Forward Planning Tool

This tool can be used to provide just-in-time corequisite support to students by connecting prerequisite standards or concepts—with known unfinished learning—to future grade-level standards. It can be used in conjunction with the **Forward Planning | Standards Snapshot Tool.**

Planning to address unfinished learning that occurred in: Grade Level/Course and Concept 6th Grade Geometry

Guiding Questions:

1. To *what* future work is the specific concept/standard connected?
2. *How* will the concept/standard be connected?

2020–2021 Identified Unfinished Learning: **6th Grade** **Geometry**	**2021–2022** **7th Grade** **Connected Standards**	**2022–2023** **8th Grade** **Connected Standards**	**2023–2024** **Alg. I** **Connected Standards**	**Not an essential prerequisite**
6-G.A.01 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	7-G.B.06 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. To connect: Draw an isosceles trapezoid and ask students to draw in lines to decompose it into a rectangle and two right triangles. Can they find the area of the composite shapes? While teaching surface area, formatively assess students on the shapes that make up the net and review finding the area of the shapes as needed.			
6-G.A.02 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.	7-G.B.06 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.			

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Apply the formulas V = l w h and V = b h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	To connect: Finding the volume of shapes composed of cubes is on grade level – make some of those cubes have fractional edge lengths to reinforce 6-G.A.02.			
6-G.A.03 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. Apply these techniques in the context of solving real-world and mathematical problems.		8-G.B.08 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system. To connect: Introduce the Pythagorean Theorem on the coordinate plane through drawing right triangles with given coordinates, where the two legs are parallel to the x- and y-axes, then apply the Pythagorean Theorem.		

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6-G.A.04 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	7-G.B.06 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. To connect: Introduce problem solving with surface area by having students cut apart solids to form nets; find the area of the shapes in the net, and draw nets for 3-D shapes.			
6-SP.A.01 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.	7-SP.A.01 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. To connect: Begin the study of statistics by evaluating some questions: are they statistical in nature? What would you learn by studying them?			

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6-SP.A.02 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.	7-SP.B.03 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable. To connect: Gather two sets of data that could be compared. For each one, discuss its center, spread, overall shape, before comparing them.			
6-SP.A.03 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.	7-SP.B.04 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book. To connect: before comparing populations, collect a single source of data as a class, find several measures of center and variability for the data, then compare and contrast what the measure of center and measure of spread tell you.			

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6-SP.B.04 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	7-SP.B.03 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable. To connect: Show examples of dot plots, histograms, and box plots, without naming the graphs. Have students discuss the similarities and differences, what the shapes might tell us, can they name the different graphs? Formatively assess their familiarity with each type of graph and review as needed.			
6-SP.B.05 Summarize numerical data sets in relation to their context, such as by: 6-SP.B.05.a Reporting the number of observations.				Not an essential prerequisite, will be covered in other standards

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6-SP.B.05 Summarize numerical data sets in relation to their context, such as by: 6-SP.B.05.b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.				Not an essential prerequisite
6-SP.B.05 Summarize numerical data sets in relation to their context, such as by: 6-SP.B.05.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.	7-SP.B.03 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable. To connect: Begin with a single set of data with its measure of center and variability. Discuss with students how the context in which the data were gathered might affect the conclusions. Formatively assess students' understanding of variability and support with examples as necessary before moving to two distributions.			