

# S1 COURSE PLAN

|                            |                                     |   |   |
|----------------------------|-------------------------------------|---|---|
| TERM 1 - August to October | Whole Number                        | Rounding  | Round to the nearest whole number (revision)  |
|                            |                                     | Rounding  | Round to the nearest 10, 100, 1000 (revision)   |
|                            |                                     | Rounding  | Multiply and divide whole numbers by single digit or by 10,100, 1000                      |
|                            |                                     | Communicating Methods   | Use add (+), subtract (-), multiply (x) or divide ( $\div$ ) to solve problems (revision) |
|                            |                                     | BODMAS  | Order of operations (BODMAS) plus use of brackets   |
|                            | Fractions, Decimals and Percentages | Terminology   | Use correct terminology to describe fractions and place value for decimals (revision)     |
|                            |                                     | Decimals  | Add, subtract, multiply and divide a decimal by a whole number and decimal                |
|                            |                                     | Rounding  | Round to number of decimal places (max 3)   |
|                            |                                     | Equivalent fractions and simplest form                        | Equivalent conversion between common fractions, decimals and percentages                  |
|                            |                                     |   | Equivalent fractions  |
|                            |                                     |   | Simplify fractions  |
|                            |                                     | Fraction of a quantity  | Calculate fraction of a quantity  |
|                            |                                     | Add and subtract fractions                                    | Add and subtract fractions with same denominator (revision)                               |
|                            |                                     | Mixed number fractions  | Convert between mixed number and improper (top heavy) fractions                           |
|                            |                                     | Add, subtract, multiply & divide - with/without mixed numbers | Add and subtract fractions with different denominators, including mixed numbers           |
|                            |                                     |   | Multiply and divide fractions including mixed numbers                                     |
|                            |                                     | Percentages   | Calculate the percentage of a number with and without a calculator                        |
|                            |                                     |   | Express a quantity as a percentage of another.  |
|                            |                                     |   | Calculate percentage increase and decrease  |

## S1 COURSE PLAN

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|------------------------------|---------------------------|---|--|
| TERM 2 - October to December | Integers                  | Rules of negative numbers                   | Rules to add (+), subtract (-), multiply (x) and divide ( $\div$ ) negative (-ve) and positive (+ve) numbers |
|                              |                           | Scales with negative numbers                | Read and use a scale with negative numbers on it   |
|                              |                           | Problem solving using negative numbers      | Problem solving using negative numbers including real life examples  |
|                              | Factors & Multiples       | Multiples                                   | Lowest Common Multiple   |
|                              |                           | Factors                                     | Highest Common Factor  |
|                              |                           |   | Prime Factors  |
|                              | Powers & Roots            | Powers                                      | Understand whole number powers and calculate them, with and without calculator                               |
|                              |                           | Roots                                       | Understand roots and calculate with and without calculator   |
|                              | Expressions and Equations | Collect like terms and simplify expressions | Collect like terms involving more than one variable  |
|                              |                           | Evaluate substitutions                      | Substitute values into expressions, including multiple terms and squares and square roots                    |
|                              |                           | Constructing and solving simple equations   | Solve simple equations - term on one side only e.g., $5x + 6 = 31$   |
|                              |                           |   | Solve equations with term on both sides e.g., $3x + 4 = 2x - 5$  |
|                              | Problem Solving           | Problem Solving                             | Problem Solving  |

# S1 COURSE PLAN

|                             |   |   |  |
|-----------------------------|---|---|--|
| TERM 3 - January to March   | Time  | Time intervals  | Calculate time intervals - 12 and 24 time (revision)   |
|                             |   | Convert units of time   | Convert hours and minutes to hours in decimal form (and reverse)   |
|                             |   | Speed, Distance & Time  | Calculate speed, distance or time given the other two using simple time periods  |
|                             | Calculate speed, distance or time given the other two using time intervals and/or hours and minutes within problems |   |  |
|                             | Angles  | Terminology   | Types of angles (revision) - acute, straight, obtuse, right, reflex, full turn   |
|                             |   | Naming angles   | Name angles using 3 letters (revision)   |
|                             |   | Angles in 2D shapes   | Draw and measure angles using a protractor   |
|                             | Symmetry  | Line/reflection symmetry  | Line/reflection symmetry - line on or out with shape   |
|                             |   | Rotational symmetry   | Rotational symmetry - using centre as axis of rotation   |
|                             |   | Rotational symmetry   | Rotational symmetry - using point out with shape as axis of rotation   |
|                             |   | Tessellation  | Tessellation of simple 2D shapes to produce tiling patterns  |
|                             |   | Transformation of point or shape  | Reflect, translate, or rotate a point or simple 2D shape within a set of axes and describe coordinates                 |
|                             | Properties of 2D shapes   | Draw/properties of 2D shapes (revision)   | Identify and draw 2D shapes  |
|                             |   | Properties of 2D shapes   | Properties of 2D shapes - square, rectangle, parallelogram, rhombus, kite, triangles (scalene, equilateral, isosceles) |
|                             | Perimeter   | Convert between metric units of measurement   | Know metric units of measurement (mm, cm, m, km) and convert between   |
|                             |   | Perimeter of 2D shapes  | Calculate perimeter of 2D shapes including composite shapes  |
|                             | Area  | Terminology of area units   | Know metric units of measurement ( $\text{mm}^2$ , $\text{cm}^2$ , $\text{m}^2$ , $\text{km}^2$ )                      |
|                             |   | Area of 2D shapes - using formulae  | Use a formula to find the area of 2D shapes - square, rectangle, triangle, kite, parallelogram, rhombus                |
| Area of composite 2D shapes |   | Calculate the area of composite 2D shapes, including parallelogram, kite and trapezium approached as composite shapes |  |

## S1 COURSE PLAN

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|  | Volume | Weight                                   | Convert between grams and kilograms  |
|  |        | Terminology of volume units              | Know metric units of measurement ( $\text{mm}^3$ , $\text{cm}^3$ , $\text{m}^3$ , $\text{km}^3$ )            |
|  |        | Nets of 3D shapes                        | Know properties of 3D shapes and draw nets of cubes, cuboids, triangular prisms                              |
|  |        | Volume of 3D shapes - using formulae     | Use a formula to find the volume of 3D shapes - cube, cuboid, prisms   |
|  |        | Convert between solid and liquid volumes | Know that $1\text{cm}^3 = 1\text{ml}$ , and therefore $1\text{ litre} = 1000\text{cm}^3$ and use in problems |

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| TERM 4 - April to May | Coordinates                | Terminology  | Revision - axes are labelled x and y; coordinates are in the form (x, y); the 'origin' is (0, 0) |
|                       |                            | Coordinates in first quadrant  | Read/describe coordinates in the first quadrant in the form (x, y)                               |
|                       |                            |  | Plot coordinates on a set of axes (first quadrant only)  |
|                       | Coordinates in 4 quadrants | Plot and read coordinates in the form (x, y) on all 4 quadrants (negative coordinates) |  |
|                       | Data and Analysis          | Graphs and charts  | Read and understand graphs and charts  |
|                       |                            |  | Recognise misleading and biased data   |
|                       |                            | Graphs/Charts inc pie charts using discrete and grouped data                           | Draw graphs/charts (discrete data): bar, line, pictogram, frequency table, pie                   |
|                       |                            |  | Draw graphs/charts (grouped data): bar, line, pictogram, frequency table, pie                    |
|                       | Chance and Uncertainty     | Probability  | Probability can be written as a fraction, decimal, or percentage                                 |
|                       |                            |  | Calculate probability of a simple event  |
|                       |                            |  | Calculate probability of an event  |
|                       |                            |  | Compare different events to calculate best chance  |
|                       | Project                    | Project  | Famous Mathematician   |