

Subject: Maths

Year Group: 8

Specification: KS3 Maths Progress Pi

Active Learning Opportunities

Year 2

Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	GCSE Q Stem	Homework	Lit Num SMSC Codes
12hrs	1 Number					
1 hr	1.1 Calculations Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Use written methods to add and subtract with decimals. Calculate mentally. Calculate with money. Estimate answers to calculations.	Can Money ever have more than 2D.P? Write down the following numbers correct to 2 significant figures. a. 0.00539 b. 892		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1 So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

1hr	1.2 Calculating with negative integers	Add, subtract, multiply and divide positive and negative numbers.	$-0.8 \times 2.6 =$	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	
2hrs	1.3 Powers and roots Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) <i>Show me boards, Coaching, Independent Study, Student teachers etc</i>	Calculate using squares, square roots, cubes and cube roots. Use index notation for powers of numbers. Estimate the square root of a number.	Can a Power have an index number?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9
2 hrs	1.4 Powers, roots and brackets	Use mental methods to calculate combinations of powers roots and brackets.	$7^2 \times \sqrt{16}$	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9

3hrs	Theta 3: 2.1 Substituting into expressions	Substitute into algebraic expressions involving powers.		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9
	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Write expressions and formulae.	What other subject could I use this in ? And how?		Monopolise your homework Sheet 1	
		Change the subject of a formula.			Monopolise your homework Sheet 1	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9
		Simplify expressions involving brackets, use rules for indices and factorise expressions. Multiply out double brackets and collect like terms.				
3hrs	1.5 Multiples and factors	Use index notation.				

	<p>Do Now: Numeracy Ninja</p> <p>Plenary: TEQ (Typical exam question)</p> <p>Show me boards, Coaching, Independent Study, Student teachers etc</p>	<p>Write a number as a product of its prime factors.</p> <p>Use prime factor decomposition to find the HCF and LCM.</p>	<p>How can Venn Diagrams help us?</p>	<p>TEQ - Show understanding of worded questions and how marking schemes test working practices</p>	<p>Monopolise your homework Sheet 1</p>	<p>So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9</p>
Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	GCSE Q Stem	Homework	Lit Num SMSC Codes
11hrs	2 Area and volume					
2hrs	2.1 Area of a triangle	<p>Derive and use the formula for the area of a triangle.</p>	<p>How can this formula always work?</p>	<p>TEQ - Show understanding of worded questions and how marking schemes test working practices</p>		<p>So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9</p>

	<p>Do Now: Numeracy Ninja</p> <p>Plenary: TEQ (Typical exam question)</p> <p>Show me boards, Coaching, Independent Study, Student teachers etc</p>	Find areas of compound shapes.		Self & Peer	Monopolise your homework Sheet 2	Perpendicular
2hrs	2.2 Area of a parallelogram and trapezium	Calculate areas of parallelograms and trapezia.	How is the area formula of a trapezium similar to a triangles?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9
2hrs	2.3 Volume of cubes and cuboids	Calculate the volume of cubes and cuboids.	How could you modify this for other 3D shapes?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9

1 hr	2.4 3D shapes	Sketch nets of 3D solids.	Does surface area always affect the volume of a shape? How?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9
2hrs	2.5 Surface area of cubes and cuboids	Calculate the surface area of cubes and cuboids.	How many areas do you need to work out? Minimum?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9
2hrs	2.6 Problems and measures	Calculate the volume of cubes and cuboids.	A "hexomino" is a 2D shape made from six connected squares. (Note that the squares are joined edge to edge and there are no overlaps or gaps.) On squared paper, draw some different hexominoes. How many different hexominoes are there? Which ones could be folded into a cube?	TEQ - Show understanding of worded questions and how marking schemes test working practices		So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9

		Calculate the surface area of cubes and cuboids.		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
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