



The Sutton Academy

Knowledge Rich Curriculum Plan

Year 11 Foundation – Geometry 4

Lesson/Learning Sequence	Intended Knowledge: <i>Students will know that...</i>	Tiered Vocabulary	Prior Knowledge: <i>In order to know this, students need to already know that...</i>	Assessment
To learn how to calculate the surface area of prisms	<ul style="list-style-type: none"> • Students will know how to find the surface area of prisms including cubes, cuboids and triangular prisms • Students will know how to find the surface area of other prisms including compound prisms. • Students will know how to solve problems involving the surface area of prisms 	<p>Surface area - the total area of all of the faces of a 3D solid added together</p> <p>Prism – A solid object with two identical ends and flat sides</p> <p>Compound Solid - a solid that is made up of 2 or more solids.</p>	<ul style="list-style-type: none"> • Students need to know how to calculate the area of squares, rectangles, triangles and compound shapes 	
To learn how to calculate the surface area of cylinders	<ul style="list-style-type: none"> • Students will know how to find the surface area of cylinders. Students will know how to calculate this in terms of π as well as by using a calculator. • Students will know how to solve problems involving the surface area of cylinders 		<ul style="list-style-type: none"> • Students need to know how to calculate area and circumference of circles 	
To learn how to calculate the volume of prisms	<ul style="list-style-type: none"> • Students will know that: Volume of a Prism = Area of Cross Section x Length • Students will know how to find the volume of cubes, cuboids, triangular prisms and compound prisms by calculating the area of the cross-section and multiplying it by the length of the prism • Students will know how to solve problems involving the volume of prisms 	<p>Volume – the amount of space inside a 3D object</p> <p>Prism – A solid object with two identical ends and flat sides</p> <p>Compound Solid - a solid that is made up of 2 or more solids.</p>	<ul style="list-style-type: none"> • Students need to be able to calculate the area of squares, rectangles, triangles and compound shapes 	
To learn how to calculate the volume of cylinders	<ul style="list-style-type: none"> • Students will know how to find the volume of cylinders. Students will know how to leave their answers for this in terms of π. • Students will know how to work backwards from the volume of a cylinder to calculate its height or the radius/diameter • Students will know how to solve problems involving the volume of cylinders 		<ul style="list-style-type: none"> • Students need to be able to calculate the area of circles 	
To learn how to calculate Density, Mass and Volume	<ul style="list-style-type: none"> • Students will know how to calculate mass, density or volume using two variables. • Students will know how to combine the densities, mass and volumes of two materials/liquids to make a third material/liquid. Students will know how to find missing values from a liquid using the density, mass or volumes for the other liquids. • Students will know how to solve more complex problems involving density, mass and volume 	<p>Density – a measurement of the amount of a substance contained in a certain volume</p> <p>Mass – the weight of an object</p>	<ul style="list-style-type: none"> • Students need to be able to convert units for mass • Students need to be able to convert units for length and understand how to convert units for volume 	