

PEARSON/EDEXCEL SCHEMES OF WORK ADAPTED FOR FOREST HILL (KS3: SETS 1 AND 2)

YEAR 7		KS3 Maths Progress			Delta 1 and Delta 3	
Wk.	TERM	UNIT / LESSON	STEPS FROM	STEPS TO	OBJECTIVES	
	AUTUMN	1 Analysing and displaying data	2nd (grade 1)	7th (grade 4)		
1	04/09/2017	Delta 3: 4.1 STEM: Data collection	4th (grade 2)	8th (grade 5)	Identify sources of primary and secondary data.	
2	11/09/2017	INVESTIGATION: NOUGHS & CROSSES			Choose a suitable sample size.	
3	18/09/2017				Understand how to reduce bias in sampling and questionnaires. Identify a random sample.	
	Delta 1	INVESTIGATION: KS3 DATA COLLECTION				
		1.1 Two-way tables and bar charts	2nd (grade 1)	5th (grade 3)	Use two-way tables. Interpret and draw dual bar charts and compound bar charts.	
		1.2 Averages and range	3rd (grade 2)	6th (grade 3)	Choose the most appropriate average for a set of data. Find the mode, median, mean and range for a set of data. Compare sets of data using averages and the range.	
		1.3 Grouped data	3rd (grade 2)	6th (grade 3)	Group discrete and continuous data. Draw and interpret grouped frequency diagrams.	
		1.4 More graphs	3rd (grade 2)	6th (grade 3)	Interpret and draw line graphs. Recognise when a graph is misleading.	
		1.5 Pie charts	5th (grade 3)	6th (grade 3)	Draw and interpret pie charts.	
		1.6 STEM: Scatter graphs and correlation	5th (grade 3)	7th (grade 4)	Graph paper and draw scatter graphs. Describe the correlation between two sets of data. Draw a line of best fit and use it to estimate values.	
4	25/09/2017	PROBLEM-SOLVING ACTIVITIES			RICH TASK 6: AVERAGING IT OUT	
	AUTUMN	2 Number skills	3rd (grade 2)	6th (grade 3)		
5	02/10/2017	2.1 Factors, primes and multiples	3rd (grade 2)	5th (grade 3)	Understand the difference between multiples, factors and primes. Find all the factor pairs of any whole number.	
6	09/10/2017	RICH TASK 2: FACTORS & MULTIPLES GAME				
		RICH TASK 16: HOW MANY POLAR BEARS?			Find the HCF and LCM of two numbers.	
		2.2 Using negative numbers	4th (grade 2)	5th (grade 3)	Add, subtract, multiply and divide positive and negative numbers.	
		2.3 Multiplying and dividing	4th (grade 2)	5th (grade 3)	Use mental and written strategies for multiplication.	
		RICH TASK 12: MULTIPLICATION REDUCTION			Divide a 3-digit integer by a single or 2-digit integer.	
		2.4 Squares and square roots	4th (grade 2)	5th (grade 3)	Use index notation for squares and square roots. Calculate with squares and square roots.	
		2.5 More powers and roots	5th (grade 3)	6th (grade 3)	Carry out calculations involving squares, cubes, square roots and cube roots.	
		INVESTIGATION: OPPOSITE CORNERS			Use factorising to work out square roots and cube roots.	
		INVESTIGATION: PARTITIONING			Solve word problems using square roots and cube roots.	
		2.6 Calculations	5th (grade 3)	6th (grade 3)	Estimate answers to complex calculations. Carry out calculations involving brackets.	
		RICH TASK 14: WHY IS 1089 SO SPECIAL?				
7	16/10/2017	PROBLEM-SOLVING; REVISION			HALF TERM TEST	
	AUTUMN	3 Equations, functions and formulae	3rd (grade 2)	6th (grade 3)		
8	30/10/2017	3.1 Simplifying algebraic expressions	3rd (grade 2)	6th (grade 3)	Simplify expressions by collecting like terms.	
9	06/11/2017	3.2 Writing algebraic expressions	4th (grade 2)	5th (grade 3)	Construct expressions using four operations.	
		3.3 STEM: Using formulae	3rd (grade 2)	5th (grade 3)	Substitute into formulae.	
		3.4 Writing formulae	4th (grade 2)	6th (grade 3)	Derive formulae from a description.	
		3.5 Brackets and powers	4th (grade 2)	6th (grade 3)	Expand expressions involving brackets.	
		RICH TASK 23: SUMMING CONSECUTIVE NUMBERS			Substitute into expressions involving powers.	
		3.6 Factorising expressions	6th (grade 3)	6th (grade 3)	Factorise an algebraic expression.	
10	13/11/2017	PROBLEM-SOLVING ACTIVITIES			RICH TASK 8: DIFFY?	
	AUTUMN	4 Fractions	4th (grade 2)	7th (grade 4)		
11	20/11/2017	4.1 Working with fractions	4th (grade 2)	6th (grade 3)	Compare and simplify fractions.	
12	27/11/2017	RICH TASK 1: POSITIVE DIFFERENCES			Write one number as a fraction of another. Work out simple fractions of amounts.	
		4.2 Adding and subtracting fractions	4th (grade 2)	5th (grade 3)	Write an improper fraction as a mixed number. Add and subtract fractions.	
		4.3 Fractions, decimals and percentages	5th (grade 3)	6th (grade 3)	Work with equivalent fractions, decimals and percentages. Use division to write a fraction as a decimal.	
		4.4 Multiplying and dividing fractions	5th (grade 3)	7th (grade 4)	Work out fractions of amounts. Divide an integer and a fraction by a fraction. Multiply a fraction by a fraction.	
		4.5 Working with mixed numbers	5th (grade 3)	7th (grade 4)	Add and subtract mixed numbers. Enter time as a mixed number into a calculator. Multiply and divide a mixed number.	
13	04/12/2017	PROBLEM-SOLVING ACTIVITIES			RICH TASK 7: FRACTION ARRANGEMENT	
14	11/12/2017	PROBLEM-SOLVING; REVISION			END OF TERM TEST	

EXTENSION LEARNING OUTCOMES IN BOLD						
TERM	UNIT / LESSON	STEPS FROM	STEPS TO	LEARNING OBJECTIVES		
SPRING	5 Angles and shapes	4th (grade 2)	7th (grade 4)			
15	01/01/2018	5.1 Angles and parallel lines	4th (grade 2)	6th (grade 3)	Work out unknown angles when two or more lines meet or cross at a point. Work out unknown angles involving parallel lines.	
16	08/01/2018	5.2 Triangles	4th (grade 2)	6th (grade 3)	Describe the line and rotational symmetry of triangles. Understand how to prove that a result is true. Use properties of a triangle to work out unknown angles. Use the properties of isosceles and equilateral triangles to solve problems.	
		TASK 10: HOW MANY ANGLES?				
		5.3 Quadrilaterals	4th (grade 2)	5th (grade 3)	Describe the line and rotational symmetry of quadrilaterals. Describe the properties of quadrilaterals.	
		INVESTIGATION: FLAGGING				
		TASK 15: SQUARE COORDINATES				
		5.4 Polygons	5th (grade 3)	7th (grade 4)	Work out the interior and exterior angles of a polygon.	
		PROBLEM-SOLVING ACTIVITIES				
17	15/01/2018	RICH TASK 13: HOW MANY QUADRILATERALS?				
	SPRING	6 Decimals	4th (grade 2)	7th (grade 4)		
18	22/01/2018	6.1 Ordering decimals	5th (grade 3)	7th (grade 4)	Write decimals in ascending and descending order.	
19	29/01/2018	6.2 Rounding decimals	5th (grade 3)	6th (grade 3)	Round to decimal places. Add and subtract decimals. Multiply a decimal by an integer. Use place value to multiply decimals. Divide a decimal by a whole number. Divide a number by a decimal. Convert between fractions decimals and percentages. Compare different proportions using percentages.	
		6.3 Adding and subtracting decimals	4th (grade 2)	6th (grade 3)		
		6.4 Multiplying decimals	4th (grade 2)	6th (grade 3)		
		TASK 28: DECIMAL ARITHMETIC				
		6.5 Dividing decimals	4th (grade 2)	6th (grade 3)		
		6.6 Fractions, decimals and percentages	5th (grade 3)	6th (grade 3)		
		TASK 5: NUMBER SHACK				
		6.7 FINANCE: Working with percentages	4th (grade 2)	6th (grade 3)	Calculate percentages with and without a calculator. Calculate percentage increases and decreases. Work backwards to solve a percentage problem.	
20	05/02/2018	PROBLEM-SOLVING; REVISION			HALF TERM TEST	
	SPRING	7 Equations	4th (grade 2)	8th (grade 5)		
21	19/02/2018	7.1 Solving one-step equations	4th (grade 2)	5th (grade 3)	Write and solve simple equations.	
22	26/02/2018	TASK 27: SOLVING LINEAR EQUATIONS?				
		7.2 Solving two-step equations	5th (grade 3)	6th (grade 3)	Solve problems using equations. Write and solve two-step equations. Derive formulae from a description. Write and solve equations that have brackets. Write and solve equations with letters on both sides.	
		7.3 More complex equations	6th (grade 3)	6th (grade 3)		
		7.4 Trial and improvement	6th (grade 3)	8th (grade 5)	Solve equations that include x^2 and x^3 . Use trial and improvement to find solutions to 1 decimal place.	
		TASK 11: NUMBER REVERSE				
23	05/03/2018	PROBLEM-SOLVING ACTIVITIES			RICH TASK 3: CHOOSE 3 NUMBERS	
	SPRING	8 Fractions	4th (grade 2)	7th (grade 4)		
24	12/03/2018	8.1 STEM: Metric and imperial units	4th (grade 2)	5th (grade 3)	Convert between metric and imperial units. Use metric units.	
25	19/03/2018	8.2 Writing ratios	4th (grade 2)	6th (grade 3)	Write a ratio in its simplest form. Simplify a ratio expressed in fractions or decimals. Share a quantity in 2 or more parts in a given ratio. Understand the relationship between ratio and proportion. Solve simple word problems involving ratio and direct proportion. Solve simple word problems involving ratio and inverse proportion. Solve problems involving ratio and proportion using the unitary method. Write ratios in the form 1 : n. Solve best buy problems.	
		8.3 Sharing in a given ratio	4th (grade 2)	5th (grade 3)		
		8.4 Proportion	5th (grade 3)	5th (grade 3)		
		8.5 Proportional reasoning	5th (grade 3)	6th (grade 3)		
		8.6 Using the unitary method	5th (grade 3)	6th (grade 3)		
26	26/03/2018	PROBLEM-SOLVING; REVISION			END OF TERM TEST	

STEPS REFER TO THE 12-STEP PEARSON MODEL						
TERM	UNIT / LESSON	STEPS FROM	STEPS TO	LEARNING OBJECTIVES		
SUMMER	9 Perimeter, area and volume	4th (grade 2)	6th (grade 3)			
27	16/04/2018	9.1 Triangles, parallelograms and trapeziums	5th (grade 3)	6th (grade 3)	Calculate the area of triangles. Calculate the area of parallelograms. Calculate the area of trapeziums.	
28	23/04/2018	9.2 Perimeter and area of compound shapes	4th (grade 2)	5th (grade 3)	Calculate the perimeter of shapes made from rectangles and triangles. Calculate the area of shapes made from rectangles and triangles.	
		INVESTIGATION: THE FENCING PROBLEM				
		9.3 Properties of 3D solids	4th (grade 2)	5th (grade 3)	Identify nets of different 3D shapes.	
		INVESTIGATION: MATCHSTICKS MODELS (OCR)				
		9.4 Surface area	4th (grade 2)	6th (grade 3)	Calculate the surface area of a cube. Calculate the surface area of a cuboid.	
		9.5 Volume	5th (grade 3)	6th (grade 3)	Calculate the volume of a cube. Calculate the volume of a cuboid.	
		INVESTIGATION: THE OPEN BOX PROBLEM				
		TASK 29: 24 CUBES				
		9.6 STEM: Measures of area and volume	4th (grade 2)	6th (grade 3)	Convert between different units of volume: cm^3 , ml and litres. Convert between metric measures for area and volume.	
29	30/04/2018	PROBLEM-SOLVING ACTIVITIES				
	SUMMER	10 Sequences and graphs	4th (grade 2)	6th (grade 3)		
30	07/05/2018	10.1 Sequences	4th (grade 2)	5th (grade 3)	Work out the terms of an arithmetic sequence using the term-to-term rule. Work out a given term in a simple arithmetic sequence.	
31	14/05/2018	RICH TASK 21: T-TOTAL				
		10.2 The n th term	5th (grade 3)	6th (grade 3)	Work out and use expressions for the n th term in an arithmetic sequence. Generate sequences and predict how they will continue. Recognise geometric sequences and work out the term-to-term rule.	
		10.3 Pattern sequences	4th (grade 2)	6th (grade 3)		
		INVESTIGATION: LINES, REGIONS & CROSS-OVERS				
		10.4 Coordinates and line segments	4th (grade 2)	6th (grade 3)	Use positive and negative coordinates. Work out the midpoint of a line segment.	
		INVESTIGATION: SPIRAL BOUND				
		10.5 Graphs	4th (grade 2)	6th (grade 3)	Draw straight-line graphs. Recognise straight-line graphs parallel to the axes. Recognise graphs of $y = x$ and $y = -x$.	
32	21/05/2018	PROBLEM-SOLVING ACTIVITIES			RICH TASK 17: PASCAL'S TRIANGLE	
	28/05/2018	HALF TERM				
33	04/06/2018	REVISION FOR END OF YEAR TESTS				
34	11/06/2018	REVISION FOR END OF YEAR TESTS				
35	18/06/2018	END OF YEAR TESTS: NON-CALCULATOR & CALCULATOR				
36	25/06/2018	FINANCIAL MATHS				
37	02/07/2018	FINANCIAL MATHS				
38	09/07/2018	FEEDBACK FROM END OF YEAR TESTS				
39	16/07/2018	FEEDBACK FROM END OF YEAR TESTS				
40	23/07/2018	FEEDBACK FROM END OF YEAR TESTS				