Home-School Learning Collaboration – Mathematics

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
Three dimensional shapes • 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	https://vimeo.com/468132787 https://vimeo.com/471682224 https://vimeo.com/471682335 https://vimeo.com/477506963 https://vimeo.com/477507427 https://vimeo.com/477512193
Constructions & congruency • 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	https://vimeo.com/481595696 https://vimeo.com/481595698 https://vimeo.com/483971493 https://vimeo.com/483971151 https://vimeo.com/575518911
Numbers • Understand and use surds • HCF and LCM • Fraction calculations • Number problems	https://vimeo.com/491143049 https://vimeo.com/491143221 https://vimeo.com/490424468

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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…)	
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	**Family Learning Opportunities**
Tetrahedron	3D shape with 4 faces that are equilateral triangles	Have a look at the plans and elevations interactive website to help you understand the topic https://www.geogebra.org/m/n6y2hw3b
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	You may want to look at revision resources to better understand LOCUS topic:
Net	A pattern that you can cut and fold to make a model of a solid shape	https://thirdspacelearning.com/gcse-maths/geometry-and-measure/loci/
Plan	A drawing of something as viewed from above	
Locus	The set of all points that share a property	Try these questions on simplifying surds:
Equidistant	Being same distant apart	https://minimallydifferent.com/2018/05/25/simplifying-surds-2/
Bisector	The line that divides something into two equal parts	
Surd	A number that can't be simplified to remove a square root (or cube root etc)	