

PEARSON/EDXCEL SCHEMES OF WORK ADAPTED FOR FOREST HILL SCHOOL (KS3: SETS 3 AND 4)

YEAR 7		MID-ATTAINING		Theta 1	
TERM	UNIT / LESSON	STEPS FROM	STEPS TO	STEPS FROM	STEPS TO
1	AUTUMN	1. Analyzing and displaying data	2nd (grade 1)	5th (grade 3)	
1	04/09/2017	1.1 Mode, median and range	2nd (grade 1)	4th (grade 2)	Find the mode of a set of data, numerical and non-numerical. Find the median of a set of data (odd and even number of values).
1	11/09/2017				Find the range of a set of data.
1	18/09/2017	INVESTIGATION: NOUGHTS & CROSSES			Read and draw pictograms, bar charts and bar line charts. Read and construct tally charts and frequency tables. Find the mode and range from a tally or table.
1		1.2 Displaying data	2nd (grade 1)	3rd (grade 2)	Read and draw pictograms, bar charts and bar line charts. Read and construct tally charts and frequency tables. Find the mode and range from a tally or table.
1		1.3 Grouping data	2nd (grade 1)	4th (grade 2)	Read and construct grouped bar charts and frequency tables.
1		INVESTIGATION: KS3 DATA COLLECTION			Read and construct grouped bar charts for discrete and continuous data. Find the modal class from a bar chart or frequency table.
1		1.4 Averages and comparing data	3rd (grade 2)	4th (grade 2)	Calculate the mode, median, mean and range of a set of values. Compare two sets of data using an average and the range.
1		1.5 Line graphs and more bar charts	3rd (grade 2)	5th (grade 3)	Read and draw a line graph. Read and draw a dual bar chart. Read and draw a compound bar chart.
1		1.6 Spreadsheets	2nd (grade 1)	4th (grade 2)	Enter data into a spreadsheet program. Use a spreadsheet to calculate the mode, median, mean and range. Use a spreadsheet to draw bar charts, dual bar charts, compound bar charts.
1	25/09/2017	PROBLEM-SOLVING ACTIVITIES			RICH TASK 6: AVERAGING IT OUT
1	AUTUMN	2. Number skills	2nd (grade 1)	5th (grade 3)	
1	02/10/2017	2.1 Mental maths	3rd (grade 2)	4th (grade 2)	Know and use the priority of operations and laws of arithmetic.
1	09/10/2017	RICH TASK 14: WHY IS 1089 SO SPECIAL? RICH TASK 16: HOW MANY POLAR BEARS?			Recall multiplication facts up to $10 \times 10$ Multiply and divide by 10, 100, 1000
1		2.2 Addition and subtraction	2nd (grade 1)	4th (grade 2)	Round whole numbers to the nearest 10, 100, 1000 Check answers using estimation. Add and subtract whole numbers using written methods.
1		RICH TASK 12: MULTIPLICATION REDUCTION			Multiply whole numbers using a written method. Check answers using estimation operations.
1		2.3 Multiplication	2nd (grade 1)	4th (grade 2)	Divide whole numbers using a written method. Check answers using estimation operations.
1		2.4 Division	3rd (grade 2)	4th (grade 2)	Round decimals to the nearest whole number.
1		2.5 Finance: Time and money	2nd (grade 1)	5th (grade 3)	Interpret a calculator display. Solve problems involving time and money using a calculator.
1		INVESTIGATION: OPPOSITE CORNERS INVESTIGATION: PARTITIONING			Order positive and negative numbers. Add and subtract positive and negative numbers. Begin to multiply with negative numbers.
1		2.6 Negative numbers	3rd (grade 2)	4th (grade 2)	Identify and understand factors, multiples and prime numbers. Recognise and use square numbers, square roots and triangle numbers.
1		RICH TASK 2: FACTORS & MULTIPLES GAME			
1		2.7 Factors, multiples and primes	2nd (grade 1)	4th (grade 2)	
1		2.8 Squares and triangle numbers	3rd (grade 2)	4th (grade 2)	
1	16/10/2017	PROBLEM-SOLVING; REVISION			HALF TERM TEST
1	AUTUMN	3. Expressions, functions and formulae	2nd (grade 1)	4th (grade 2)	
1	30/10/2017	3.1 Functions	2nd (grade 1)	3rd (grade 2)	Find outputs of simple functions written in words and using symbols. Describe simple functions in words.
1	06/11/2017	RICH TASK 25: FUNCTION MACHINES			Simplify simple algebraic expressions by collecting like terms. Use arithmetic operations with algebra. Use brackets with numbers and letters. Simplify more complicated expressions by collecting like terms.
1		3.2 Simplifying expressions 1	3rd (grade 2)	4th (grade 2)	Write expressions from word descriptions using addition, subtraction and multiplication. Write expressions to represent function machines. Substitute positive integers into simple formulae written in words. Substitute integers into formulae written in letter symbols. Identify variables and use letter symbols. Write simple formulae using letter symbols. Identify formulae and functions. Identify the unknowns in a formula and a function.
1		3.3 Simplifying expressions 2	3rd (grade 2)	4th (grade 2)	
1		3.4 Writing expressions	4th (grade 2)	4th (grade 2)	
1		3.5 STEM: Substituting into formulae	3rd (grade 2)	4th (grade 2)	
1		3.6 Writing formulae	4th (grade 2)	4th (grade 2)	
1	13/11/2017	PROBLEM-SOLVING ACTIVITIES			
1	AUTUMN	4. Decimals and measures	2nd (grade 1)	5th (grade 3)	
1	20/11/2017	4.1 Decimals and rounding	2nd (grade 1)	4th (grade 2)	Measure and draw lines to the nearest millimetre. Write decimals in order of size. Round decimals to the nearest whole number and to one decimal place. Round decimals to make estimates and approximations of calculations.
1	22/11/2017				Compare measurements by converting them into the same units. Solve simple problems involving units of measurement in the context of length. Convert between metric units of length, mass and capacity. Read scales on a range of measuring equipment. Interpret the display of a calculator in different contexts. Interpret metric measures displayed on a calculator. Plot and read coordinates in all four quadrants. Multiply decimals mentally. Check a result by considering whether it is of the right order of magnitude. Understand where to position the decimal point by considering equivalent calculations. Add and subtract decimals. Multiply and divide decimals by single-digit whole numbers. Work out the perimeters of shapes. Solve perimeter problems. Find areas by counting squares. Calculate the areas of squares and rectangles. Calculate the areas of shapes made from rectangles. Solve problems involving area. Choose suitable units to estimate length and area. Use units of measurement to solve problems. Use metric and imperial units.
1		4.2 Length, mass and capacity	3rd (grade 2)	4th (grade 2)	
1		4.3 Scales and coordinates	3rd (grade 2)	5th (grade 3)	
1		4.4 Working with decimals mentally	3rd (grade 2)	4th (grade 2)	
1		4.5 Working with decimals	3rd (grade 2)	5th (grade 3)	
1		4.6 Perimeter	2nd (grade 1)	5th (grade 3)	
1		4.7 Area	2nd (grade 1)	4th (grade 2)	
1		4.8 STEM: More units	3rd (grade 2)	5th (grade 3)	
1	04/12/2017	PROBLEM-SOLVING ACTIVITIES			
1	11/12/2017	PROBLEM-SOLVING; REVISION			END OF TERM TEST

TERM	UNIT / LESSON	STEPS FROM	STEPS TO	LEARNING OBJECTIVES	
1	SPRING	5. Fractions	2nd (grade 1)	5th (grade 3)	
1	01/01/2018	5.1 Comparing fractions	3rd (grade 2)	5th (grade 3)	Use fraction notation to describe parts of a shape. Compare simple fractions. Use a diagram to compare two or more simple fractions.
1	08/01/2018	5.2 Simplifying fractions	3rd (grade 2)	4th (grade 2)	Change an improper fraction to a mixed number. Identify equivalent fractions. Simplify fractions by cancelling common factors.
1		TASK 5: NUMBER SHACK			Add and subtract simple fractions. Calculate simple fractions of quantities.
1		5.3 Working with fractions	3rd (grade 2)	4th (grade 2)	Work with equivalent fractions and decimals. Write one number as a fraction of another.
1		5.4 Fractions and decimals	3rd (grade 2)	4th (grade 2)	Work with equivalent fractions and decimals. Write one number as a fraction of another.
1		TASK 28: DECIMAL ARITHMETIC			Understand percentage as the number of parts per 100. Convert a percentage to a number of hundredths or tenths. Work with equivalent percentages, fractions and decimals. Use different strategies to calculate with percentages. Express one number as a percentage of another.
1		5.5 Understanding percentages	2nd (grade 1)	3rd (grade 2)	
1		5.6 Percentages of amounts	2nd (grade 1)	5th (grade 3)	
1	15/01/2018	PROBLEM-SOLVING ACTIVITIES			
1	SPRING	6. Probability	3rd (grade 2)	5th (grade 3)	
1	01/02/2018	6.1 The language of probability	3rd (grade 2)	4th (grade 2)	Use the language of probability. Use a probability scale with words. Understand the probability scale from 0 to 1.
1	22/01/2018				
1	29/01/2018				
1		INVESTIGATION: LOTTERY NUMBERS			
1		6.2 Calculating probability	4th (grade 2)	4th (grade 2)	List and count outcomes. Calculate probability based on equally likely outcomes. Compare probabilities. Calculate probability of A or B happening by counting outcomes. Calculate the probability of an event not happening.
1		6.3 More probability calculations	4th (grade 2)	5th (grade 3)	Record data from an experimental data. Estimate probability based on experimental data. Make conclusions based on the results of an experiment. Use probability to estimate the number of expected wins in a game. Apply probabilities from experimental data in simple situations.
1		6.4 Experimental probability	3rd (grade 2)	4th (grade 2)	
1		6.5 FINANCE: Expected outcomes	5th (grade 3)	5th (grade 3)	
1	05/02/2018	PROBLEM-SOLVING; REVISION			HALF TERM TEST
1	SPRING	7. Ratio and proportion	3rd (grade 2)	5th (grade 3)	
1	19/02/2018	7.1 Direct proportion	4th (grade 2)	5th (grade 3)	Use direct proportion in simple contexts. Solve simple problems involving direct proportion. Use the unitary method to solve simple word problems involving direct proportion. Use ratio notation. Reduce a ratio to its simplest form. Reduce a three-part ratio to its simplest form by cancelling.
1	26/02/2018				
1		7.2 Writing ratios	4th (grade 2)	5th (grade 3)	Divide a quantity into two parts in a ratio given in words. Divide a quantity into two parts in a given ratio. Solve word problems involving ratio.
1		7.3 Using ratios	3rd (grade 2)	5th (grade 3)	Use ratios and measures. Use fractions to describe and compare proportions. Understand and use the relationship between ratio and proportion. Use percentages to describe proportions. Use percentages to compare simple proportions. Understand and use the relationship between ratio and proportion.
1		7.4 Scales and measures	4th (grade 2)	5th (grade 3)	
1		7.5 Proportions and Fractions	4th (grade 2)	5th (grade 3)	
1		7.6 Proportions and percentages	4th (grade 2)	5th (grade 3)	
1	05/03/2018	PROBLEM-SOLVING ACTIVITIES			
1	SPRING	8. Lines and angles	2nd (grade 1)	5th (grade 3)	
1	12/03/2018	8.1 Lines, angles and triangles	2nd (grade 1)	3rd (grade 2)	Describe and label lines, angles and triangles. Identify angle, side and symmetry properties of triangles. Use a protractor to measure and draw angles. Estimate the size of angles. Solve problems involving angles. Use a ruler and protractor to draw triangles accurately.
1	19/03/2018	TASK 10: HOW MANY ANGLES?			Solve problems involving angles and triangles.
1		8.2 Estimating, measuring and drawing angles	3rd (grade 2)	4th (grade 2)	
1		8.3 Drawing triangles accurately	4th (grade 2)	5th (grade 3)	
1		INVESTIGATION: FLAGGING			Solve problems involving angles and triangles.
1		8.4 STEM: Calculating angles	3rd (grade 2)	4th (grade 2)	Use the rule for angles on a straight line, angles around a point and vertically opposite angles. Solve problems involving angles.
1		8.5 Angles in a triangle	3rd (grade 2)	4th (grade 2)	Use the rule for the sum of angles in a triangle. Calculate interior and exterior angles. Solve angle problems involving triangles.
1		8.6 Quadrilaterals	4th (grade 2)	5th (grade 3)	Identify and name types of quadrilaterals. Use the rule for the sum of angles in a quadrilateral.
1		RICH TASK 13: HOW MANY QUADRILATERALS?			Solve angle problems involving quadrilaterals.
1	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	
1	SUMMER	9. Sequences and graphs	2nd (grade 1)	5th (grade 3)	
1	16/04/2018	9.1 Sequences	2nd (grade 1)	4th (grade 2)	Recall sequences including term-to-term rules. Develop the use of mathematical language to describe sequences. Demonstrate how sequences can be used as a mathematical model to describe patterns.
1	23/04/2018	RICH TASK 21: T-TOTAL			Generate sequences from practical sequences, describing how patterns grow. Continue sequences arising from practical contexts and use them to answer questions.
1		9.2 Pattern sequences	3rd (grade 2)	4th (grade 2)	
1		INVESTIGATION: LINES, REGIONS & CROSS-OVERS			Recognise geometric shapes drawn on coordinate grids and find coordinates of points using geometric information. Find and calculate the midpoints of a line segment.
1		9.3 Coordinates	4th (grade 2)	5th (grade 3)	
1		TASK 15: SQUARE COORDINATES			Recognise geometric shapes drawn on coordinate grids and find coordinates of points using geometric information. Find and calculate the midpoints of a line segment.
1		9.4 Extending sequences	3rd (grade 2)	4th (grade 2)	Continue and describe special sequences. Generate sequences using more complex (two-step) term-to-term rules. Continue sequences arising from practical contexts.
1		INVESTIGATION: SPIRAL BOUND			Begin to identify and use position-to-term rules. Recognise an arithmetic sequence and find the starting number and common difference.
1		9.5 Straight line graphs	4th (grade 2)	5th (grade 3)	Recognise, name and plot straight line graphs parallel to the x- or y-axis. Generate coordinates that satisfy a simple linear rule and plot the graph in the first quadrant. Recognise, name and plot the graphs of $y = x + a$ and $y = -x$ .
1		9.6 Position to term rules	4th (grade 2)	5th (grade 3)	Identify and use position-to-term rules. Recognise the relationships between term-to-term rules, position-to-term rules and nth terms.
1	30/04/2018	PROBLEM-SOLVING ACTIVITIES			RICH TASK 17: PASCAL'S TRIANGLE
1	SUMMER	10. Transformations	3rd (grade 2)	5th (grade 3)	
1	07/05/2018	10.1 Congruency and enlargements	3rd (grade 2)	5th (grade 3)	Identify congruent shapes. Use the language of enlargement. Enlarge shapes using given scale factors. Work out the scale factor given an object and its image.
1	14/05/2018				
1		10.2 Symmetry	3rd (grade 2)	5th (grade 3)	Recognise line and rotational symmetry in 2D shapes. Identify all the symmetries of 2D shapes. Identify reflection symmetry in 3D shapes.
1		10.3 Reflection	5th (grade 3)	6th (grade 3)	Recognise and carry out reflections in a mirror line. Reflect a shape on a coordinate grid. Describe a reflection on a coordinate grid.
1		10.4 Rotation	3rd (grade 2)	4th (grade 2)	Describe and carry out rotations on a coordinate grid. Translate 2D shapes.
1		10.5 Translations and combined transformations	4th (grade 2)	5th (grade 3)	Carry out translations. RICH TASK 18: ENTRAPMENT
1	21/05/2018	PROBLEM-SOLVING ACTIVITIES			
1	SUMMER	11. Half term			
1	04/06/2018	REVISION FOR END OF YEAR TESTS			
1	11/06/2018	REVISION FOR END OF YEAR TESTS			
1	18/06/2018				
1	25/06/2018	END OF YEAR TESTS: NON-CALCULATOR & CALCULATOR			
1	02/07/2018	FINANCIAL MATHS			
1	09/07/2018	FINANCIAL MATHS			
1	16/07/2018	FEEDBACK FROM END OF YEAR TESTS			
1	23/07/2018	FEEDBACK FROM END OF YEAR TESTS			