

## Year 7 Spring Term 2022 Maths Curriculum

Students in Year 7 study different content dependent upon their class. The classes will spend approximately two weeks studying each topic.

<b>Mr Storey Scott and Mrs Joseph</b>		<b>Mr Ahluwalia and Miss Robinson</b>		<b>Mr Bees and Mr McClusky</b>	
<b>Length and perimeter</b>	Students measure and draw lines accurate to the nearest mm, before looking at perimeter of increasing more complex shapes and using perimeter to find missing lengths.	<b>Angles</b>	Techniques for measuring and drawing angles are consolidated before looking at angle rules involving lines, triangles and quadrilaterals. A focus for this unit is developing geometrical reasoning.	<b>Algebraic expressions</b>	Exact definitions of algebraic expressions are developed, leading to students manipulating expressions by collecting like terms, multiplying and dividing terms and expanding brackets.
<b>Division</b>	Links between multiplication and division are explored and strategies for division are developed. This leads to students using division to find fractions of numbers and solving problems.	<b>Properties of shapes and solids</b>	Understanding of exact properties of both 2D shapes and 3D solids are considered. Students then look at the different methods of drawing 3D solids.	<b>Lines and angles</b>	Three letter angle notation is introduced and students develop their geometrical reasoning using proper notation for lines and polygons. Rotation symmetry is also studied.
<b>Symmetry and shape</b>	Understanding of symmetry is developed. This is used to help students classify different triangles, quadrilaterals and other polygons.	<b>Area</b>	Students look at the techniques involved in finding the areas of increasingly more complex shapes, including composites. Problems involving finding missing lengths from areas are also considered.	<b>Fractions</b>	Students look at how improper fractions and mixed numbers can be used to represent numbers greater than a whole. They then look at how to add, subtract, multiply and divide these numbers.
<b>Time</b>	Students practice reading both digital and analogue times, converting between times written using the twelve and twenty-four hour clocks and using time related facts to solve problems.	<b>Proportional reasoning</b>	The double number line is introduced to students and used to solve direct proportion problems. Links are also made with ratio problems, building on the bar model work from earlier in the year.	<b>Solving equations</b>	Various techniques for solving linear equations are explored including those involving multiple unknowns. Algebraic substitution is used to check solutions.
<b>Coordinates</b>	Students knowledge of accurately plotting and reading coordinates is consolidated before linking this to compass directions and the skill of translating shapes.	<b>Fractions and percentages</b>	Equivalence of fractions and percentages is consolidated before students further develop their skills in finding percentages of quantities using the double number line.	<b>Sequences</b>	Students look at how arithmetic sequences can be described using term to term and position to term rules. Geometrical sequence patterns are also considered.

After completing each topic students complete an assessed homework task which is recorded in the front of their yellow assessment books.

Students will also sit short two short tests this term. These are provisionally planned in the weeks beginning 14<sup>th</sup> February and 4<sup>th</sup> April. These tests will cover topics they have studied in the half term and prior knowledge. Students record their results of all tests in the back of their yellow assessment books.