# Maths – Year 7 Overview

| | Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 | |
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| | **Sequences** | **Place value and ordering integers and decimals** | **Solve problems with addition & subtraction** | **Four operations with directed number** | **Constructing, measuring and using geometric notation** | **Developing number sense** | **Careers** |
| **White Rose Maths - Year 7** | • Describe and continue sequences in diagram and number forms, both linear and non-linear.<br>• Compare numerical and graphical forms. | • Recognise and use integer place value up to one billion.<br>• Recognise and use decimal place value to at least hundredths.<br>• Work out intervals and use number lines.<br>• Compare and order numbers.<br>• Use ordered lists to find range and the median of a set of data.<br>• Round numbers to positive powers of ten<br><br>Round numbers to one significant figure. | • Use mental and formal written methods of addition with integers and decimals, including choosing the most appropriate method.<br>• Solve problems in the context of bar charts and line charts. | • Order directed numbers, both in contextualised and abstract situations.<br>• Revisit four operations to include directed number.<br>• Use a calculator with directed number.<br>• Solve two-step equations (with and without a calculator)<br><br>Use the order of operations. | • Understand and use letting and labelling notation for lines and angles.<br>• Draw and measure lines and angles accurately.<br>• Classify angles.<br>• Identify and draw parallel line and perpendicular lines.<br>• Recognise types of triangle, quadrilateral and other polygons.<br>• Construct triangles given SSS, SAS and ASA<br><br>Draw and interpret pie charts. | • Mental arithmetic strategies.<br>• Use known facts to derive other facts.<br>• Evaluate an algebraic expression given related facts.<br>• Use estimation. | Careers lesson 1 – After studying the unit of algebra students will look at the importance of substitution and equations in the healthcare sector. Calculating BMI based on your height and weight to help maintain a healthy lifestyle & using basic medicine calculations to highlight the importance of Maths in this career.<br><br>Careers lesson 2 – Once year 7's have seen area and perimeter basics the link to being a landscape gardener and showcasing this topic in a real life context is a life skill for the future!<br><br>Careers lesson 3 – Architecture is so much more than drawing, The links to scale drawings, angles and the calculations fits perfectly after our year 7 topic of geometric reasoning. This aspirational career lesson will showcase the need for accuracy and use of Mathematical equipment. |

| Understand and use algebraic notation | Fraction, decimal and percentage equivalence | Solving problems with multiplication and division | Addition and subtraction of fractions | Developing geometric reasoning | Sets and probability |
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| • Use single function machines and series of two function machines with numbers, bar models and letters.<br>• Use and interpret algebraic notation.<br>• Understand and use inverse operations.<br>• Form and substitute into expressions, including to generate sequences.<br>• Represent functions graphically.<br>• Careers Lesson 1. | • Represent tenths and hundredths on diagrams and number lines.<br>• Interchange between fractions, decimals and percentages for multiples of one tenths and one quarter.<br>• Interpret pie charts.<br>• Equivalent fractions.<br>• Convert between other fractions, decimals and percentages. | • Multiply by 10, 100, 1000, 0.1 and 0.01, and convert metric units.<br>• Use mental and formal written methods of multiplication and division.<br>• Find the HCF and LCM of small numbers.<br>• Evaluate the areas of triangles, rectangles and parallelograms.<br>• Find the mean of a set of numbers.<br>• Find simple fractions and percentages of amounts.<br>• Begin to use the order of operations.<br>• Careers Lesson 2. | • Represent tenths and hundredths on diagrams and number lines.<br>• Convert mixed numbers and improper fractions.<br>• Add and subtract fractions with the same denominator, one denominator a multiple of the other and different denominators.<br>• Add and subtract fractions and decimals. | • Calculate and use angles at a point, angles on a straight line and vertically opposite angles.<br>• Calculate the missing angles in triangles and quadrilaterals.<br>• Careers Lesson 3. | • Understand and use set notation.<br>• Draw and interpret Venn diagrams.<br>• Understand and use the language of probability.<br>• Calculate the probability of a single event.<br>• Use the sum of probabilities of an event is 1. |

| Equality and equivalence | | Fractions & percentages of amounts | | Prime numbers and proof | |
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| • Understand equality.<br>• Use fact families.<br>• Form and solve one-step equations.<br>• Understand equivalence of algebraic expressions.<br>• Collect like terms. | | • Work out simple fractions and percentages of amount with and without a calculator. | | • Recognise prime, square and triangle numbers.<br>• Express a number as a product of prime factors.<br>• Powers and roots.<br>• Make and test conjectures.<br>• Understand and use counterexamples. | |