Stratford School Academy
Schemes of Work

Number of lessons (between 6&8)	Content of the unit	Assumed prior learning (tested at the beginning of the unit)
	• use conventional terms and notations: points, lines, vertices, edges, planes, parallel lines, perpendicular lines, right angles, polygons, regular polygons and polygons with reflection and/or rotation symmetries • use the standard conventions for labelling and referring to the sides and angles of triangles • draw diagrams from written description • identify properties of the faces, surfaces, edges and vertices of: cubes, cuboids, prisms, cylinders, pyramids, cones and spheres • derive and apply the properties and definitions of: special types of quadrilaterals, including square, rectangle, parallelogram, trapezium, kite and rhombus; and triangles and other plane figures using appropriate language	• Use a ruler to measure and draw lengths to the nearest millimetre Use a protractor to measure and draw angles to the nearest degree • Know the names of common 3D shapes • Know the meaning of face, edge, vertex • Understand the principle of a net • Know the names of special triangles • Know the names of special quadrilaterals • Know the meaning of parallel, perpendicular • Know the notation for equal sides, parallel sides, right angles
Assessment points and tasks	**Written feedback points**	**Learning Outcomes (tested at the end and related to subject competences)**
Pre test Post test (half term exams/ mock exams)	Diagnostic marking (TF)-(green sticker)-(PF)/(SF) yellow and orange stickers Traffic lighting of exam papers	Use correct algebraic notation Write and Simplify expressions Use the index laws Multiply and divide expressions Substitute numbers into expressions Recognise the difference between a formula and an expression

Lesson	Clear learning intentions	Clear success criteria	Hook	Presentation of content	Guided practice	Independent practice (homework)	Closure
1 Parallel and perpendicular lines	• Interpret geometrical conventions and notation	• Use notation for parallel lines • Know the meaning of 'perpendicular' and identify perpendicular lines • Use AB notation for describing lengths • Use ∠ABC notation for describing angles •	Give examples of parallel and perpendicular lines.	Boardworks – KS3- S1 Lines and Angles – Slides 1-16 Parallel and perpendicular lines ppt.	Parallel and perpendicular line worksheet. Geometric notation review worksheet		Write down the definitions and properties of parallel and perpendicular lines.
2 Symmetry	• Can you identify symmetry in regular polygons	• Know the meaning of 'regular' polygons • Identify line and rotational symmetry in polygons •	Freemason's starter	*Discuss difference between regular and irregular polygon.* Boardworks – KS3- S4 Coordinates and transformations 1 – slides 34-42	KM: Rotational symmetry KS3 L5-6 PDF-PG 40 Rotational Symmetry		Convince me that a hexagon can have rotational symmetry with order 2.

				and slides 53-58 Mathswatch clip 83-symmetries				
3/4/5 Constructing triangles MPT Observing FMA on Tuesday 13/10/15 P2. Improvement lesson AKI, date TBC.	Lesson 1 – Can you construct SAS triangles?	• Use ruler and protractor to construct triangles from written descriptions •	Count the triangles See ppts for starters	Constructing triangles ppt Triangles-Construction-2 ppt MyMaths-Constructing Triangles MyMaths-Constructing Shapes	Constructing Triangles SAS obs worksheet	My maths	Agree/disagree. Student to come up to the front and explain how to construct a triangle and other students to agree or disagree. Card sort for ordering method for constructing triangles.	
3/4/5 Constructing triangles	Lesson 2 – Can you construct ASA triangles?	• Use ruler and protractor to construct triangles from written descriptions •	See ppts for starters	Constructing triangles ppt Triangles-Construction-2 ppt MyMaths-Constructing Triangles	Constructing Triangles ASA obs worksheet			

				MyMaths-Constructing Shapes			
3/4/5 Constructing triangles	Lesson 3- Can you construct SSS triangles?	• Use ruler and compasses to construct triangles when all three sides known	See ppts for starters	Constructing triangles ppt Triangles-Construction-2 ppt MyMaths-Constructing Triangles MyMaths-Constructing Shapes	Constructing Triangles SSS obs worksheet Triangles-construction-extension		
6 3D Shapes	• Investigate the properties of 3D shapes •	• Know the vocabulary of 3D shapes • Know the connection between faces, edges and vertices in 3D shapes • Visualise a 3D shape from its net •	Faces and edges	3D shapes ppt	KM: Euler's formula KM: Visualising 3D shapes Nets of 3D Shapes		• Always / Sometimes / Never: The number of vertices in a 3D shape is greater than the number of edges
7 Special triangles and quadrilaterals	• Know the names of special triangles • Know the names of special quadrilaterals •	• Recall the names and shapes of special triangles and quadrilaterals	Square Circle Kite: Write down the names of all the mathematical	Boardworks – KS3- S2 2D shapes – slides 1-25	KM: What's special about quadrilaterals? Constructing quadrilaterals from diagonals and		

		Know the properties of the special quadrilaterals (including diagonals) • Apply the properties of triangles to solve problems • Apply the properties of quadrilaterals to solve problems	shapes you know.		summarising results. NRICH: Property chart NRICH: Quadrilaterals game		
8 Properties of polygons	• Can you calculate interior and exterior angles of regular polygons? •	•	Polygon Riddle 1: Solve the riddle to find the name of the polygon then sum the interior angles. Polygon Riddle 2: A "My first is in..." type riddle leading to a polygon interior angle calculation. Polygon Riddle 3: Work out which mathematical shape the riddle describes.	Interior and exterior angles ppt	KM: Investigating polygons. Tasks one and two should be carried out with irregular polygons.	My maths	See ppt- last slide

9 Revision Lesson	•	•					
10 Homework Lesson	•	•					