

Topics in this cycle:	Taught: Autumn 2	Year Group: 9
Key knowledge/concepts to be learnt ('Tell me about....')		Websites/blogs/YouTube links and further reading to deepen and consolidate learning
<p>Three dimensional shapes</p> <ul style="list-style-type: none"> • Nets of cuboids and other 3D shapes • Plans and elevations • Surface area of cubes and cuboids • Surface area of triangular prisms • Surface area of a cylinder • Volume of cubes and cuboids • Volume of prisms and cylinders • Volume of cones and pyramids <p>Constructions & congruency</p> <ul style="list-style-type: none"> • Locus of distance from a point/two points • Locus from a straight line/shape • Perpendicular bisector • Perpendicular from/to a point • Locus of distance from two lines • Construct an angle bisector • Congruent figures • Congruent triangles 		<p> https://vimeo.com/468132787 https://vimeo.com/471682224 https://vimeo.com/471682335 https://vimeo.com/477506963 https://vimeo.com/477507427 https://vimeo.com/477512193 </p> <p> https://vimeo.com/481595696 https://vimeo.com/481595698 https://vimeo.com/483971493 https://vimeo.com/483971151 https://vimeo.com/575518911 </p>

Key Vocabulary and Definitions To Be Learnt		What Will The Assessment Look Like?
Dimensions	2D two dimensional shapes (square, triangle...) 3D three dimensional shapes (cube, sphere, cylinder...)	Please follow the link to a full breakdown of topics covered in November assessment. Link: You may also want to try some samples of questions: Link:
Cuboid	3D shape with 6 rectangular faces	
Cube	3D shape with 6 squared faces	
Cylinder	3D shape, a prism with circular cross-section	
Prism	3D shape that has a cross-section running through the length of the shape	
Sphere	3D shape with only one curved face	
Tetrahedron	3D shape with 4 faces that are equilateral triangles	Family Learning Opportunities Support you child at busting XP levels on SPARX MATH HOMEWORK. <u>Test understanding by asking questions:</u> Three dimensional shapes: <ul style="list-style-type: none"> <u>Nets of cuboids and other 3D shapes:</u> How many faces does cube have? What is the difference between a cube and a cuboid? How many sides does each edge connect to in a cuboid? Is there more than one way of drawing a net of a cube? If one of the lengths was increased, which part of its net would change? <u>Plans and elevations:</u> What can you see looking at shape from the front/side/above? Are there any parts of the shape you cannot see?
Cone	3D shape with two faces (a circular base and one curved face)	
Edge	A straight line that joints two faces	
Vertex	A corner where edges meet	
Net	A pattern that you can cut and fold to make a model of a solid shape	
Plan	A drawing of something as viewed from above	
Locus	The set of all points that share a property	
Equidistant	Being same distant apart	
Bisector	The line that divides something into two equal parts	

<p>Surd</p>	<p>A number that can't be simplified to remove a square root (or cube root etc)</p>	<p>Why do you need to have three different perspectives to be able to construct the shape?</p> <ul style="list-style-type: none"> • <u>Surface area of cubes and cuboids:</u> What is the same/different about the face of cubes and cuboids? What is an 'open' cube? • <u>Surface area of triangular prisms:</u> How many faces do all triangular prisms have? Are any of the faces the same in a triangular prism? Which dimensions of a triangle are used to find its area? • <u>Surface area of a cylinder:</u> How many faces does a cylinder have? How many of the faces are the same? How do you find the area of a curved face? How do you find the circumference of a circle? What does 'in terms of π' mean? Is this form of answer exact or estimate? • <u>Volume of cubes and cuboids:</u> What units are used to measure volume? Can you built the shape using blocks? What is the difference between finding the volume and finding the surface area of a cube/cuboid? • <u>Volume of prisms and cylinders:</u> Which face is the constant cross-section? (Explode a range of prisms) What is the height of each prism? Could this also be called the depth of the prism? <p>More: Have a look at the plans and elevations interactive website to help you understand the topic</p>
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