|  |  | Term 1 |  | Term 2 |  | Term 3 |  |
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|  | No. of Weeks | Number \& Algebra (7) | Algebra (7) | Geometry (6) | Geometry (5) | Proportional Reasoning (6) | Geometry <br> (7) |
| Year 8 | Topic Title and NC link | $\begin{array}{\|l} \hline \text { Number } \\ \text { N7, N10, N11, N12 \& } \\ \text { A1, A2, A3, A4 } \end{array}$ | $\begin{array}{\|l} \hline \text { Algebra } \\ \text { A7, A6, A14, A15, } \\ \text { A16, G5 } \end{array}$ | $\begin{aligned} & \text { Geometry } \\ & \text { G2, G3, G4, G6, } \\ & \text { G7, G10, G12, } \\ & \text { G13 } \end{aligned}$ | Geometry G11, G1, N15, G5, N10, N11, R8 | $\begin{aligned} & \text { Geometry } \\ & \text { G1, G2, G15 } \end{aligned}$ | Ratio P3, R2, R3, R4, R5, R6, R7, R9, R10 |
|  | Pupils should know... | - How to square whole numbers <br> - How to work out cube numbers <br> - How percentage is a fraction out of 100 <br> - How to calculate a \% of an amount without a calculator <br> - How to find a whole given a \% part <br> - How to represent one value as a \% of another <br> - When to use a range of imperial and metric units <br> - How to convert between metric units of length, mass and capacity <br> - How to write in index form <br> - How to simplify to index form <br> - Algebraic vocabulary | - How to represent simple equations with algebra tiles and as a bar model <br> - How to solve a variety of linear equations with one unknown <br> - How to expand a single bracket <br> - How to find the term-to-term rule or position-to-term rule of an arithmetic sequence <br> - How to generate terms of a sequence using the term-to-term rule or position-toterm rule <br> - How to recognise a geometric sequence | - How to measure and draw acute, obtuse and reflex angles <br> - How to label a shapes sides and angles with correct notation <br> - How to find missing angles on a straight line, at a point and in a triangle or quadrilateral <br> - Understand vertically opposite angles <br> - How to draw Side, Angle, Side (SAS) and Angle, Side, Angle (ASA) triangle and Side, Side, Side (SSS) triangles | - How to use different angle facts (straight line, around a point, vertically opposite, angles in a triangle and quadrilateral) to find unknown angles <br> - How to find interior and exterior angles of polygons <br> - Know the difference between simple \& compound interest <br> - Know how to find reverse percentages <br> - Know how to increase and decrease using multipliers | - How to sort given data in the Venn diagrams <br> - How to identify corresponding, alternate, cointerior angles in parallel lines <br> - How to find area of a circle and trapezium | - How to identify 3D shapes and their properties <br> - How to find surface area and volume of cubes, cuboids and triangular prisms <br> - How to simplify ratios and identify equivalent ratios <br> - How to represent ratios using bar model and divide an amount into given ratios |


|  |  | - How to write basic algebraic notation <br> - How to simplify expression by adding and subtracting <br> - How to simplify expression by multiplying and dividing <br> - How to expand single brackets <br> - How to substitute into an expression or formula | - How to calculate the nth term of a sequence <br> - How to generate terms using the nth term of a sequence <br> - To investigate special sequences <br> - How to represent and interpret Inequality on a number line <br> - How to solve an inequality and show the solution on a numberline | - How to accurately draw quadrilateral <br> - How to construct angle and line bisectors <br> - What pi is and how it is used to find circumference <br> - How to find arc lengths and perimeter of a sector <br> - The properties of the three different types of triangle <br> - The properties of the different quadrilateral shapes <br> - How to find the lines of symmetry on a shape <br> - Calculate the order of rotational symmetry |  |  |  |
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|  | Pupils should be able to do... | - Calculate with square numbers and their roots | - Form \& solve equations from worded problems | - Measure and draw acute, obtuse and reflex angles | - Find the interior sum of angles in any polygon | - How to use and interpret the correct notation for | - How to sketch nets of 3D shapes and link their nets to the shapes |




|  | $\bullet$Order of <br> operations <br> Know what a base <br> and power is | $\bullet$Know names <br> of different <br> two- <br> dimensional <br> shapes e.g. <br> triangles. <br> Know what <br> parallel lines <br> and diagonals <br> are |  |  |  |
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