

| 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 | | RICH 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. Use congruence to solve problems in triangles and quadrilaterals. |
| | | INVESTIGATION: TOWERS OF HANOI | | | |
| | | 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 $y = mx + c$ to find the equation of a straight-line graph. |
| | | INVESTIGATION: MOBILE PHONES | | | |
| | | 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 | | | |