NAME		TEACHER				
My GCSE Target Grade is		End of Cycle Teacher Assessment Please circle				
		SAE	AE	E	BE	SBE
End of unit assessment type		Your end of topic assessment will be a written exam.				

YEAR 8 CYCLE 2: ALGEBRA, DATA, 2D/3D SHAPES

	Knowledge	Prior knowledge	End of topic
7 to 9	**Surface Area of Prisms –** I can find the surface area of different prisms (including triangular and hexagonal) 1. Teach Perimeter and Area of triangles, parallelograms, trapezium and compound shapes 2. Teach volume and surface area of cubes and cuboids		
	Volume of Prisms – I can find the volume of a prism (including triangular and hexagonal) Teach volume of cube and cuboids with different units		
	Circles – I can name the different parts of a circle and find the area and circumference		
	Cylinders – I can calculate the surface area and volume of a cylinder		
	Direct proportion and Rates of change - Recognise when values are in direct proportion. Interpret real-life graphs.		
	Distance-time graphs - Use distance–time graphs to solve problems.		
6	**Powers -** I can simplify algebraic powers and substitute into formulae involving powers		
	Expressions & Brackets – I can form algebraic expressions and expand single brackets (including with negative numbers and powers)		
	Double Brackets – I can expand double brackets and collect like terms and apply to problems involving shapes		
	Re-arranging Formula – I can change the subject of a formula and substitute		
	Factorising – I can factorise linear expressions & use factorising to simplify simple fractions		
	Solving Equations 2 – I can solve two step equations using a function machine and can also use the balancing method		
	Distance-Time Graphs – I can interpret a distance-time graph and plot data from a question		
	Line Graphs – I can plot line graphs from a table of data and interpret / make comparisons Teach drawing straight line graphs using table of values first		
5	**Expressions** – I can simplify expressions by collecting like terms (including with powers)		
	Solving Equations 1 – I can solve one step equations by finding the inverse operation and using a function machine		
	Brackets – I can use brackets with numbers and letters		
	Data Surveys – I can plan a survey and collect data and group data into equal class intervals		
	Bar Charts – I can interpret and draw bar charts for one / more than one set of data		

LEARNING TOOLS

KEY CONCEPT	**Expression**	What is the difference between an expression and an equation?	
KEY QUESTIONS	What is important when drawing a **Bar Chart**?	What is the value of ∏?	
KEY EQUATION		∏r² is the formula for the _____ of a circle	

YEAR 8 CYCLE 2: EQUATIONS & PRESENTING DATA

	Skills	Prior knowledge	End of topic
7 to 9 Delta	G9 - identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment		
	G13 - construct and interpret plans and elevations of 3D shapes		
	G16 - know & apply formulae to calculate: volume of prisms (including cylinders)		
	G17 - know the formulae: circumference of a circle = $2\pi r = \pi d$, area of a circle = πr^2; calculate: perimeters of 2D shapes, including circles; areas of circles and composite shapes; surface area and volume of spheres, pyramids, cones and composite solids		
6 Theta	A4 - simplify and manipulate algebraic expressions: ● collecting like terms ● multiplying a single term over a bracket ● taking out common factors		
	A5 - understand and use formulae; rearrange formulae to change the subject		
	A7 - interpret simple expressions as functions with inputs and outputs; ; **interpret the reverse process as the 'inverse function'**		
5 Pi	S2 - interpret and construct tables, charts and diagrams, including bar charts		
	A2 - substitute numbers into formulae and expressions, including scientific formulae		

EVERYBODY READS… IN MATHS!

KEY WORDS	Inverse	Annual	Parallel	Correlation	Diagonal

PROBLEM OF THE CYCLE

Can the centre of the grid be filled with one of the three shapes?