## Curriculum Map Year 7 MATHEMATICS

| Topic Name | Term | Skills developed with link to NC Subject content | Reflection on previous link in the curriculum | Progress to future link in the curriculum |
| :---: | :---: | :---: | :---: | :---: |
| Number systems and the axioms | Autumn HT1 | - Place value systems including base 10 and other bases <br> - Commutativity, associativity and distributivity |  | These are key skills which develop deeper knowledge of our decimal number system. |
| Factors and multiples and order of operations | Autumn HT1 | - Factors, primes and multiples <br> - Square and cube numbers <br> - Representing the structure of number <br> - Establishing the order of operations | Year 6: Factors, primes and multiples. | Y7 Summer HT5 Prime factor decomposition |
| Positive and negative numbers | Autumn HT2 | - Negative numbers in context <br> - Using negative numbers with all four operations | Year 6: Order of operations introduced. | Key skills applied to subsequent Number and Algebra topics |
| Expressions, equations and sequences | Autumn HT2 | - Finding missing terms in sequences <br> - Finding the nth term <br> - Writing expressions <br> - Recognising equivalent expressions | Year 6: Sequences: finding the next term. | GCSE: nth term of quadratic sequences. |
| Angles | Spring HT3 | - Measuring and drawing angles <br> - Angles on a straight line and around a point <br> - Angles in parallel lines <br> - Creating expressions from angle facts | Year 6: Introduction to Angle properties. | Year 8: Angles in polygons |
| Classifying 2-D shapes | Spring HT3 | - Classifying polygons according to their properties <br> - Rotational and line symmetry | Year 6: Translation and Reflection Introduced | Year 8: Transformations |
| Constructing triangles and quadrilaterals | Spring HT3 | - Using a ruler, protractor and compasses to construct 2D shapes <br> - Using properties of quadrilaterals and triangles to explore standard constructions. | Year 5: Drawing Angles | GCSE: Loci and Constructions |
| Coordinates | Spring HT4 | - Plotting points in all four quadrants <br> - Horizontal and vertical lines <br> - Midpoints of line segments <br> - Problem solving on a coordinate grid | Year 6: Plotting Coordinates | Year 8: Transformations/Linear Graphs |
| Area of 2-D shapes | Spring HT4 | - Area of triangles and quadrilaterals <br> - Formulae and solving equations | Year 6: Introduction to Area of Rectangles, Triangles and Parallelograms | Year 8: Area of Circles and Composite Shapes. |
| Prime factor decomposition | Summer HT5 | - Prime factor decomposition <br> - LCM and HCF <br> - Square roots and cube roots | Year 7: Autumn 1- Factors and Multiples | GCSE: Further application questions |
| Fractions | Summer HT5 | - Equivalent fractions <br> - Converting between fractions and decimals <br> - Multiply and divide fractions <br> - Fractions of amounts | Year 6: Introduction to operations on fractions | GCSE: Algebraic Fractions |


|  |  | - Mixed numbers and improper fractions |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Ratio | Summer <br> HT6 | - Ratio notation <br> - Understand the relationship between ratio and fractions <br> - Working with ratios and quantities | Year 6: Introduced to unequal sharing of a quantity. | Year 8: Review of ratio with further application questions |
| Percentages | $\begin{aligned} & \text { Summer } \\ & \text { HT6 } \end{aligned}$ | - Equivalence to fractions and decimal fractions <br> - Percentage of an amount <br> - Percentage increase and decrease <br> - Finding the original amount <br> - Using percentages, fractions and decimals in different contexts including probability | Year 6: Introduction to fraction, decimal and percentage conversion. Percentages of amounts. | GCSE: Compound/Reverse Percentages |

