

Scheme Of Work 2019 - 2020

Subject: Maths

Year Group: 8

Specification: KS3 Maths Progress Theta

Active Learning Opportunities

Stretch & Challenge (Nace)

Year 2

Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	GCSE Q Stem	Homework
Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	Assessment	Homework
12hrs	4 Expressions and equations				
2hrs	Understand and simplify algebraic powers. Substitute values into formulas involving powers.	4.1 Algebraic powers Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Simplify $x^2 + x + y^2 + 2x$	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3
S & C	Pixl Maths Aiming for grade 1	Exercise from page 12-25	Related question teacher judgement		

1hr	Expand brackets. Make and simplify algebraic expressions.	4.2 Expressions and brackets Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	$4(x + 4) + 3(2x + 1)$	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3
S & C	Pixl Maths Aiming for grade 1	Exercise from page 12-25	Related question teacher judgement		
	Substitute into algebraic expressions involving powers. Pixl Maths Aiming for grade 1 Write expressions and formulae.	Theta 3: 2.2 Writing expressions and formulae Exercise from page 12-25 Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3

2hrs	Pixl Maths Aiming for grade 1 Change the subject of a formula.	Exercise from page 12-25	What is a scientific example of changing the subject?		
	Pixl Maths Aiming for grade 1 Simplify expressions involving brackets, use rules for indices and factorise expressions.	Exercise from page 12-25			
	Pixl Maths Aiming for grade 1 Multiply out double brackets and collect like terms.	Exercise from page 12-25		TEQ - Show understanding of worded questions and how marking schemes test working practices	
S & C	Pixl Maths Aiming for grade 1	Exercise from page 12-25	Related question teacher judgement		Monopolise your homework Sheet 3

2hrs	Factorise expressions.	4.3 Factorising expressions	Factorise $4 + 12xy$.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3
S & C	Pixl Maths Aiming for grade 1	Exercise from page 12-25	Related question teacher judgement		
1hr	Find the inverse of a function. Solve simple equations using function machines.	4.4 One-step equations Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	$5a + 9 = -15$	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3

	Solve real life problems using equations.				
S & C	Pixl Maths Aiming for grade 1	Exercise from page 12-25	Related question teacher judgement		
2hrs	Solve two-step equations using function machines. Solve real life problems using equations.	4.5 Two-step equations Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3
	Solve equations using the balancing method.	4.6 The balancing method	$2x + 7 = 4x - 2$		

2hrs	Solve equations with the unknown number on both sides.	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3
Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	Assessment	Homework
10hrs	6 Decimals and ratio				
1hr	Rounding whole numbers and decimals. Writing large numbers as a decimal number of millions. Pixl Maths Aiming for grade 1 Ordering positive and negative decimals.	6.1 Ordering decimals and rounding Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc Exercise from page 55-59	round 0.00000004567 to 1 significant figure Use inequalities to show that N can be any number between 1 and 10 .	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 5

	Using the symbols > and < between two negative decimals.				
S & C	Pixl Maths Aiming for grade 1	Exercise from page 55-59	Related question teacher judgement		
1hr	<p>Multiplying larger numbers.</p> <p>Multiplying decimals with up to two decimal places.</p> <p>Multiplying any number by 0.1 and 0.01.</p>	<p>6.2 Place-value calculations</p> <p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	<p>8765 x 234</p> <p>24.678 x 67.98</p> <p>34 x 0.01</p>	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 5
S & C	Pixl Maths Aiming for grade 1	Exercise from page 55-59	Related question teacher judgement		

2hrs	Adding and subtracting decimals of any size.	6.3 Calculations with decimals		TEQ - Show understanding of worded questions and how marking schemes test working practices
	Pixl Maths Aiming for grade 1	Exercise from page 55-59	67.789 - 34.987	
	Multiplying and dividing by decimals.	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Related question teacher judgement	Monopolise your homework Sheet 5
	Pixl Maths Aiming for grade 1	Exercise from page 55-59	Related question teacher judgement	
	Dividing by 0.1 and 0.01.			
3hrs	Using ratios involving decimals.	6.4 Ratio and proportion with decimals	simplify 2.5 : 2	TEQ - Show understanding of worded questions and how marking schemes test working practices

	Pixl Maths Aiming for grade 1 Solving proportion problems involving decimals.	Exercise from page 55-59 Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Related question teacher judgement		
3hrs	Solving engineering problems using ratio and proportion.	6.5 STEM: Using ratios	5 girls : 15 boys express this ratio as a unit ratio	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 5
	Pixl Maths Aiming for grade 1 Using unit ratios.	Exercise from page 55-59 Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc			
Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	Assessment	Homework
10hrs	7 Lines and angles				

2hrs	<p>Matching quadrilaterals to their descriptions.</p> <p>Pixl Maths Aiming for grade 1</p> <p>Using known facts about quadrilaterals to solve problems.</p>	<p>7.1 Quadrilaterals</p> <p>Exercise from page 28-32</p> <p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	<p>I have four sides but none are equal in length, two of my sides are parallel. What am i?</p>	<p>TEQ - Show understanding of worded questions and how marking schemes test working practices</p>	
2hrs	<p>Using alternate angles to find unknown angles.</p> <p>Pixl Maths Aiming for grade 1</p> <p>Using reasoning to complete mathematical proofs.</p>	<p>7.2 Alternate angles and proof</p> <p>Exercise from page 28-32</p> <p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	<p>Use parallel lines to prove that all triangle interior angle equal 180 degrees</p>		
				<p>TEQ - Show understanding of worded questions and how marking schemes test working practices</p>	<p>Monopolise your homework Sheet 6</p>

2hrs	Solving geometrical problems using side and angle properties of triangles and quadrilaterals.	7.3 Geometrical problems		
	Pixl Maths Aiming for grade 1	Exercise from page 28-32		
	Identifying corresponding angles.	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	How could we use this information to find the angle of a ladder leaning against a wall. What information would you need? What other maths would you need to find other information, like the length of the ladder or the height of the wall?	TEQ - Show understanding of worded questions and how marking schemes test working practices
	Pixl Maths Aiming for grade 1	Exercise from page 28-32		Monopolise your homework Sheet 6

	Solving problems using properties of angles in parallel and intersecting lines.				
2hrs	<p>Calculating the sum of the interior and exterior angles of a polygon.</p> <p>Pixl Maths Aiming for grade 1</p> <p>Calculating the interior and exterior angles of a polygon.</p>	<p>7.4 Exterior and interior angles</p> <p>Exercise from page 28-32</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>	180(N-2)	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 6
	Finding unknown angles by forming and solving equations.	7.5 Solving geometric problems	Could a shape have three		

2hrs	Solving geometrical problems showing reasoning.
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Do Now: Numeracy Ninja
Plenary: TEQ (Typical exam question)
Show me boards, Coaching, Independent Study, Student teachers etc

angles of 60 degrees each
and not be a triangle?

TEQ - Show understanding of worded questions and how marking schemes test working practices

Monopolise your homework Sheet 6

Lit Num SMSC Codes
Lit Num SMSC Codes
So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

Lit Num
SMSC
Codes

So2, So6,
So7 , M1,
C3, C5, C6 ,
Sp2 Sp9

So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
Operators

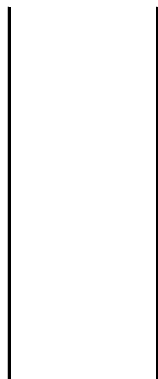
So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

Subtract

Decimal

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

Multiple
So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
Lit Num SMSC Codes



So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

Parallel



So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

Opposite

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

Perpendicular

Proof

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

So2, So6,
So7 , M1,
C3, C5, C6
, Sp2 Sp9

