

Year 8 Spring Term 2021 Maths Curriculum

Students in Year 8 study different content dependent upon their class. The classes will spend approximately two weeks studying each topic.

Mr McClusky, Mr Bees		Mr Ahluwalia, Mr Storey-Scott		Mrs Joseph, Mr McClusky/Mr Hammond	
Area	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.	Fractions	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.	Probability	Different ways of writing probabilities are studied before looking at probability questions involving mutually exclusive events, two-way tables, frequency trees, Venn diagrams and expectation.
Angles	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 students geometrical reasoning.	Algebraic expressions	Exact definitions of algebraic expressions are developed, leading to students manipulating expressions by collecting like terms, multiplying and dividing terms and expanding brackets.	Circumference and perimeter	Students start this topic by discovering pi before using it to calculate circumference and diameters of circles. Perimeter of sectors and circle composites are studied.
Properties of shapes and solids	Understanding of exact properties of both 2D shapes and 3D solids are considered. Students then look at the different methods of drawing 3D solids.	Lines and angles	Three letter angle notation is introduced and students develop their geometrical reasoning using proper notation for lines and polygons. Rotation symmetry is also studied.	Geometry and angles	Previous angle work is built upon with students looking at how angles on parallel lines are linked and internal and external angles of polygons. Geometric proof is also introduced.
Proportional reasoning	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.	Solving equations	Various techniques for solving linear equations are explored including those involving multiple unknowns. Algebraic substitution is used to check solutions.	Compound measures	Definition of compound measures is developed with students then looking at a variety of problems involving speed, density, pressure and population density.
Fractions and percentages	Equivalence of fractions and percentages is consolidated before students further develop their skills in finding percentages of quantities using the double number line.	Sequences	Students look at how arithmetic sequences can be described using term to term and position to term rules. Geometrical sequence patterns are also considered.	Area	Areas of increasingly complex composite shapes are looked at including those involving trapezia and parallelograms. Area of circles are also studied using earlier work on pi.

After completing each topic students complete an assessed piece of work which they will hand in via teams or will complete in their yellow assessment book.

Students would normally sit short two short tests this term. These were provisionally planned for the weeks beginning 8th February and 28th March. We are still unsure whether these tests will be running at the present moment.