



Mathematics Curriculum Plan Overview

GCSE plan overview

Students will be at different levels in one mixed ability group.

| Term | Topic | Learning | How can parents' best support |
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| Autumn 1 | Basic number | <p>Statistics - Bar charts and pictograms including dual bar charts.</p> <p>Number - Negative numbers, index rules, negative indices, standard form, BIDMAS, Describing factors and multiples, Highest Common Factor Lowest common Multiple, using Venn diagrams to find HCF LCM</p> <p>Fractions - simplifying fractions, equivalent fractions, 4 operations with fractions</p> | <p>Continued practice with times tables supports work on fractions and ratio.</p> <p>Look at data in the media and how it is used/misused.</p> |
| | Collecting and representing data Fractions (4 operations + - x) Hot Spot - Times Tables | | |
| Assessment: | Self assessment and topic tests | | |
| Autumn 2 | Sequences | <p>Algebra Generating sequences given a rule. continuing a numeric or pictorial sequence given a rule. Linear sequences - term to term and position to term rules. Fibonacci type sequences.</p> <p>Algebra - collecting terms and simplifying expressions</p> | |
| | Rounding Basic Algebra Coordinates | | |
| Assessment: | Self assessment and topic tests (Mock Exams November) | | |
| Spring 1 | Basic Decimals | <p>Number - percentages, basic percentages as proportion of 100, converting percentages to decimals</p> <p>Geometry and Measures - area and perimeter of rectangles and squares and compound shapes made with rectilinear shapes, area of quadrilaterals including trapeziums and parallelograms, area of triangles and polygons made from triangles</p> | <p>Investigate Golden Ratio and sequences in nature.</p> <p>Use different measurements in real life settings e.g. cooking</p> |
| | Basic Percentages Area and Perimeter Hot Spot - Measures | | |
| Assessment: | Self assessment and topic tests | | |
| Spring 2 | Circumference and area of a circle | <p>Geometry and measures - naming parts of circles, finding circumference and area of circles, area of sectors and segments</p> <p>Ratio and proportion - simplifying ratios finding similar ratios, share in a given ratio, use unitary method for calculating ratios</p> <p>Probability - calculate the probability of single events happening using fractions/decimals/percentages, calculate the probability of something "Not" happening, use AND and OR rule with probability in tree diagrams, understand mutually exclusive and independent event</p> | <p>listen to the circle song and google and discuss pi</p> <p>Practice</p> <p>Look at timetables and practice reading digital and analogues times</p> |
| | Ratio and Proportion Basic Probability Hot Spot - Time | | |
| Assessment: | Self assessment and topic tests | | |
| Summer 1 | Exam Prep Equations | <p>Algebra - solve 1 and 2 step linear equations, solve equations with unknowns on both sides, solve equations involving brackets,</p> | <p>Look at past papers and identify areas for revision</p> |

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| | Plans and views Scale drawings | solve quadratic equations by factorising, using the formula or completing the square. Geometry and Measures - Pythagoras Theorems Geometry and Measures - 2D representation of 3D shapes - plans and views on drawings calculating volume of 3D shapes, nets and volume and surface area - including prisms | |
| Assessment: | Self assessment and topic tests (Paper 1 examination May) | | |
| Summer 2 | Exam Prep Equations 2D Representations of 3D shapes Hot Spot Using a calculator | Geometry and Measures - 2D representation of 3D shapes - plans and views on drawings, calculating volume of 3D shapes, nets and volume and surface area - including prisms | Use of calculator - wordy maths questions |
| | <u>(Paper 2 & 3 examinations May/June)</u> | | |