

Meet the Team

Damian Griffith – Curriculum Area Leader – Mathematics

Jane Eagle – Assistant Principal

Ami Findley – Teacher of Mathematics

Georgia Gardner – Teacher of Mathematics

Hayat Guillard – STEM Leader

Sophie Madden - Teaching Assistant

Lindsey Robertson– Teacher of Mathematics

Chris Smith – Teacher of Mathematics

Department Introduction

Welcome to the Albion Academy Mathematic Department. Maths is one of the most important and, surprisingly, beautiful subjects you can study. Through Mathematics you will develop the skills to allow you to make sense of the world around you and the life-long learning skills of solving problems. With us you'll learn little things like what a 100-sided shape is called to big things like how to work out how far the horizon is. You'll find out how the iPhone and chewing gum are related or why Nike trainers are so expensive. By the time you leave year 11, you'll have all the skills and knowledge you need to be or do whatever you like, whether you want to be an engineer or start your own business or even become a teacher!

All students follow the EDEXCEL scheme of learning. In year 7, this is also supported by Mathematics Mastery. This new and innovative curriculum encourages students to develop a deeper conceptual understanding over time. At the end of year 11, GCSE students will sit three examinations. The three 90 minute examinations will consist of 1 non calculator paper and 2 calculator papers, which will assess against the new 9-1 grades. In order to support students achieve their best outcomes, we host a variety of intervention sessions in year 11. These range from small group support, PiXL therapy lessons, period 6 intervention sessions and creative homework opportunities. Learning is also supported by regular targeted use of MathsWatch, GCSEPOD and Corbett Maths by class teachers to facilitate home-learning and independent learning.

MathsWatch



GCSEPod



Corbett Maths



Curriculum Guide - What you study

| Year 7 | | |
|-----------------|---|---|
| | Year 7 Project | Core Knowledge and Skills Assessed |
| Autumn 1 | How many Maltesers can fit inside your math's classroom? | Mode, Median and range; displaying data, Grouping Data, Comparing Data, Line Graphs and Bar Charts. |
| Autumn 2 | How many bricks do you need to build the front of a house? | Addition and Subtraction, Multiplication, Division, Negative Numbers, Factors, Multiples and Primes, Square and Triangular Numbers. |
| Spring 1 | How do I share 8 slices of pizza between 10 people? | Comparing Fractions, Simplifying Fractions, Working With Fractions, Fractions and Decimals, Understanding Percentages, Percentages of amounts. The language of Probability, Calculating Probability, Experimental Probability. |
| Spring 2 | How do I work out the length of a park by knowing its area? | Direct Proportion, Writing Ratios, Using Ratios, Scale and Measures, Proportions and Fractions, Proportions and Percentages. |
| Summer 1 | How can I identify when a long-distance track runner will lap another? | Congruency and Enlargements, Symmetry, Reflection, Rotation, Transformations and Combining Transformations |
| Summer 2 | Revision | Revision |

| Year 8 | | |
|-----------------|--|--|
| | Year 8 Project | Core Knowledge and Skills Assessed |
| Autumn 1 | How can I find the exact middle between two points without using a ruler? | Negative Numbers, Powers Roots and Brackets, Multiples and Factors, |

| | | |
|-----------------|---|---|
| | | Area of a Triangle, Area of a Parallelogram & Trapezium, Volume of cubes and cuboids, 3D Shapes and Surface Area of Cubes and Cuboids, Multiples and Factors. |
| Autumn 2 | How much cardboard would I need to make a shoebox? | Algebraic Powers, Expression and brackets, factorising expressions, one and two step equations, Distance, Time Graphs; Conversion Graphs and Line Graphs, Complex Graphs |
| Spring 1 | What is the probability that a random student will like Coca Cola? | Ordering Decimals and Rounding, Place Value Calculations, Calculations with Decimals, Ratio and proportion with decimals, Quadrilaterals, Alternate Angles and Proof, Geometrical Problems, Exterior and Interior Angles, Solving Geometric Problems |
| Spring 2 | How do I find how much wood I need to build a table? | Direct Proportion and Graphs, Gradients, Equations of Straight Lines, Fractions and decimals, Equivalent Proportions, Writing Percentages, Percentages of Amounts, |
| Summer 1 | How can I show how much my phone bill will be with a graph? | Revision |
| Summer 2 | Revision | Revision |

| Year 9 | | |
|-----------------|--|--|
| | Year 9 Project | Core Knowledge and Skills Assessed |
| Autumn 1 | How can we use rounding to estimate answers to complex problems? | Lowest Common Multiple and Highest Common Factor, Indices, Standard Form, Rounding, significant figures Indices, squares roots and cubes, Prime factor decomposition, Venn Diagram (LCM & HCF), Algebraic notation, simplifying expressions, Index Laws, Substitution, Formula, Expanding Brackets, Factorising |
| Autumn 2 | Is the iPhone responsible for a decline in chewing gum sales? | Frequency Tables, Two way tables Representing Data, Time Series, Stem and Leaf, Pie Charts, Scatter Graphs, Lines of Best fit, |
| Spring 1 | How do we work out the price of a TV BEFORE a discount? | Fractions, Fractions & Decimals, Percentages, Solving Equations, rearranging, inequalities, Using Formula, Sequences |
| Spring 2 | How can we predict what the price of milk will be in 50 years from now? | Properties of shapes, Angle Facts, Geometrical Problems, Means & Range, finding averages from Stem and Leaf and Grouped Frequency, Sampling. |
| Summer 1 | If a recipe is given for 4 people, how do I work out what it is for 7 people? | Rectangles, Parallelograms and Triangles, Trapezia, area of compound shapes, surface area of 3D Solids Volume of Prisms |
| Summer 2 | Revision | Revision |

| Year 10 | | |
|-----------------|---|---|
| | Year 10 Project | Core Knowledge and Skills Assessed |
| Autumn 1 | How do Nike work out how much they should sell their trainers for? | Coordinates, $y=MX + C$, Linear Graphs, Gradients, Real life Graphs, Distance Time Graphs, Translation, Reflection, Enlargement, Rotations, Combining Transformations, Ratio Notation, Using Ratios, Ratio and Measures, Comparing Ratios, Proportion, Proportion and Graphs |
| Autumn 2 | Where should you stand to get the best mobile phone signal? | Pythagoras Theorem, Trigonometric Ratios, Solving Trigonometric Problems, |
| Spring 1 | How much leather do you need to make a football? | Calculating Probability, Two Way Tables and Probability, Experiential Probability, Venn Diagrams, Tree Diagrams |
| Spring 2 | How do we compare if your class did better in a test than another class? | Percentages, Compound Interest, Compound Measures; Speed Distance Time Graphs, Direct and Indirect Proportion, Properties of 3D Solids, Plans and Elevations, Constructions (SSA, ASA, SAS), Scale Drawing and Maps, Constructions (Angle and Perpendicular Bisectors), Loci And Regions, Bearings |
| Summer 1 | How far away is the horizon? | Expanding Double Brackets, Quadratic Graphs, Factoring Quadratic Expressions, Solving Quadratics Expressions |
| Summer 2 | Revision | Circumference and Area of Circles, Semi Circles and Sectors, Composite 2D Shapes and Cylinders, |

| | | |
|--|--|---|
| | | Pyramids and Cones, Spheres and Composite Shapes |
|--|--|---|

| Year 11 | | |
|----------------|---|--|
| | Year 10 Project | Core Knowledge and Skills Assessed |
| Autumn | How do we find the probability that a student studies History AND Spanish? | Fractions, Indices and Standard Form, Congruence Similarity and Vectors Graphs of Reciprocal and cubic functions, Non Linear Graphs |
| Spring | Revision | Revision |
| Summer | Revision | Revision |