	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes.
6.G.A.2	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism.
6.G.A.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate.
6.G.A.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures.
<b>6.SP</b>	<b>Statistics and Probability</b>
6.SP.A.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
6.SP.A.2	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
6.SP.A.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.
6.SP.B.1	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
6.NS.B.2 (a-d)	Summarize numerical data sets in relation to their context, such as by: <ol style="list-style-type: none"> <li>a. Reporting the number of observations.</li> <li>b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</li> <li>c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.</li> <li>d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.</li> </ol>

## Scope and Sequence

Unit Outline	Standard #	Outcomes Objectives/Student Centered Goals
<b>Unit 4</b>		
<b>Area</b>	6.G.A.1	Find the area of right triangles, special quadrilaterals, and polygons
	6.G.A.3	Draw polygons in the coordinate plane given coordinates for the vertices
	6.G.A.4	Three-dimensional figures using nets of rectangles and triangles
<b>Volume and Surface Area</b>	6.G.A.2	Find the volume of a right rectangular prism with fractional edge lengths
<b>Unit 5</b>		
<b>Statistical Measures</b>	6.SP.A.1	Recognize a statistical question
	6.SP.A.2	Statistical question can be described by center, spread, and shape
	6.SP.A.3	Recognize that a measure of center for a numerical data set
<b>Statistical Displays</b>	6.SP.B.4	Data in plots on a number line, dot plots, histograms, and box plots
	6.SP.B.5	Summarize numerical data sets in relation to their context
	6.SP.B.5.a	Reporting the number of observations
	6.SP.B.5.b	Describing the nature of the attribute under investigation
	6.SP.B.5.c	Give quantitative measures of center (median and/or mean)
	6.SP.B.5.d	Relating the choice of measures of center