



Maths Curriculum

KS3

We follow the White Rose scheme of work in KS3. This is a similar scheme of work to that which the primary schools follow and allows us to ensure consistency and continuity within the students' learning.

It also helps make transitions from KS2 into KS3 smoother given the work covered builds on what they have already learnt. In addition to this delivering the learning in longer blocks allows the students to spend a significant amount of time mastering the work covered in a similar way to how they were taught at primary school.

The depth of understanding, difficulty and challenge offered will be suitable and appropriate for each class.

KS4

In KS4 we follow the Edexcel 2-year scheme of work. Edexcel are also the exam board we use for their GCSE exams.

The scheme of work, much like the exam itself, is split into two tiers – higher and foundation.

Students will follow the scheme that is most suited to their ability. Changes can, and will, be made as appropriate throughout the years 10 and 11.

Curriculum Map

Below is a map of our curriculum.

We have combined both the KS3 White Rose scheme with the KS4 Edexcel scheme to create a coherent map across the 5-years of study. By adopting the White Rose scheme we have also been able to link our learning in year 7 with that which the students learnt in year 6.

It shows where each block/unit fits within the national curriculum and also what preceded it and what follows it.

Block and Unit Content

Further below is a break down of what exactly each block (KS3) and unit (KS4) consists of.

This should allow you to see what is being taught within these blocks and units.

As teacher we can break these down even further to plan on a lesson by lesson basis. If you'd like a more detailed explanation about what exactly each/any of these units or block contain please do get in touch.

| National Curriculum Strand | | White Rose Maths KS2/3 Scheme of Work Block | | | | Edexcel Foundation GCSE Scheme of Work Unit | | Edexcel Higher GCSE Scheme of Work Unit | |
|----------------------------|-----------------------------------|---|------------|----------|-----------------|---|----------|---|----------|
| | | Year 6 | Year 7 | Year 8 | Year 9 | Year 10F | Year 11F | Year 10H | Year 11H |
| Number | Understand and Represent Number | Autumn 1 + Spring 1 | Autumn 4 | Spring 5 | Spring 1 | 1a | 18b | 1a | 19a |
| | | Autumn 2 | Spring 2 | Spring 6 | Summer 6 | 1d | | 1b | |
| | | Autumn 1 | Spring 4 | | | | | 1c | |
| | | Autumn 2 | Summer 5 | | | | | 7c | |
| Number | Calculations | Autumn 2 | Spring 1&2 | Autumn 3 | Spring 1 | 4a | 18a | 4a | 17 |
| | | Autumn 1 | Spring 4 | Spring 6 | Spring 3 | | 14 | 1b | |
| | | Autumn 3 | Spring 5 | | | | | | |
| | | Autumn 2 + Spring 1 | Summer 3 | | | | | | |
| Number | Understand Fractions and Decimals | Spring 2 | Autumn 5 | Spring 4 | Spring 1 | 4a | 18a | 4a + 4b | 17 |
| | | Autumn 3 + Spring 2 | Spring 3 | | | 1b | | | 11 |
| Number | Percentages | Spring 2 | Autumn 5 | Spring 4 | Spring 2&3 | 4b | | 4a | 11 |
| | | Autumn 3 + Spring 2 | Spring 3 | | | | | | |
| Algebra | Notation and Substitution | Spring 3 | Autumn 2 | Spring 1 | Autumn 1,2&3 | 1c | 16a | 2a | 15 |
| | | Spring 1 | Spring 4 | Spring 3 | Summer 5 | 2a | 20 | 6b | 17 |
| | | Autumn 3 + Spring 3 | Spring 5 | | | 2b | | 9a | |

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|---------------------------------|---------------------------------------|------------------------|----------|--------------|-----------------|--------|--------------|--------------|----|
| Ratio and Proportion | | Spring 3 | Summer 3 | | | | | | |
| | Equivalence and Proof | Autumn 2 + Spring 3 | Autumn 3 | Spring 1 | Autumn 1,2&3 | 2a | 20 | 2a | 15 |
| | | Spring 3 | Spring 4 | | Summer 5 | 2b | | 9a | 17 |
| | | Spring 3 | Spring 5 | | | | | | |
| | | Spring 3 | Summer 3 | | | | | | |
| | Solving Equations and Inequalities | Autumn 2 + Spring 3 | Autumn 3 | Spring 1 | Autumn 2 | 1a | 20 | 9a | 15 |
| | | Spring 3 | Spring 4 | | Summer 5 | 5a | | 9b | 17 |
| Linear Graphs | Spring 3 | Autumn 2 | Autumn 2 | Autumn 1,2&3 | 9a | 16b | 6a + 6b | 13a + 16b | |
| | | | Autumn 4 | Summer 5 | 9b | 20 | 19a + 19b | | |
| Non-Linear Graphs | Summer 1 | Autumn 1 | Autumn 4 | Summer 5 | 9a | 16b+20 | 6c | 15 | |
| Sequences | Spring 3 | Autumn 1 | Spring 2 | Autumn 3 | 5b | | 2b | | |
| | Spring 2 | Autumn 2 | | Summer 6 | | | | | |
| Multiplicative Relationships | Autumn 2 | Spring 2 | Autumn 2 | Autumn 5 | 9a | 14 | 11 | 19b | |
| | Spring 6 | Summer 3 | Spring 6 | Summer 2 | 8 | 17 | | | |

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|-----------------------|-----------------------------------|-----------------------|----------------------|----------------------------------|------------------------------------|------------------|-------------------|----------|-----------|
| | Ratio and Rates | | | Autumn 1 | Spring 2&3 Summer 3 Summer 2 | 11a 11b 4b | 15b | 4b | |
| Geometry and Measures | Perimeter, Area and Volume | Spring 5 Spring 5 | Spring 1 Spring 2 | Autumn 1 Summer 2 | Autumn 4 | 8 | 17 19a | 7a 7b | 12 19a |
| | Constructions and Transformations | Autumn 4 | Summer 1 | Autumn 2 Summer 1 Summer 3 | Autumn 5 Spring 5 | 10 | 19b 15a 15b | 8a 8b | 18 |
| | Properties of Shapes | Summer 2 | Summer 1 | Summer 1,2&3 | Autumn 3 Autumn 4 | 6a | | 7a | 12 |
| | Angles | Summer 2 | Summer 2 | Summer 1 | Spring 4 | 6a + 6b | | 5a | 16a |
| | Pythagoras and Trigonometry | | | | Spring 6 Summer 1 | 12 | 17 | 5b | 13a + 13b |
| | Geometric Proof | Summer 2 | Summer 2 | Summer 1 | Autumn 5 Spring 4 Spring 6 | 12 | 19a | | 18 |
| Statistics | Probability | Autumn 3 + Spring 1+2 | Summer 4 | Autumn 6 | Summer 4 | | 13 | 4a + 10 | |



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|--|------------------------------|------------------------------------|----------------------|----------------------|----------|--------------|--|----|------------|
| | Represent and Interpret Data | Summer 2 Summer 1 | Spring 1 Summer 1 | Autumn 5 Summer 4 | Summer 4 | 3a + 3b 7 | | 3b | 14a 14b |
| | Statistical Measures | Autumn 1 + Spring 1 Summer 1 | Autumn 4 Spring 2 | Summer 5 | Summer 6 | 7 | | 3a | 14b |
| | Bivariate Data | | | Autumn 5 | Summer 6 | 3c | | 3b | |

Year 7 Scheme of Work

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
|---------------|--|---|--------------------------------|------------------------------------|-------------------------|--|----------------------------|--|-------------------------|---------|---------|---------|
| Autumn | Algebraic Thinking | | | | | | Place Value and Proportion | | | | | |
| | Sequences | Understand and use algebraic notation | | Equality and equivalence | | Place value and ordering integers and decimals | | Fraction, decimal and percentage equivalence | | | | |
| Spring | Applications of Number | | | | | | Directed Number | | Fractional Thinking | | | |
| | Solving problems with addition & subtraction | Solving problems with multiplication and division | | Fractions & percentages of amounts | | Operations and equations with directed number | | Addition and subtraction of fractions | | | | |
| Summer | Lines and Angles | | | | | | Reasoning with Number | | | | | |
| | Constructing, measuring and using geometric notation | | Developing geometric reasoning | | Developing number sense | | Sets and probability | | Prime numbers and proof | | | |

Year 8 Scheme of Work

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
|---------------|---------------------------------------|-----------------------|------------------------------|------------------------------------|------------------------------|--------------------------------|---------------------------|-------------------|---------------------|----------------------|--------------|---------|
| Autumn | Proportional Reasoning | | | | | | Representations | | | | | |
| | Ratio and scale | Multiplicative change | | Multiplying and dividing fractions | | Working in the Cartesian plane | | Representing data | | Tables & Probability | | |
| Spring | Algebraic Techniques | | | | | | Developing Number | | | | | |
| | Brackets, equations and inequalities | | | Sequences | | Indices | Fractions and percentages | | Standard Index form | | Number sense | |
| Summer | Developing Geometry | | | | | | Reasoning with Data | | | | | |
| | Angles in parallel lines and polygons | | Area of trapezia and circles | | Line symmetry and reflection | | The data handling cycle | | | Measures of location | | |

Year 9 Scheme of Work

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
|---------------|----------------------------|---------------------------------------|---------------------|--------|--------|--------|------------------------------------|--------------------------|---------------------|------------------------------|---------|---------|
| Autumn | Reasoning with Algebra | | | | | | Constructing in 2 and 3 Dimensions | | | | | |
| | Straight Line Graphs | Forming and Solving Equations | Testing Conjectures | | | | Three-dimensional shapes | | | Constructions and congruency | | |
| Spring | Reasoning with Number | | | | | | Reasoning with Geometry | | | | | |
| | Numbers | Using percentages | Maths and Money | | | | Deduction | Rotation and translation | Pythagoras' Theorem | | | |
| Summer | Reasoning with Proportion | | | | | | Representations and Revision | | | | | |
| | Enlargement and Similarity | Solving Ratio and Proportion Problems | Rates | | | | Probability | Algebraic Representation | Revision | | | |

KS4 Higher Tier

| Higher Tier | |
|-------------|--|
| Unit | Title |
| 1 | a Calculations, checking and rounding |
| | b Indices, roots, reciprocals and hierarchy of operations |
| | c Factors, multiples, primes, standard form and surds |
| 2 | a Algebra: the basics, setting up, rearranging and solving equations |
| | b Sequences |
| 3 | a Averages and range |
| | b Representing and interpreting data and scatter graphs |
| 4 | a Fractions and percentages |
| | b Ratio and proportion |
| 5 | a Polygons, angles and parallel lines |
| | b Pythagoras' Theorem and trigonometry |
| 6 | a Graphs: the basics and real-life graphs |
| | b Linear graphs and coordinate geometry |
| | c Quadratic, cubic and other graphs |
| 7 | a Perimeter, area and circles |
| | b 3D forms and volume, cylinders, cones and spheres |
| | c Accuracy and bounds |
| 8 | a Transformations |
| | b Constructions, loci and bearings |
| 9 | a Solving quadratic and simultaneous equations |
| | b Inequalities |
| 10 | Probability |
| 11 | Multiplicative reasoning |
| 12 | Similarity and congruence in 2D and 3D |
| 13 | a Graphs of trigonometric functions |
| | b Further trigonometry |
| 14 | a Collecting data |
| | b Cumulative frequency, box plots and histograms |
| 15 | Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and |
| 16 | a Circle theorems |
| | b Circle geometry |
| 17 | Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof |
| 18 | Vectors and geometric proof |
| 19 | a Reciprocal and exponential graphs; Gradient and area under graphs |
| | b Direct and inverse proportion |

KS4 Foundation Tier



| Foundation Tier | |
|-----------------|--|
| Unit | Title |
| 1 | a Integers and place value |
| | b Decimals |
| | c Indices, powers and roots |
| | d Factors, multiples and primes |
| 2 | a Algebra: the basics |
| | b Expressions and substitution into formulae |
| 3 | a Tables, charts and graphs |
| | b Pie charts |
| | c Scatter graphs |
| 4 | a Fractions, decimals and percentages |
| | b Percentages |
| 5 | a Equations and inequalities |
| | b Sequences |
| 6 | a Properties of shapes, parallel lines and angle facts |
| | b Interior and exterior angles of polygons |
| 7 | Statistics, sampling and the averages |
| 8 | Perimeter, area and volume |
| 9 | a Real-life graphs |
| | b Straight-line graphs |
| 10 | Transformations |
| 11 | a Ratio |
| | b Proportion |
| 12 | Right-angled triangles: Pythagoras and trigonometry |
| 13 | Probability |
| 14 | Multiplicative reasoning |
| 15 | a Plans and elevations |
| | b Constructions, loci and bearings |
| 16 | a Quadratic equations: expanding and factorising |
| | b Quadratic equations: graphs |
| 17 | Circles, cylinders, cones and spheres |
| 18 | a Fractions and reciprocals |
| | b Indices and standard form |
| 19 | a Similarity and congruence in 2D |
| | b Vectors |
| 20 | Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations |