

Year 9 Spring Term 2021 Maths Curriculum

Students in Year 9 study different content dependent upon their class. The classes will spend approximately two weeks studying each topic.

Mrs Loveridge, Mr Bees/Mr Hammond		Mr Storey-Scott, Mrs Joseph		Mr Ahluwalia, Mr McClusky	
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.	Vectors	After being introduced to what vectors represent and how they are written, students look at how to prove vectors are parallel and solve geometrical problems involving them.
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.	Enlargement and similar shapes	Techniques for enlarging shapes by both positive and negative scale factors are studied. This leads onto students solving problems involving similar and congruent shapes.
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.	Trigonometry	Students investigate how the ratio of the lengths of sides of right-angled triangles are linked. This leads to trigonometric ratios being used to calculate missing sides, angles and solving other problems.
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.	Sequences	Work on arithmetic sequences is built upon with students now studying both geometric and simple quadratic sequences; this includes finding and using nth term rules.
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.	Sets and probability	Set notation is introduced. Techniques for combining the probabilities of more than one event are studied, this includes listing, sample space diagrams and tree diagrams.

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.