

YEAR 8		DELTA (HIGH ATTAINING)		Delta 2	
Wk.	TERM	UNIT / LESSON	STEPS (GRADES) FROM ...	STEPS (GRADES) FROM ...	LEARNING OUTCOME
	AUTUMN	1 Factors and powers	4th (grade 2)	8th (grade 5)	
1	04/09/2017	1.1 Prime factor decomposition	4th (grade 2)	6th (grade 3)	Write the prime factor decomposition of a number.
2	11/09/2017	RICK TASK 24: NIM			
3	18/09/2017	1.2 Laws of indices	6th (grade 3)	8th (grade 5)	Use prime factor decomposition to find the HCF or LCM of two numbers.
		1.3 STEM: Powers of 10	6th (grade 3)	7th (grade 4)	Work out the laws of indices for positive powers. Show that any number to the power of zero is 1. Use the laws of indices for multiplying and dividing.
		1.4 Calculating and estimating	6th (grade 3)	7th (grade 4)	Use and understand powers of 10. Use the prefixes associated with powers of 10. Understand the effect of multiplying and dividing by any integer power of 10.
4	25/09/2017	PROBLEM-SOLVING ACTIVITIES			
	AUTUMN	2 Working with powers	6th (grade 3)	8th (grade 5)	
5	02/10/2017	2.1 simplifying expressions	6th (grade 3)	6th (grade 3)	Simplify expressions involving powers and brackets.
6	09/10/2017	2.2 More simplifying	6th (grade 3)	8th (grade 5)	Understand the meaning of an identity. Use the index laws in algebraic calculations and expressions. Simplify expressions with powers.
		2.3 Expanding and simplifying	6th (grade 3)	7th (grade 4)	Write and simplify expressions involving brackets and powers. Factorise an algebraic expression.
		2.4 Substituting and solving	7th (grade 4)	7th (grade 4)	Substitute integers into expressions. Construct and solve equations.
		RICK TASK 25: FUNCTION MACHINES			
7	16/10/2017	PROBLEM-SOLVING; REVISION		HALF TERM TEST	
	AUTUMN	3 2D shapes and 3D solids	4th (grade 2)	8th (grade 5)	
8	30/10/2017	3.1 Plans and elevations	4th (grade 2)	6th (grade 3)	Use 2D representations of 3D solids.
9	06/11/2017	3.2 Surface area of prisms	7th (grade 4)	7th (grade 4)	Sketch nets of 3D solids. Calculate the surface area of prisms.
		INVESTIGATION: TUBES			
		3.3 Volume of prisms	5th (grade 3)	8th (grade 5)	Calculate the volume of right prisms.
		3.4 Circumference of a circle	6th (grade 3)	7th (grade 4)	Name the different parts of a circle. Calculate the circumference.
		INVESTIGATION: BEYOND PYTHAGORAS'			
		RICK TASK 30: TILED SQUARES			
		3.5 Area of a circle	6th (grade 3)	7th (grade 4)	Calculate the radius or diameter when you know the circumference.
		INVESTIGATION: PILE 'EM HIGH (OCR)			
		3.6 Cylinders	8th (grade 5)	8th (grade 5)	Calculate the area of a circle. Calculate the radius or diameter when you know the area.
		3.7 Pythagoras' theorem	5th (grade 3)	8th (grade 5)	Calculate the volume and surface area of a cylinder. Use Pythagoras' theorem in right-angled triangles.
10	13/11/2017	PROBLEM-SOLVING ACTIVITIES		RICK TASK 20: DIAGONALS OF RECTANGLES	
	AUTUMN	4 Real life graphs	5th (grade 3)	7th (grade 4)	
11	20/11/2017	4.1 Direct proportion	5th (grade 3)	6th (grade 3)	Recognise when values are in direct proportion. Plot graphs and read values to solve problems.
12	27/11/2017	4.2 FINANCE: Interpreting financial graphs	5th (grade 3)	6th (grade 3)	Interpret graphs from different sources. Understand financial graphs.
		4.3 Distance-time graphs	5th (grade 3)	7th (grade 4)	Draw and interpret distance-time graphs. Use distance-time graphs to solve problems.
		4.4 Rates of change	6th (grade 3)	7th (grade 4)	Interpret graphs that are curved. Interpret real-life graphs.
		4.5 Misleading graphs	7th (grade 4)	7th (grade 4)	Understand when graphs are misleading.
13	04/12/2017	PROBLEM-SOLVING ACTIVITIES			
14	11/12/2017	PROBLEM-SOLVING; REVISION		END OF TERM TEST	

EXTENSION LEARNING OUTCOMES IN BOLD					
TERM	UNIT / LESSON	STEPS (GRADES) FROM ...	STEPS (GRADES) FROM ...	LEARNING OUTCOME	
SPRING	5 Transformations	3rd (grade 2)	9th (grade 6)		
15	01/01/2018	5.1 Reflection and translation	3rd (grade 2)	5th (grade 3)	Describe and carry out translations.
16	08/01/2018				Describe and carry out reflections.
		5.2 Rotation	3rd (grade 2)	8th (grade 5)	Describe and carry out rotations.
		5.3 Enlargement	5th (grade 3)	6th (grade 3)	Enlarge a shape. Describe an enlargement.
		5.4 More enlargement	5th (grade 3)	8th (grade 5)	Enlarge a shape using negative scale factors. Enlarge a shape using fractional scale factors.
		5.5 STEM: Combining transformations	5th (grade 3)	8th (grade 5)	Transform 2D shapes using a combination of reflection, rotation, enlargement and translation.
		5.6 2D shapes and 3D solids	5th (grade 3)	9th (grade 6)	Identify planes of reflection symmetry in 3D solids.
		INVESTIGATION: ROUTES ON POLYHEDRA (OCR)			
		RICK TASK 4: WILL THEY MEET?			
				Find the perimeter and area of 2D shapes after enlargement.	
				Find the volume of 3D solids after enlargements.	
17	15/01/2018	PROBLEM-SOLVING ACTIVITIES		RICH TASK 18: ENTRAPMENT	
	SPRING	6 Fractions, decimals and percentages	5th (grade 3)	9th (grade 6)	
18	22/01/2018	6.1 Recurring decimals	5th (grade 3)	7th (grade 4)	Recognise fractional equivalents to important recurring decimals
19	29/01/2018				Recognise which denominators of simple fractions produce recurring decimals. Change a recurring decimal into a fraction.
		6.2 Using percentages	6th (grade 3)	7th (grade 4)	Calculate percentages. Work out an original quantity before a percentage increase or decrease
		6.3 Percentage change	8th (grade 5)	8th (grade 5)	Calculate percentage change.
		6.4 FINANCE: Repeated percentage change	9th (grade 6)	9th (grade 6)	Calculate the effect of repeated percentage changes.
20	05/02/2018	PROBLEM-SOLVING; REVISION		HALF TERM TEST	
	SPRING	7 Constructions and loci	4th (grade 2)	8th (grade 5)	
21	19/02/2018	7.1 Accurate drawings	4th (grade 2)	5th (grade 3)	Draw triangles accurately using a ruler and protractor. Draw diagrams to scale.
22	26/02/2018	7.2 Constructing shapes	6th (grade 3)	7th (grade 4)	Draw accurate nets of 3D solids. Construct triangles using a ruler and compasses. Construct nets of 3D solids using a ruler and compasses.
		7.3 Constructions 1	5th (grade 3)	8th (grade 5)	Construct a line using a ruler and compasses. Construct perpendicular lines using a ruler and compasses.
		RICK TASK 20: LEAP FROG			
		7.4 Constructions 2	6th (grade 3)	7th (grade 4)	Bisect angles using a ruler and compasses. Draw accurate diagrams to solve problems.
		7.4 Constructions 3			
		7.5 Loci	5th (grade 3)	8th (grade 5)	Draw a locus. Use loci to solve problems.
		INVESTIGATION: GRAZING (OCR)			
23	05/03/2018	PROBLEM-SOLVING ACTIVITIES		RICK TASK 19: FIRE HYDRANTS	
	SPRING	8 Probability	3rd (grade 2)	10th (grade 7)	
24	12/03/2018	8.1 Comparing probabilities	3rd (grade 2)	6th (grade 3)	Calculate and compare probabilities. Decide if a game is fair.
25	19/03/2018	8.2 Mutually exclusive events	4th (grade 2)	7th (grade 4)	Identify mutually exclusive outcomes and events. Find the probabilities of mutually exclusive outcomes and events. Find the probability of an event not happening.
		8.3 Estimating probability	4th (grade 2)	5th (grade 3)	Calculate the relative frequency of a value. Use relative frequency to make estimates. Use relative frequency to estimate the probability of an event. Use estimated probability to calculate expected frequencies. Carry out a probability experiment.
		8.4 Experimental probability	3rd (grade 2)	8th (grade 5)	Estimate probability using data from an experiment. Work out the expected results when an experiment is repeated.
		INVESTIGATION: LOTTERY NUMBERS			
		8.5 Probability diagrams	5th (grade 3)	6th (grade 3)	List all the possible outcomes of one or two events in sample space diagrams or Venn diagrams. Calculate probabilities of repeated events.
		8.6 Tree diagrams	8th (grade 5)	10th (grade 7)	Use tree diagrams to find the probabilities of two or more events.
26	26/03/2018	PROBLEM-SOLVING; REVISION		END OF TERM TEST	

STEPS REFER TO THE 12-STEP PEARSON MODEL					
TERM	UNIT / LESSON	STEPS (GRADES) FROM ...	STEPS (GRADES) FROM ...	LEARNING OUTCOME	
SUMMER	9 Scale drawings and measures	4th (grade 2)	8th (grade 5)		
27	16/04/2018	9.1 Maps and scales	5th (grade 3)	7th (grade 4)	Use scales in maps and plans.
28	23/04/2018				Use and interpret maps.
		9.2 Bearings	4th (grade 2)	7th (grade 4)	Measure and use bearings. Draw diagrams to scale using bearings.
		9.3 Scales and ratio	5th (grade 3)	7th (grade 4)	Draw diagrams to scale. Use and interpret scale drawings.
		9.4 Congruent and similar shapes	6th (grade 3)	7th (grade 4)	Identify congruent and similar shapes.
		INVESTIGATION: TOWERS OF HANOI		Use congruence to solve problems in triangles and quadrilaterals.	
		9.5 Solving geometry problems	7th (grade 4)	8th (grade 5)	Use similarity to solve problems in 2D shapes.
29	30/04/2018	PROBLEM-SOLVING ACTIVITIES			
	SUMMER	10 Graphs	6th (grade 3)	8th (grade 5)	
30	07/05/2018	10.1 Plotting linear graphs	6th (grade 3)	6th (grade 3)	Plot straight-line graphs.
31	14/05/2018				Find the y - intercept of a straight-line graph.
		10.2 The gradient	6th (grade 3)	7th (grade 4)	Find the gradient of a straight-line graph. Plot graphs using the gradient and y -intercept.
		10.3 $y = mx + c$	7th (grade 4)	7th (grade 4)	Use $y = mx + c$ Find the equation of a straight-line graph.
		INVESTIGATION: MOBILE PHONES		Identify parallel and perpendicular lines.	
		10.4 Parallel and perpendicular lines	7th (grade 4)	8th (grade 5)	Identify parallel and perpendicular lines.
		10.5 Inverse functions	6th (grade 3)	7th (grade 4)	Find the inverse of a linear function.
		10.6 STEM: Non-linear graphs	8th (grade 5)	8th (grade 5)	Plot and use non-linear graphs. Plotting cubic and reciprocal graphs, solving simultaneous equations graphically. (EXTN)
32	21/05/2018	PROBLEM-SOLVING ACTIVITIES			
	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				
37	02/07/2018	FINANCIAL PROJECT - CORE MATHEMATICS			
38	09/07/2018	FINANCIAL PROJECT - CORE MATHEMATICS			
39	16/07/2018	FEEDBACK FROM END OF YEAR TESTS			
40	23/07/2018	FEEDBACK FROM END OF YEAR TESTS			