KS3 Topic Order
Year 8
1. Number: Integers and Decimals
2. Number: Powers, Multiples, Factors and Primes
3. Algebra: Algebraic Expressions
4. Shape, Space & Measures: Angles and Shapes
5. Shape, Space & Measures: 2D and 3D Shapes

1. Number: Integers and Decimals
- Multiply and divide numbers by 10, 100 and 1000
- Understand place value to three decimal places
- Read, write, compare and order integers (positive and negative) and decimals (up to 3dp)
- Round to the nearest whole number, ten, hundred, thousand
- Round to a given number of decimal places
- Estimate answers
- Check calculations using approximation and estimation
- Check calculations by applying inverse operations
- Written addition, subtraction, multiplication and division of positive and negative integers and decimals (with and without a calculator)
- Understand and use negative numbers in practical situations, e.g. temperature, debt

2. Number: Powers, Multiples, Factors and Primes
- Find square numbers, positive and negative square roots, cube numbers and cube roots
- Use index notation for squares, cubes and powers of 10
- Find the factors and multiples of a number
- Understand prime numbers
- Use prime factor decomposition to write any number as a product of its prime factors
- Find the highest common factor (HCF) and least (lowest) common multiple (LCM) of two numbers

3. Algebra: Algebraic Expressions
- Interpret simple expressions as function machines with inputs and outputs
- Simplify expressions by collecting like terms
- Multiply a constant over a bracket/expand brackets

4. Shape, Space and Measures: Angles and Shapes
- Understand the terms parallel, perpendicular, polygons and regular polygons
- Polygons with reflection and/or rotation symmetries
- Label the sides and angles of shapes using correct the mathematical notation
- Apply the angles facts: angles at a point, angles on a straight line, vertically opposite angles, etc.
- Understand and use alternate and corresponding angles on parallel lines
- Estimate, measure, draw and label angles up to 360 degrees

5. Shape, Space and Measures: 2D and 3D Shapes
- Label the parts of a circle: centre, radius, chord, diameter, circumference
- Apply the properties and definitions of quadrilaterals, including square, rectangle, parallelogram, trapezium, kite and rhombus; and triangles
- Identify the faces, edges and vertices of 3D shapes, including cubes, cuboids, prisms, cylinders, pyramids, cones and spheres
- Tessellate 2D shapes
- Reflect 2-D shapes in a line