

## MATHS - KS3 Key Concept Overview

| YEAR |             | Autumn 1  | Autumn 2  | Spring 1   | Spring 2   | Summer 1  | Summer 2   |
|------|-------------|---|---|--|--|---|--|
| 7    | Key Concept | Algebraic thinking  | Place value and proportion  | Reasoning and problem solving with addition and subtraction  | Reasoning and problem solving with multiplication and division   | Directed number & Fractional thinking   | Reasoning with lines angles and probability  |
|      | Overview    | <ul style="list-style-type: none"> <li>Understand and use algebraic notation</li> <li>Equality and equivalence</li> <li>Sequences</li> </ul>  | <ul style="list-style-type: none"> <li>Place value and ordering integers and decimals</li> <li>Fraction, decimal and percentage equivalence</li> <li>Prime numbers and proof</li> </ul> | <ul style="list-style-type: none"> <li>Solving problems with addition and subtraction</li> <li>Averages</li> </ul> | <ul style="list-style-type: none"> <li>Solving problem with multiplication and division</li> <li>Fractions and percentages of amounts</li> </ul> | <ul style="list-style-type: none"> <li>Operations and equations with directed number</li> <li>Addition and subtraction of fractions</li> </ul>                      | <ul style="list-style-type: none"> <li>Constructing, measuring and using geometric notation</li> <li>Developing geometric reasoning</li> <li>Sets and probability</li> </ul> |
| 8    | Key Concept | Reasoning and Applications of Number  | Algebraic Techniques and Proportional Reasoning   | Representations  | Algebraic Techniques and Standard Index Form   | Developing Geometry   | Reasoning with data  |
|      | Overview    | <ul style="list-style-type: none"> <li>Number sense</li> <li>Fractions and Percentages</li> <li>Multiplying and Dividing Fractions</li> </ul> | <ul style="list-style-type: none"> <li>Sequences</li> <li>Prime Numbers and Proof</li> <li>Ratio and Scale</li> <li>Multiplicative Change</li> </ul>                                    | <ul style="list-style-type: none"> <li>Working in the cartesian plane</li> <li>Tables and Probability</li> </ul>   | <ul style="list-style-type: none"> <li>Brackets, Equations and Inequalities</li> <li>Indices</li> <li>Standard Index form</li> </ul>             | <ul style="list-style-type: none"> <li>Angles in parallel lines and polygons</li> <li>Area of trapezia and circles</li> <li>Line symmetry and reflection</li> </ul> | <ul style="list-style-type: none"> <li>Representing data</li> <li>The data handling cycle</li> <li>Measures of location</li> </ul>   |
| 9    | Key Concept | Reasoning with algebra  | Constructing in 2 and 3 dimensions  | Reasoning with number  | Reasoning with algebra and Geometry  | Reasoning with number and proportion  | Representations  |
|      | Overview    | <ul style="list-style-type: none"> <li>Straight line graphs</li> <li>Algebraic representation</li> </ul>                                      | <ul style="list-style-type: none"> <li>Three dimensional shapes</li> <li>Constructions and Congruency</li> </ul>  | <ul style="list-style-type: none"> <li>Fractions and Decimals</li> <li>Percentage change</li> </ul>                | <ul style="list-style-type: none"> <li>Forming and solving equations</li> <li>Pythagoras' Theorem</li> </ul>                                     | <ul style="list-style-type: none"> <li>Indices, standard form and surds</li> <li>Rates and Measure</li> </ul>   | <ul style="list-style-type: none"> <li>Scatter graphs and outliers</li> <li>Accuracy and Bounds</li> <li>Transformations</li> <li>Probabilities</li> </ul>                   |