

## GCSE Mathematics Foundation Scheme of Work Overview

### FOUNDATION Year 10

|                |    |       |
|----------------|----|-------|
| Algebra 1F     | 14 | hours |
| Number 1F      | 12 | hours |
| Geometry 1F    | 12 | hours |
| Probability 1F | 12 | hours |
| Number 2F      | 12 | hours |
| Ratio 1F       | 10 | hours |
| Geometry 2F    | 12 | hours |
| Algebra 2F     | 12 | hours |

Total                    96    hours  
                                   32    weeks

### FOUNDATION Year 11

|                |    |       |
|----------------|----|-------|
| Number 3F      | 13 | hours |
| Algebra 3F     | 12 | hours |
| Ratio 2F       | 11 | hours |
| Probability 2F | 7  | hours |
| Geometry 3F    | 17 | hours |

Total                    60    hours  
                                   20    weeks

| Module         | Clips                         |
|----------------|-------------------------------|
| Algebra 1F     | 7 - 8, 33 - 37, 93 - 104      |
| Number 1F      | 1 - 6, 17 - 32                |
| Geometry 1F    | 9 - 13, 43 - 56, 113 - 116    |
| Probability 1F | 14 - 16, 57 - 65, 125 - 130   |
| Number 2F      | 66 - 77                       |
| Ratio 1F       | 38 - 42, 105 - 107            |
| Geometry 2F    | 117 - 124, 145 - 150          |
| Algebra 2F     | 133 - 141                     |
| Number 3F      | 78 - 92, 131 - 132, 154 - 156 |
| Algebra 3F     | 157 - 163                     |
| Ratio 2F       | 108 - 112, 142 - 144, 164     |
| Probability 2F | 151 - 153, 175 - 176          |
| Geometry 3F    | 165 - 174                     |

### *Points to note:*

\* **Order of topics is appropriate for all.**

\* **Timings of topics are approximate.**

Lower Foundation classes may need more time than upper Foundation classes.

Some departments will have more than 3 hours per week.

\* **It is presumed that Grade 1 to 3 topics have been met, before.**

\* **Some schools will begin the course in the latter part of Yr 9.**

The order of topics is still appropriate.

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| <b>Year 10</b> |
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**Algebra 1F**  
 14 hours

| Clip | Grade | Title                                      |           |
|------|-------|--|-----------|
| 7    | 1     | Algebraic conventions                      | Lesson 1  |
| 8    | 1     | Coordinates                                |           |
| 33   | 2     | Simplifying - Addition and Subtraction     |           |
| 34   | 2     | Simplifying - Multiplication               | Lesson 2  |
| 35   | 2     | Simplifying - Division                     |           |
| 36   | 2     | Function Machines                          | Lesson 3  |
| 37   | 2     | Generating a Sequence - Term to Term       |           |
| 93   | 3     | Expanding Brackets                         | Lesson 4  |
| 94   | 3     | Simple Factorisation                       |           |
| 95   | 3     | Substitution                               | Lesson 5  |
| 96   | 3     | Straight Line Graphs                       | Lesson 6  |
| 96   | 3     | Straight Line Graphs                       | Lesson 7  |
| 97   | 3     | The Gradient of a Line                     |           |
| 98   | 3     | Drawing Quadratic Graphs                   | Lesson 8  |
| 99   | 3     | Sketching Functions                        | Lesson 9  |
| 100  | 3     | Solving Equations using Flowcharts         | Lesson 10 |
| 101  | 3     | Subject of a Formula using Flowcharts      |           |
| 102  | 3     | Generating a Sequence from the $n$ th Term | Lesson 11 |
| 103  | 3     | Finding the $n$ th Term                    |           |
| 104  | 3     | Special Sequences                          | Lesson 12 |
|      |       | Revision                                   | Lesson 13 |
|      |       | Algebra 1F Assessment                      | Lesson 14 |

**Number 1F**  
 12 hours

| Clip | Grade | Title                                    |           |
|------|-------|--|-----------|
| 1    | 1     | Place Value                              | Lesson 1  |
| 2    | 1     | Ordering Integers                        |           |
| 3    | 1     | Ordering Decimals                        |           |
| 4    | 1     | Reading Scales                           | Lesson 2  |
| 5    | 1     | Simple Mathematical Notation             |           |
| 6    | 1     | Interpreting Real-Life Tables            |           |
| 17   | 2     | Adding Integers and Decimals             | Lesson 3  |
| 18   | 2     | Subtracting Integers and Decimals        |           |
| 19   | 2     | Multiplying Integers                     | Lesson 4  |
| 20   | 2     | Dividing Integers                        | Lesson 5  |
| 21   | 2     | Inverse Operations                       | Lesson 6  |
| 22   | 2     | Money Questions                          |           |
| 23   | 2     | Negatives in Real Life                   | Lesson 7  |
| 24   | 2     | Introduction to Fractions                |           |
| 25   | 2     | Equivalent Fractions                     | Lesson 8  |
| 26   | 2     | Simplifying Fractions                    |           |
| 27   | 2     | Half-Way Values                          |           |
| 28   | 2     | Factors, Multiples and Primes            | Lesson 9  |
| 29   | 2     | Introduction to Powers/Indices           |           |
| 30   | 2     | Multiplying and Dividing by Powers of 10 |           |
| 31   | 2     | Rounding to the Nearest 10, 100, 1000    | Lesson 10 |
| 32   | 2     | Rounding to Decimal places               |           |
|      |       | Revision                                 | Lesson 11 |
|      |       | Number 1F Assessment                     | Lesson 12 |

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| <b>Year 10</b> |
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**Geometry 1F**  
12 hours

| Clip | Grade | Title                                 |           |
|------|-------|---------------------------------------|-----------|
| 9    | 1     | Simple Geometric Definitions          | Lesson 1  |
| 10   | 1     | Polygons                              |           |
| 11   | 1     | Symmetries                            |           |
| 12   | 1     | Tessellations and Congruency          |           |
| 13   | 1     | Names of Angles                       |           |
| 43   | 2     | Properties of Solids                  | Lesson 2  |
| 44   | 2     | Nets                                  |           |
| 45   | 2     | Angles on a Line and at a Point       | Lesson 3  |
| 46   | 2     | Measuring and drawing Angles          |           |
| 47   | 2     | Drawing a Triangle Using a Protractor | Lesson 4  |
| 48   | 2     | Reflections                           |           |
| 49   | 2     | Rotations                             | Lesson 5  |
| 50   | 2     | Translations                          |           |
| 51   | 2     | Plans and Elevations                  | Lesson 6  |
| 52   | 2     | Perimeters                            |           |
| 53   | 2     | Area of a Rectangle                   | Lesson 7  |
| 54   | 2     | Area of a Triangle                    |           |
| 55   | 2     | Area of a Parallelogram               | Lesson 8  |
| 56   | 2     | Area of a Trapezium                   |           |
| 113  | 3     | Problems on Coordinate Axes           | Lesson 9  |
| 114  | 3     | Surface Area of a Prism               |           |
| 115  | 3     | Volume of a Cuboid                    | Lesson 10 |
| 116  | 3     | Circle Definitions                    |           |
|      |       | Revision                              | Lesson 11 |
|      |       | Geometry and Measures 1F Assessment   | Lesson 12 |

**Probability 1F**  
12 hours

| Clip | Grade | Title                                    |           |
|------|-------|--|-----------|
| 14   | 1     | The Probability Scale                    | Lesson 1  |
| 15   | 1     | Tally Charts and Bar Charts              |           |
| 16   | 1     | Pictograms                               |           |
| 57   | 2     | Frequency Trees                          | Lesson 2  |
| 58   | 2     | Listing Outcomes                         |           |
| 59   | 2     | Calculating Probabilities                |           |
| 60   | 2     | Mutually Exclusive Events                | Lesson 3  |
| 61   | 2     | Two-Way Tables                           |           |
| 62   | 2     | Averages and the Range                   | Lesson 4  |
| 63   | 2     | Data - Discrete and Continuous           |           |
| 64   | 2     | Vertical Line Charts                     | Lesson 5  |
| 65   | 2     | Frequency Tables and Diagrams            |           |
| 125  | 3     | Experimental Probabilities               | Lesson 6  |
| 126  | 3     | Possibility Spaces                       |           |
| 127  | 3     | Venn Diagrams                            | Lesson 7  |
| 128  | 3     | Pie Charts                               | Lesson 8  |
| 129  | 3     | Scatter Diagrams                         | Lesson 9  |
| 130  | 3     | Averages from a table                    | Lesson 10 |
|      |       | Revision                                 | Lesson 11 |
|      |       | Probability and Statistics 1F Assessment | Lesson 12 |

**Year 10**

**Number 2F**  
12 hours

| Clip | Grade | Title                            |           |
|------|-------|----------------------------------|-----------|
| 66   | 3     | Multiplying Decimals             | Lesson 1  |
| 67   | 3     | Dividing Decimals                | Lesson 2  |
| 68   | 3     | Four Rules of Negatives          | Lesson 3  |
| 69   | 3     | Listing Strategies               | Lesson 4  |
| 70   | 3     | Comparing Fractions              |           |
| 71   | 3     | Adding and Subtracting Fractions | Lesson 5  |
| 72   | 3     | Finding a Fraction of an Amount  | Lesson 6  |
| 73   | 3     | Multiplying Fractions            | Lesson 7  |
| 74   | 3     | Dividing Fractions               | Lesson 8  |
| 75   | 3     | BODMAS/BIDMAS                    | Lesson 9  |
| 76   | 3     | Reciprocals                      | Lesson 10 |
| 77   | 3     | Calculator Questions             |           |
|      |       | Revision                         | Lesson 11 |
|      |       | Number 2F Assessment             | Lesson 12 |

**Ratio 1F**  
10 hours

| Clip | Grade | Title                            |           |
|------|-------|----------------------------------|-----------|
| 38   | 2     | Introduction to Ratio            | Lesson 1  |
| 39   | 2     | Using Ratio for Recipe Questions | Lesson 2  |
| 40   | 2     | Introduction to Percentages      | Lesson 3  |
| 41   | 2     | Value for Money                  | Lesson 4  |
| 42   | 2     | Simple Proportion                | Lesson 5  |
| 105  | 3     | Exchanging Money                 | Lesson 6  |
| 106  | 3     | Sharing using Ratio              | Lesson 7  |
| 107  | 3     | Ratios, Fractions and Graphs     | Lesson 8  |
|      |       | Revision                         | Lesson 9  |
|      |       | Ratio 1F Assessment              | Lesson 10 |

**Geometry 2F**  
12 hours

| Clip | Grade | Title                                |           |
|------|-------|--------------------------------------|-----------|
| 117  | 3     | Area of a Circle                     | Lesson 1  |
| 118  | 3     | Circumference of a Circle            |           |
| 119  | 3     | Volume of a Prism                    | Lesson 2  |
| 120  | 3     | Angles and Parallel Lines            | Lesson 3  |
| 121  | 3     | Angles in a Triangle                 |           |
| 122  | 3     | Properties of Special Triangles      | Lesson 4  |
| 123  | 3     | Angle Sum of Polygons                |           |
| 124  | 3     | Bearings                             | Lesson 5  |
| 145  | 4     | Bisecting an Angle                   | Lesson 6  |
| 146  | 4     | Constructing Perpendiculars          |           |
| 147  | 4     | Draw a Triangle Using Compasses      | Lesson 7  |
| 148  | 4     | Enlargements                         | Lesson 8  |
| 149  | 4     | Tangents, Arcs, Sectors and Segments | Lesson 9  |
| 150  | 4     | Pythagoras' Theorem                  | Lesson 10 |
|      |       | Revision                             | Lesson 11 |
|      |       | Geometry 2F Assessment               | Lesson 12 |

**Algebra 2F**  
12 hours

| Clip | Grade | Title                              |           |
|------|-------|------------------------------------|-----------|
| 133  | 4     | Midpoint of a Line on a Graph      | Lesson 1  |
| 134  | 4     | Expanding and Simplifying Brackets | Lesson 2  |
| 134  | 4     | Expanding and Simplifying Brackets | Lesson 3  |
| 135  | 4     | Solve Equations                    | Lesson 4  |
| 135  | 4     | Solve Equations                    | Lesson 5  |
| 136  | 4     | Rearranging Simple Formulae        | Lesson 6  |
| 137  | 4     | Forming Formulae and Equations     | Lesson 7  |
| 138  | 4     | Inequalities on a Number Line      | Lesson 8  |
| 139  | 4     | Solve Linear Inequalities          | Lesson 9  |
| 140  | 4     | Simultaneous Equations Graphically | Lesson 10 |
| 141  | 4     | Fibonacci Sequences                |           |
|      |       | Revision                           | Lesson 11 |
|      |       | Algebra 2F Assessment              | Lesson 12 |

## Year 11

**Number 3F**  
13 hours

| Clip | Grade | Title                               |           |
|------|-------|-------------------------------------|-----------|
| 78   | 3     | Product of Primes                   | Lesson 1  |
| 79   | 3     | Highest Common Factor (HCF)         |           |
| 80   | 3     | Lowest Common Multiple (LCM)        |           |
| 81   | 3     | Squares, Cubes and Roots            | Lesson 2  |
| 82   | 3     | Working with Indices                |           |
| 83   | 3     | Standard Form                       | Lesson 3  |
| 84   | 3     | Decimals and Fractions              | Lesson 4  |
| 85   | 3     | Fractions, Percentages, Decimals    |           |
| 86   | 3     | Percentage of an Amount (Calc.)     | Lesson 5  |
| 87   | 3     | Percentage of an Amount (Non-Calc.) |           |
| 88   | 3     | Change to a Percentage (Calc.)      | Lesson 6  |
| 89   | 3     | Change to a Percentage (Non-Calc.)  |           |
| 90   | 3     | Rounding to Significant Figures     | Lesson 7  |
| 91   | 3     | Estimating Answers                  | Lesson 8  |
| 92   | 3     | Using Place Value                   |           |
| 131  | 4     | Index Notation                      | Lesson 9  |
| 132  | 4     | Introduction to Bounds              |           |
| 154  | 5     | Negative Indices                    | Lesson 10 |
| 155  | 5     | Error Intervals                     | Lesson 11 |
| 156  | 5     | Mathematical Reasoning              |           |
|      |       | Revision                            | Lesson 12 |
|      |       | Number 3F Assessment                | Lesson 13 |

**Algebra 3F**  
12 hours

| Clip | Grade | Title                                   |           |
|------|-------|---|-----------|
| 157  | 5     | Factorising and Solving Quadratics      | Lesson 1  |
| 157  | 5     | Factorising and Solving Quadratics      | Lesson 2  |
| 158  | 5     | The Difference of Two Squares           |           |
| 159  | 5     | Finding the Equation of a Straight Line | Lesson 3  |
| 160  | 5     | Roots and Turning Points of Quadratics  | Lesson 4  |
| 161  | 5     | Cubic and Reciprocal Graphs             | Lesson 5  |
| 161  | 5     | Cubic and Reciprocal Graphs             | Lesson 6  |
| 162  | 5     | Simultaneous Equations Algebraically    | Lesson 7  |
| 162  | 5     | Simultaneous Equations Algebraically    | Lesson 8  |
| 162  | 5     | Simultaneous Equations Algebraically    | Lesson 9  |
| 163  | 5     | Geometric Progressions                  | Lesson 10 |
|      |       | Revision                                | Lesson 11 |
|      |       | Algebra 3F Assessment                   | Lesson 12 |

**Ratio 2F**  
11 hours

| Clip | Grade | Title                              |           |
|------|-------|------------------------------------|-----------|
| 108  | 3     | Increase/Decrease by a Percentage  | Lesson 1  |
| 109  | 3     | Percentage Change                  | Lesson 2  |
| 110  | 3     | Reverse Percentage Problems        | Lesson 3  |
| 111  | 3     | Simple Interest                    | Lesson 4  |
| 112  | 3     | Metric conversions                 | Lesson 5  |
| 142  | 4     | Compound Units                     | Lesson 6  |
| 143  | 4     | Distance-Time Graphs               | Lesson 7  |
| 144  | 4     | Similar Shapes                     | Lesson 8  |
| 164  | 5     | Compound Interest and Depreciation | Lesson 9  |
|      |       | Revision                           | Lesson 10 |
|      |       | Ratio 2F Assessment                | Lesson 11 |

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| <b>Year 11</b> |
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**Probability 2F**

7 hours

|                           |   |                      |          |
|---------------------------|---|----------------------|----------|
| 151                       | 4 | Simple Tree Diagrams | Lesson 1 |
| 152                       | 4 | Sampling Populations | Lesson 2 |
| 153                       | 4 | Time Series          | Lesson 3 |
| 175                       | 5 | Harder Tree Diagrams | Lesson 4 |
| 176                       | 5 | Stratified sampling  | Lesson 5 |
| Revision                  |   |                      | Lesson 6 |
| Probability 2F Assessment |   |                      | Lesson 7 |

**Geometry 3F**

17 hours

| Clip                   | Grade | Title                      |           |
|------------------------|-------|----------------------------|-----------|
| 165                    | 5     | Loci                       | Lesson 1  |
| 166                    | 5     | Congruent triangles        | Lesson 2  |
| 166                    | 5     | Congruent triangles        | Lesson 3  |
| 167                    | 5     | Sectors of a Circle        | Lesson 4  |
| 167                    | 5     | Sectors of a Circle        | Lesson 5  |
| 168                    | 5     | Trigonometry               | Lesson 6  |
| 168                    | 5     | Trigonometry               | Lesson 7  |
| 168                    | 5     | Trigonometry               | Lesson 8  |
| 169                    | 5     | Spheres                    | Lesson 9  |
| 169                    | 5     | Spheres                    | Lesson 10 |
| 170                    | 5     | Pyramids                   | Lesson 11 |
| 171                    | 5     | Cones                      | Lesson 12 |
| 172                    | 5     | Frustums                   | Lesson 13 |
| 173                    | 5     | Exact Trigonometric Values | Lesson 14 |
| 174                    | 5     | Introduction to Vectors    | Lesson 15 |
| Revision               |       |                            | Lesson 16 |
| Geometry 3F Assessment |       |                            | Lesson 17 |

## GCSE Mathematics Higher Scheme of Work Overview

### HIGHER Year 10

|                |    |       |
|----------------|----|-------|
| Algebra 1H     | 14 | hours |
| Number 1H      | 12 | hours |
| Geometry 1H    | 12 | hours |
| Algebra 2H     | 9  | hours |
| Probability 1H | 11 | hours |
| Ratio H        | 12 | hours |
| Algebra 3H     | 11 | hours |
| Geometry 2H    | 14 | hours |
| Probability 2H | 13 | hours |

Total                    108    hours  
                                  36    weeks

### HIGHER Year 11

|             |    |       |
|-------------|----|-------|
| Algebra 4H  | 12 | hours |
| Geometry 3H | 12 | hours |
| Number 2H   | 13 | hours |
| Algebra 5H  | 12 | hours |
| Geometry 4H | 12 | hours |
| Algebra 6H  | 19 | hours |

Total                    80    hours  
                                  26.7    weeks

| Module         | Clips  |
|----------------|--|
| Algebra 1H     | 33 - 36, 93 - 99, 102 - 104, 133 - 134           |
| Number 1H      | 29, 32, 66 - 68, 70 - 92, 131 - 132              |
| Geometry 1H    | 48 - 56, 113 - 124, 145 - 150                    |
| Algebra 2H     | 135 - 141  |
| Probability 1H | 57 - 65, 125 - 130, 151 - 153                    |
| Ratio H        | 38 - 39, 41 - 42, 105 - 112, 142 - 144, 164, 199 |
| Algebra 3H     | 157 - 163  |
| Geometry 2H    | 165 - 172  |
| Probability 2H | 175 - 176, 185 - 187, 204 - 205                  |
| Algebra 4H     | 178 - 180, 190 - 192                             |
| Geometry 3H    | 173 - 174, 181 - 184, 200                        |
| Number 2H      | 154 - 156, 177, 188 - 189, 206 - 207             |
| Algebra 5H     | 193 - 198  |
| Geometry 4H    | 201 - 203, 217 - 219                             |
| Algebra 6H     | 208 - 216  |

### *Points to note:*

\* **Order of topics is appropriate for all.**

\* **Timings of topics are approximate.**

Weaker Higher classes may need more time than upper Higher classes.

Some departments will have more than 3 hours per week.

\* **It is presumed that Grade 1 to 4 topics have been met, before.**

\* **Some schools will begin the course in the latter part of Yr 9.**

The order of topics is still appropriate.

\* **Some lower topics have been deliberately omitted.**

Higher students don't need to be taught about ordering integers for example.

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| <b>Year 10</b> |
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**Algebra 1H**  
14 hours

| Clip | Grade | Title                                      |           |
|------|-------|--|-----------|
| 33   | 2     | Simplifying - Addition and Subtraction     | Lesson 1  |
| 34   | 2     | Simplifying - Multiplication               |           |
| 35   | 2     | Simplifying - Division                     | Lesson 2  |
| 36   | 2     | Function Machines                          |           |
| 93   | 3     | Expanding Brackets                         | Lesson 3  |
| 94   | 3     | Simple Factorisation                       |           |
| 95   | 3     | Substitution                               | Lesson 4  |
| 96   | 3     | Straight Line Graphs                       | Lesson 5  |
| 97   | 3     | The Gradient of a Line                     | Lesson 6  |
| 98   | 3     | Drawing Quadratic Graphs                   | Lesson 7  |
| 99   | 3     | Sketching Functions                        | Lesson 8  |
| 102  | 3     | Generating a Sequence from the $n$ th Term | Lesson 9  |
| 103  | 3     | Finding the $n$ th Term                    |           |
| 104  | 3     | Special Sequences                          | Lesson 10 |
| 133  | 4     | Midpoint of a Line on a Graph              | Lesson 11 |
| 134  | 4     | Expanding and Simplifying Brackets         | Lesson 12 |
|      |       | Revision                                   | Lesson 13 |
|      |       | Algebra 1H Assessment                      | Lesson 14 |

**Number 1H**  
12 hours

| Clip | Grade | Title                               |           |
|------|-------|-------------------------------------|-----------|
| 29   | 2     | Introduction to Powers/Indices      | Lesson 1  |
| 32   | 2     | Rounding to Decimal places          |           |
| 66   | 3     | Multiplying Decimals                |           |
| 67   | 3     | Dividing Decimals                   |           |
| 68   | 3     | Four Rules of Negatives             | Lesson 2  |
| 70   | 3     | Comparing Fractions                 |           |
| 71   | 3     | Adding and Subtracting Fractions    |           |
| 72   | 3     | Finding a Fraction of an Amount     | Lesson 3  |
| 73   | 3     | Multiplying Fractions               |           |
| 74   | 3     | Dividing Fractions                  |           |
| 75   | 3     | BODMAS/BIDMAS                       |           |
| 76   | 3     | Reciprocals                         | Lesson 4  |
| 77   | 3     | Calculator Questions                |           |
| 78   | 3     | Product of Primes                   | Lesson 5  |
| 79   | 3     | Highest Common Factor (HCF)         |           |
| 80   | 3     | Lowest Common Multiple (LCM)        |           |
| 81   | 3     | Squares, Cubes and Roots            |           |
| 82   | 3     | Working with Indices                | Lesson 6  |
| 83   | 3     | Standard Form                       |           |
| 84   | 3     | Decimals and Fractions              | Lesson 7  |
| 85   | 3     | Fractions, Percentages, Decimals    |           |
| 86   | 3     | Percentage of an Amount (Calc.)     |           |
| 87   | 3     | Percentage of an Amount (Non-Calc.) |           |
| 88   | 3     | Change to a Percentage (Calc.)      | Lesson 8  |
| 89   | 3     | Change to a Percentage (Non-Calc.)  |           |
| 90   | 3     | Rounding to Significant Figures     |           |
| 91   | 3     | Estimating Answers                  | Lesson 9  |
| 92   | 3     | Using Place Value                   |           |
| 131  | 4     | Index Notation                      | Lesson 10 |
| 132  | 4     | Introduction to Bounds              |           |
|      |       | Revision                            | Lesson 11 |
|      |       | Number 1H Assessment                | Lesson 12 |



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| <b>Year 10</b> |
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**Geometry 1H**  
12 hours

| Clip       | Grade | Title                                |           |
|------------|-------|--------------------------------------|-----------|
| 48         | 2     | Reflections                          | Lesson 1  |
| 49         | 2     | Rotations                            |           |
| 50         | 2     | Translations                         |           |
| 51         | 2     | Plans and Elevations                 | Lesson 2  |
| 52         | 2     | Perimeters                           |           |
| 53         | 2     | Area of a Rectangle                  |           |
| 54         | 2     | Area of a Triangle                   |           |
| 55         | 2     | Area of a Parallelogram              |           |
| 56         | 2     | Area of a Trapezium                  |           |
| 113        | 3     | Problems on Coordinate Axes          | Lesson 3  |
| 114        | 3     | Surface Area of a Prism              |           |
| 115        | 3     | Volume of a Cuboid                   |           |
| 116        | 3     | Circle Definitions                   | Lesson 4  |
| 117        | 3     | Area of a Circle                     |           |
| 118        | 3     | Circumference of a Circle            |           |
| 119        | 3     | Volume of a Prism                    | Lesson 5  |
| 120        | 3     | Angles and Parallel Lines            | Lesson 6  |
| 121        | 3     | Angles in a Triangle                 |           |
| 122        | 3     | Properties of Special Triangles      |           |
| 123        | 3     | Angle Sum of Polygons                | Lesson 7  |
| 124        | 3     | Bearings                             |           |
| 145        | 4     | Bisecting an Angle                   | Lesson 8  |
| 146        | 4     | Constructing Perpendiculars          |           |
| 147        | 4     | Draw a Triangle Using Compasses      |           |
| 148        | 4     | Enlargements                         | Lesson 9  |
| 149        | 4     | Tangents, Arcs, Sectors and Segments |           |
| 150b and c | 4     | Pythagoras' Theorem                  | Lesson 10 |
|            |       | Revision                             | Lesson 11 |
|            |       | Geometry and Measures 1H Assessment  | Lesson 12 |

**Algebra 2H**  
9 hours

| Grade | Title                              |          |
|-------|------------------------------------|----------|
| 135   | Solve Equations                    | Lesson 1 |
| 135   | Solve Equations                    | Lesson 2 |
| 136   | Rearranging Simple Formulae        | Lesson 3 |
| 137   | Forming Formulae and Equations     | Lesson 4 |
| 138   | Inequalities on a Number Line      | Lesson 5 |
| 139   | Solve Linear Inequalities          |          |
| 140   | Simultaneous Equations Graphically | Lesson 6 |
| 141   | Fibonacci Sequences                | Lesson 7 |
|       | Revision                           | Lesson 8 |
|       | Algebra 2H Assessment              | Lesson 9 |

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| <b>Year 10</b> |
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**Probability 1H**  
11 hours

| Clip | Grade | Title                                    |           |
|------|-------|--|-----------|
| 57   | 2     | Frequency Trees                          | Lesson 1  |
| 58   | 2     | Listing Outcomes                         |           |
| 59   | 2     | Calculating Probabilities                |           |
| 60   | 2     | Mutually Exclusive Events                | Lesson 2  |
| 61   | 2     | Two-Way Tables                           |           |
| 62   | 2     | Averages and the Range                   | Lesson 3  |
| 63   | 2     | Data - Discrete and Continuous           |           |
| 64   | 2     | Vertical Line Charts                     | Lesson 4  |
| 65   | 2     | Frequency Tables and Diagrams            |           |
| 125  | 3     | Experimental Probabilities               | Lesson 5  |
| 126  | 3     | Possibility Spaces                       |           |
| 127  | 3     | Venn Diagrams                            | Lesson 6  |
| 128  | 3     | Pie Charts                               | Lesson 7  |
| 129  | 3     | Scatter Diagrams                         | Lesson 8  |
| 130  | 3     | Averages from a table                    | Lesson 9  |
| 151  | 4     | Simple Tree Diagrams                     | Lesson 10 |
| 152  | 4     | Sampling Populations                     | Lesson 11 |
| 153  | 4     | Time Series                              | Lesson 12 |
|      |       | Revision                                 | Lesson 13 |
|      |       | Probability and Statistics 1H Assessment | Lesson 14 |

**Ratio H**  
12 hours

| Clip | Grade | Title                              |           |
|------|-------|------------------------------------|-----------|
| 38   | 2     | Introduction to Ratio              | Lesson 1  |
| 39   | 2     | Using Ratio for Recipe Questions   |           |
| 41   | 2     | Value for Money                    |           |
| 42   | 2     | Simple Proportion                  | Lesson 2  |
| 105  | 3     | Exchanging Money                   |           |
| 106  | 3     | Sharing using Ratio                | Lesson 3  |
| 107  | 3     | Ratios, Fractions and Graphs       |           |
| 108  | 3     | Increase/Decrease by a Percentage  |           |
| 109  | 3     | Percentage Change                  | Lesson 4  |
| 110  | 3     | Reverse Percentage Problems        |           |
| 111  | 3     | Simple Interest                    | Lesson 5  |
| 112  | 3     | Metric conversions                 | Lesson 6  |
| 142  | 4     | Compound Units                     | Lesson 7  |
| 143  | 4     | Distance-Time Graphs               |           |
| 144  | 4     | Similar Shapes                     |           |
| 164  | 5     | Compound Interest and Depreciation | Lesson 8  |
| 199  | 7     | Direct and Inverse Proportion      | Lesson 9  |
| 199  | 7     | Direct and Inverse Proportion      | Lesson 10 |
|      |       | Revision                           | Lesson 11 |
|      |       | Ratio H Assessment                 | Lesson 12 |

**Algebra 3H**  
11 hours

| Clip | Grade | Title                                   |           |
|------|-------|---|-----------|
| 157  | 5     | Factorising and Solving Quadratics      | Lesson 1  |
| 157  | 5     | Factorising and Solving Quadratics      | Lesson 2  |
| 158  | 5     | The Difference of Two Squares           | Lesson 3  |
| 159  | 5     | Finding the Equation of a Straight Line |           |
| 160  | 5     | Roots and Turning Points of Quadratics  | Lesson 4  |
| 161  | 5     | Cubic and Reciprocal Graphs             | Lesson 5  |
| 162  | 5     | Simultaneous Equations Algebraically    | Lesson 6  |
| 162  | 5     | Simultaneous Equations Algebraically    | Lesson 7  |
| 162  | 5     | Simultaneous Equations Algebraically    | Lesson 8  |
| 163  | 5     | Geometric Progressions                  | Lesson 9  |
|      |       | Revision                                | Lesson 10 |
|      |       | Algebra 3H Assessment                   | Lesson 11 |

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| <b>Year 10</b> |
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**Geometry 2H**  
14 hours

| Clip | Grade | Title                  |           |
|------|-------|------------------------|-----------|
| 165  | 5     | Loci                   | Lesson 1  |
| 166  | 5     | Congruent triangles    | Lesson 2  |
| 166  | 5     | Congruent triangles    | Lesson 3  |
| 167  | 5     | Sectors of a Circle    | Lesson 4  |
| 168  | 5     | Trigonometry           | Lesson 5  |
| 168  | 5     | Trigonometry           | Lesson 6  |
| 168  | 5     | Trigonometry           | Lesson 7  |
| 169  | 5     | Spheres                | Lesson 8  |
| 169  | 5     | Spheres                | Lesson 9  |
| 170  | 5     | Pyramids               | Lesson 10 |
| 171  | 5     | Cones                  | Lesson 11 |
| 172  | 5     | Frustums               | Lesson 12 |
|      |       | Revision               | Lesson 13 |
|      |       | Geometry 2H Assessment | Lesson 14 |

**Probability 2H**  
13 hours

| Clip | Grade | Title                            |           |
|------|-------|----------------------------------|-----------|
| 175  | 5     | Harder Tree Diagrams             | Lesson 1  |
| 175  | 5     | Harder Tree Diagrams             | Lesson 2  |
| 176  | 5     | Stratified sampling              | Lesson 3  |
| 185  | 6     | Probability using Venn Diagrams  | Lesson 4  |
| 186  | 6     | Cumulative Frequency             | Lesson 5  |
| 186  | 6     | Cumulative Frequency             | Lesson 6  |
| 187  | 6     | Boxplots                         | Lesson 7  |
| 204  | 7     | And and Or Probability Questions | Lesson 8  |
| 204  | 7     | And and Or Probability Questions | Lesson 9  |
| 205  | 7     | Histograms                       | Lesson 10 |
| 205  | 7     | Histograms                       | Lesson 11 |
|      |       | Revision                         | Lesson 12 |
|      |       | Probability 2H Assessment        | Lesson 13 |

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| <b>Year 11</b> |
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**Algebra 4H**  
12 hours

| Clip | Grade | Title                               |           |
|------|-------|-------------------------------------|-----------|
| 178  | 6     | Product of Three Binomials          | Lesson 1  |
| 179  | 6     | Iteration - Trial and Improvement   | Lesson 2  |
| 180  | 6     | Iterative Processes                 | Lesson 3  |
| 180  | 6     | Iterative Processes                 | Lesson 4  |
| 190  | 7     | Rearranging Difficult Formulae      | Lesson 5  |
| 190  | 7     | Rearranging Difficult Formulae      | Lesson 6  |
| 191  | 7     | Solving Quadratics with the Formula | Lesson 7  |
| 191  | 7     | Solving Quadratics with the Formula | Lesson 8  |
| 192  | 7     | Factorising Hard Quadratics         | Lesson 9  |
| 192  | 7     | Factorising Hard Quadratics         | Lesson 10 |
|      |       | Revision                            | Lesson 11 |
|      |       | Algebra 4H Assessment               | Lesson 12 |

**Geometry 3H**  
12 hours

| Clip | Grade | Title                               |           |
|------|-------|-------------------------------------|-----------|
| 173  | 5     | Exact Trigonometric Values          | Lesson 1  |
| 173  | 5     | Exact Trigonometric Values          | Lesson 2  |
| 174  | 5     | Introduction to Vectors             | Lesson 3  |
| 181  | 6     | Enlargement - Negative Scale Factor | Lesson 4  |
| 182  | 6     | Combinations of Transformations     | Lesson 5  |
| 183  | 6     | Circle Theorems                     | Lesson 6  |
| 183  | 6     | Circle Theorems                     | Lesson 7  |
| 184  | 6     | Proof of Circle Theorems            | Lesson 8  |
| 200  | 7     | Similarity - Area and Volume        | Lesson 9  |
| 200  | 7     | Similarity - Area and Volume        | Lesson 10 |
|      |       | Revision                            | Lesson 11 |
|      |       | Geometry 3H Assessment              | Lesson 12 |

**Number 2H**  
13 hours

| Clip | Grade | Title                           |           |
|------|-------|---------------------------------|-----------|
| 154  | 5     | Negative Indices                | Lesson 1  |
| 155  | 5     | Error Intervals                 | Lesson 2  |
| 156  | 5     | Mathematical Reasoning          | Lesson 3  |
| 177  | 6     | Recurring Decimals to Fractions | Lesson 4  |
| 188  | 7     | Fractional Indices              | Lesson 5  |
| 189  | 7     | Recurring Decimals - Proof      | Lesson 6  |
| 206  | 8/9   | Upper and Lower Bounds          | Lesson 7  |
| 206  | 8/9   | Upper and Lower Bounds          | Lesson 8  |
| 207  | 8/9   | Surds                           | Lesson 9  |
| 207  | 8/9   | Surds                           | Lesson 10 |
| 207  | 8/9   | Surds                           | Lesson 11 |
|      |       | Revision                        | Lesson 12 |
|      |       | Number 2H Assessment            | Lesson 13 |

**Algebra 5H**  
12 hours

| Clip | Grade | Title                       |           |
|------|-------|-----------------------------|-----------|
| 193  | 7     | Algebraic Proof             | Lesson 1  |
| 194  | 7     | Exponential Functions       | Lesson 2  |
| 194  | 7     | Exponential Functions       | Lesson 3  |
| 195  | 7     | Trigonometric Graphs        | Lesson 4  |
| 195  | 7     | Trigonometric Graphs        | Lesson 5  |
| 196  | 7     | Transformation of Functions | Lesson 6  |
| 196  | 7     | Transformation of Functions | Lesson 7  |
| 197  | 7     | Equation of a Circle        | Lesson 8  |
| 198  | 7     | Regions                     | Lesson 9  |
| 198  | 7     | Regions                     | Lesson 10 |
|      |       | Revision                    | Lesson 11 |
|      |       | Algebra 5H Assessment       | Lesson 12 |

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| <b>Year 11</b> |
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**Geometry 4H**  
12 hours

| Clip | Grade | Title                         |           |
|------|-------|-------------------------------|-----------|
| 201  | 7     | The Sine Rule                 | Lesson 1  |
| 202  | 7     | The Cosine Rule               | Lesson 2  |
| 202  | 7     | The Cosine Rule               | Lesson 3  |
| 203  | 7     | Area of a Triangle Using Sine | Lesson 4  |
| 217  | 8/9   | Pythagoras in 3D              | Lesson 5  |
| 218  | 8/9   | Trigonometry in 3D            | Lesson 6  |
| 218  | 8/9   | Trigonometry in 3D            | Lesson 7  |
| 219  | 8/9   | Vectors                       | Lesson 8  |
| 219  | 8/9   | Vectors                       | Lesson 9  |
| 219  | 8/9   | Vectors                       | Lesson 10 |
|      |       | Revision                      | Lesson 11 |
|      |       | Geometry 4H Assessment        | Lesson 12 |

**Algebra 6H**  
19 hours

| Clip | Grade | Title                                   |           |
|------|-------|---|-----------|
| 208  | 8/9   | Perpendicular Lines                     | Lesson 1  |
| 208  | 8/9   | Perpendicular Lines                     | Lesson 2  |
| 209  | 8/9   | Completing the Square                   | Lesson 3  |
| 209  | 8/9   | Completing the Square                   | Lesson 4  |
| 210  | 8/9   | Algebraic Fractions                     | Lesson 5  |
| 210  | 8/9   | Algebraic Fractions                     | Lesson 6  |
| 211  | 8/9   | Simultaneous Equations with a Quadratic | Lesson 7  |
| 212  | 8/9   | Solve Quadratic Inequalities            | Lesson 8  |
| 212  | 8/9   | Solve Quadratic Inequalities            | Lesson 9  |
| 213  | 8/9   | Finding the $n$ th Term of a Quadratic  | Lesson 10 |
| 214  | 8/9   | Inverse Functions                       | Lesson 11 |
| 214  | 8/9   | Inverse Functions                       | Lesson 12 |
| 215  | 8/9   | Composite Functions                     | Lesson 13 |
| 215  | 8/9   | Composite Functions                     | Lesson 14 |
| 216  | 8/9   | Velocity-Time Graphs                    | Lesson 15 |
| 216  | 8/9   | Velocity-Time Graphs                    | Lesson 16 |
| 216  | 8/9   | Velocity-Time Graphs                    | Lesson 17 |
|      |       | Revision                                | Lesson 18 |
|      |       | Algebra 6H Assessment                   | Lesson 19 |