# CURRICULUM MAP

| Term | Foundation<br>Year 9 |
|---|---|
| **Autumn 1**<br>**Literacy / numeracy foci:**<br>Emphasis on the difference between factor, multiple and prime factor<br>Identify square, cube and prime numbers<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics from KS3 to be done | **Unit of work:** Unit 1 - (number)<br>**Assessment objectives:**<br>Calculations with decimals<br>Find factors, multiples and primes<br>Squares, cubes and roots<br>Index notation and prime factors<br><br>**Enrichment/life and work skills:**<br>Shop transactions<br>Working with wages<br>Accounting – completing balance sheets or similar accounting sheets<br>Squares and roots will link to Pythagoras theorem<br>**Assessments:**<br>2 unit tests and 1 half term test |
| **Autumn 2**<br>**Literacy / numeracy foci:**<br>Key algebraic terms such as expression and equation<br>**Understanding what method to use for when manipulating expressions**<br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit also<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work: Unit 2 -** Algebra<br>**Assessment objectives:**<br>Working with algebraic expressions<br>Substitution into formulae<br>Expanding and factorising<br><br>**Enrichment/life and work skills:**<br>Substitution into formulae links with application within science<br>Jobs that typically involved maths and science e.g. Cryptologists and Astronomers<br>Lesson based on deciphering code<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) |

| Term | Higher<br>Year 9 |
|---|---|
| **Autumn 1**<br>**Literacy / numeracy foci:**<br>Emphasis on the difference between factor, multiple and prime factor<br>Rational and irrational numbers<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics from KS3 to be done | **Unit of work:** Unit 1 - (number)<br>**Assessment objectives:**<br>Estimation<br>Find factors, multiples and primes<br>Calculating with powers<br>Surds and rationalising<br><br>**Enrichment/life and work skills:**<br>Estimation used when measuring distance in space with a scientific context<br>Surds link to A level maths study<br>Squares and roots will link to Pythagoras theorem which is taught later in the year<br>**Assessments:**<br>2 unit tests and 1 half term test |
| **Autumn 2**<br>**Literacy / numeracy foci:**<br>Key algebraic terms such as expression and equation<br>Identifying linear and quadratic equations as well as sequences<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit also<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work: Unit 2 -** Algebra<br>**Assessment objectives:**<br>Solving equations including quadratics<br>Substitution into formulae<br>Expanding and factorising<br>Sequences<br>**Enrichment/life and work skills:**<br>Substitution into formulae links with application within science<br>Jobs that typically involved maths and science e.g. Cryptologists and Astronomers<br>Lesson based on deciphering code<br>Derive equations and solve real life problems<br>'The lift problem' - inequality to understand how to determine lift safety as a job<br>Sequences for real life events<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) |

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# CURRICULUM MAP

| Term | Foundation<br>Year 9 |
|---|---|
| **Spring 1**<br>**Literacy / numeracy foci:**<br>**Keywords for describing fractions**<br>**Writing descriptions for correlation**<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Homework sheet based on different graphs<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 3 – Graphs<br>Unit 4 – Fractions and percentages<br>**Assessment objectives:**<br>Representing data (Bar charts, line graphs)<br>Stem and leaf diagrams and pie charts<br>Scatter graphs and lines of best fit<br>Operations with fractions<br>Calculations with percentages<br>**Enrichment/life and work skills:**<br>Data analyst career taste<br>real life understanding of scatter graphs<br>Shopping with sales on items<br>Loan repayment including finding interest<br>**Assessments:** 2 unit tests and 1 half term test (includes previous units) |
| **Spring 2**<br>**Literacy / numeracy foci:**<br>Key algebraic terms such as expression and equation<br>**Arithmetic and geometric sequences**<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 5 – Equations, inequalities and sequences<br>**Assessment objectives:**<br>Solving equations<br>Introduction to inequalities<br>Generating sequences, finding the nth term<br>**Enrichment/life and work skills:**<br>Sequences for real life events<br>Solving links to many other topics including Pythagoras and trig. and finding parallel lines<br>Derive equations and solve real life problems<br>'The lift problem' - inequality to understand how to determine lift safety as a job<br>**Assessments:**<br>1 unit test and 1 half term test (includes previous units) |

| Term | Higher<br>Year 9 |
|---|---|
| **Spring 1**<br>**Literacy / numeracy foci:**<br>**Differentiating between types of averages**<br>**Worded problem solving including percentages, ratio and fractions**<br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 3 – Interpreting data<br>Unit 4 – Fractions, ratio and percentages<br>**Assessment objectives:**<br>Representing data (Bar charts, line graphs)<br>Averages and range from tables<br>Scatter graphs and lines of best fit<br>Calculations with percentages, ratio and fractions<br>**Enrichment/life and work skills:**<br>Averages applied to real life scenarios and different professions<br>Data analyst career taste<br>real life understanding of scatter graphs<br>Ratio linked with food tech.<br>Loan repayment including finding interest<br>Scatter graphs on real data - linked to geography<br>**Assessments:** 2 unit tests and 1 half term test (includes previous units) |
| **Spring 2**<br>**Literacy / numeracy foci:**<br>**Terminology for angles and formulas**<br>**Sine, Cosine and Tangent**<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 5 – Angles and trigonometery<br>**Assessment objectives:**<br>Interior and exterior angles<br>Pythagoras theorem and trigonometry<br>**Enrichment/life and work skills:**<br>Develop investigation skills with investigation interior and exterior angles<br>Pythagoras linked into DT<br>Real life application of trigonometry<br>**Assessments:**<br>2 unit test and 1 half term test (includes previous units) |

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# CURRICULUM MAP

| Term | Foundation<br>Year 9 | Term | Higher<br>Year 9 |
|---|---|---|---|
| **Summer 1**<br>**Literacy / numeracy foci:**<br>Differentiating between types of averages<br>Parallel and perpendicular<br>Terminology for angles and formulas<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** unit 6 – angles<br>unit 7 – averages and range<br>**Assessment objectives:**<br>Angles in parallel lines and triangles<br>Exterior and interior angles<br>Averages and range<br>**Enrichment/life and work skills:**<br>Develop investigation skills with investigation interior and exterior angles<br>Links to bearings and mechanics at A levels<br>Averages applied to real life scenarios and different professions<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) | **Summer 1**<br>**Literacy / numeracy foci:**<br>Terminology for different graphs (e.g. parabola)<br>Formulas for more complex shapes<br>Worded problems to identify when to work with volume and surface area<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous units<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** unit 6 – Graphs<br>unit 7 – Area and Volume<br>**Assessment objectives:**<br>Linear and quadratic graphs<br>Real life graphs<br>Surface area and volume of 3D shapes including cylinders<br>**Enrichment/life and work skills:**<br>Linked into geography - rainforest data handling with area<br>Graph plotting linked to science and astronomy<br>DIY with area for flooring<br>Designer job - group activity that demonstrates the real life application of drawing, surface area and volume<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) |
| **Summer 2**<br>**Literacy / numeracy foci:**<br>Names of 3d shapes and mathematical terms to describe them<br>Properties of shapes and their formulas<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** unit 8 – Perimeter, area and volume<br>GCSE Assessment objectives:<br>Area of rectangles, triangles, trapeziums and parallelograms<br>Area of compound shapes<br>Surface area of 3D solids<br>Volume of 3D solids<br>**Enrichment/life and work skills:**<br>DIY with area for flooring<br>Heavy links with DIY work for example knowing much paint is needed to paint a room by knowing the surface area<br>Designer job - group activity that demonstrates the real life application of drawing, surface area and volume<br>**Assessments:**<br>1 unit test and 1 end of year test (includes previous units) | **Summer 2**<br>**Literacy / numeracy foci:**<br>Differentiating between transformations<br>Use of scale factor<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** unit 8 – Transformation and constructions<br>GCSE Assessment objectives:<br>Rotate, enlarge, translate and reflect 2D shapes<br>Bearings and scale drawings<br>Constructions and Loci<br>**Enrichment/life and work skills:**<br>Ability to think about maths in real life situations by spotting rotations and describing them<br>Reading maps - linked into geography<br>Build engineering skills by designing your own theme park<br>**Assessments:**<br>2 unit test and 1 end of year test (includes previous units) |

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# YEAR 10

# CURRICULUM MAP

| Term | Foundation<br>Year 10 |
|---|---|
| **Autumn 1**<br>**Literacy / numeracy foci:**<br>Terminology for different graphs (e.g. parabola)<br>Differentiating between transformations<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics from year 9 to be done | **Unit of work:** Unit 9 – Graphs<br>Unit 10 - Transformation<br>**Assessment objectives:**<br>Linear and quadratic graphs<br>Real life graphs<br>Rotate, enlarge, translate and reflect 2D shapes<br>**Enrichment/life and work skills:**<br>Linked into geography - rainforest data handling with area<br>Graph plotting linked to science and astronomy<br>spotting rotations and describing them<br>**Assessments:**<br>2 unit tests and 1 half term test |
| **Autumn 2**<br>**Literacy / numeracy foci:**<br>Different words used for 'share'<br>Worded proportion and ratio questions to emphasise when to apply what method<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous units<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 11 – Ratio and proportion<br>**Assessment objectives:**<br>Sharing and simplifying ratio<br>Ratio and measures<br>Proportion problems<br>**Enrichment/life and work skills:**<br>Ratio linked with food tech.<br>Converting measurements applied to different scenarios in life and different professions<br>Linked in with area and volume questions<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) |

| Term | Higher<br>Year 10 |
|---|---|
| **Autumn 1**<br>**Literacy / numeracy foci:**<br>Highlight the difference between equations and inequalities<br>Identifying simultaneous equations from worded problems and shape questions<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics from year 9 to be done | **Unit of work:** Unit 9 – equations and inequalities<br>**Assessment objectives:**<br>Solving quadratics including inequalities<br>Solving linear and non-linear simultaneous equations<br>**Enrichment/life and work skills:**<br>Derive equations and solve real life problems<br>'The lift problem' - inequality to understand how to determine lift safety as a job<br>Leads to Economical mathematics at degree level which includes non-linear simultaneous<br>Skills learnt through solving simultaneous equations can be applied to real life scenarios<br>**Assessments:**<br>2 unit tests and 1 half term test |
| **Autumn 2**<br>**Literacy / numeracy foci:**<br>Terms in probability (e.g. mutual exclusive)<br>When to apply direct and inverse proportion in a worded context<br>Converting between measurements<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit also<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work: Unit 10 –** Probability<br>Unit 11– multiplicative reasoning<br>**Assessment objectives:**<br>Experimental probability<br>Venn and Tree diagrams<br>Direct and inverse proportion<br>Growth and decay<br>Speed, distance and time (compound measures)<br>**Enrichment/life and work skills:**<br>Rock paper scissors activity - probability can be applied to common activities<br>Probability linked to science through theory and experimenting<br>Comparing loans and deciding on the best option<br>Speed, distance and time will help with planning journeys and understanding ETAs<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) |

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# CURRICULUM MAP

| Term | Foundation<br>Year 10 |
|---|---|
| **Spring 1**<br>**Literacy / numeracy foci:**<br>Terminology used in Pythagoras and trig ratios (e.g. opp, adj and hyp)<br>Sine, Cosine and Tangent<br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous units<br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 12 – Right angle triangles<br>**Assessment objectives:**<br>Pythagoras theorem to find a short and longer length<br>Use trig ratios to find the size of a length<br>Use trig ratios to find the size of an angle<br>**Enrichment/life and work skills:**<br>Pythagoras linked into DT<br>Real life application of trigonometry<br>Careers that use Pythagoras Theorem<br>**Assessments:** 2 unit tests and 1 half term test (includes previous units) |
| **Spring 2**<br>**Literacy / numeracy foci:**<br>Terms in probability (e.g. mutual exclusive)<br>When to apply direct and inverse proportion in a worded context<br>Converting between measurements<br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous units<br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 13 – Probability<br>Unit 14 – Multiplicative reasoning<br>**Assessment objectives:**<br>Experimental probability<br>Venn and Tree diagrams<br>Direct and inverse proportion<br>Growth and decay<br>Speed, distance and time<br>**Enrichment/life and work skills:**<br>Rock paper scissors activity - probability can be applied to common activities<br>Probability linked to science through theory and experimenting<br>Comparing loans and deciding on the best option<br>Speed, distance and time will help with planning journeys and understanding ETAs<br>**Assessments:**<br>2 unit test and 1 half term test (includes previous units) |

| Term | Higher<br>Year 10 |
|---|---|
| **Spring 1**<br>**Literacy / numeracy foci:**<br>**Scale factor in context of similar shapes**<br>**Terminology used for further trigonometry (non-right angle trig)**<br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 12 – Similarity and congruence<br>Unit 13 – more trigonometry<br>**Assessment objectives:**<br>Pythagoras theorem and trig ratios to find length<br>Similarity in 2D and 3D shapes<br>Trig applied to non-right angle triangles<br>Transforming trig graphs<br>**Enrichment/life and work skills:**<br>Trig. graphs applied to real life situations<br>Pythagoras linked into DT<br>Real life application of trigonometry<br>Careers that use Pythagoras Theorem<br>Applied engineering using sine and cosine rule<br>Similar shapes links to proportional reading and scale factors with designing – civil engineering<br>**Assessments:** 2 unit tests and 1 half term test (includes previous units) |
| **Spring 2**<br>**Literacy / numeracy foci:**<br>Key terms for knowing when to use which method for each graph<br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit also<br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 14 – Further statistics<br>**Assessment objectives:**<br>Sampling and representing data<br>Drawing and interpreting graphs and histograms<br>**Enrichment/life and work skills:**<br>Describing and comparing populations links to geography<br>Data analyst career taste<br>real life understanding of scatter graphs<br>'Skills learnt to become an actuary' lesson<br>**Assessments:**<br>2 unit test and 1 half term test (includes previous units) |

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# CURRICULUM MAP

| Term | Foundation<br>Year 10 |
|---|---|
| **Summer 1**<br>**Literacy / numeracy foci:**<br>Terminology for graphs (e.g. parabola)<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous units<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 15 – Construction, loci and bearings<br>Unit 16 – Quadratic equations and graphs<br>**Assessment objectives:**<br>Bearings and scale drawings<br>Constructions and Loci<br>Expanding and factorising quadratics<br>Plotting quadratic graphs<br>**Enrichment/life and work skills:**<br>Reading maps - linked into geography<br>Build engineering skills by designing your own theme park<br>Real life examples of different graphs including quadratics<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) |
| **Summer 2**<br>**Literacy / numeracy foci:**<br>Circumference, names of parts of a circle<br>Formulas for more complex shapes<br>Worded problems to identify when to work with volume and surface area<br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous units<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** unit 17 – Area and Volume<br>**GCSE Assessment objectives:**<br>Circumference and area of circles<br>Area of semicircles and sectors<br>Composite 2d shapes<br>Volume and surface area of prisms including pyramids, cones and cylinders<br>**Enrichment/life and work skills:**<br>DIY with area for flooring<br>Designer job - group activity that demonstrates the real life application of drawing, surface area and volume<br>**Assessments:**<br>3 year 11 mock papers for end of year exams |

| Term | Higher<br>Year 10 |
|---|---|
| **Summer 1**<br>**Literacy / numeracy foci:**<br>Terminology for graphs (e.g. parabola)<br>Terms used in different circle theorems<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous units<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** Unit 15 – Equations and graphs<br>Unit 16 –Circle theorems<br>**Assessment objectives:**<br>Quadratic graphs<br>Solving simultaneous equations graphically<br>Learning and applying circle theorems<br>**Enrichment/life and work skills:**<br>Real life examples of different graphs including quadratics<br>Fantastic video of maths in the work place - Navigational officers and how circle theorems apply<br>**Assessments:**<br>2 unit tests and 1 half term test (includes previous units) |
| **Summer 2**<br>**Literacy / numeracy foci:**<br>Irrational and rational numbers<br>Wording in proof questions<br><br>**Homework**<br>Hegartymaths including 'mem-ri' tasks<br>Tasks to be set based on previous unit also<br><br>**Revisiting, revising, remembering opportunities:**<br>Starters based on previously covered topics to be done<br>Formula/knowledge tests to be conducted within lesson | **Unit of work:** unit 17 – more algebra<br>**GCSE Assessment objectives:**<br>Rearranging formula<br>Algebraic fractions<br>Surds<br>Functions<br>proof<br>**Enrichment/life and work skills:**<br>Rearranging real life formula<br>Surds link to A level maths study<br>Equations and calculations linked to science and the black hole theory<br>**Assessments:**<br>3 year 11 mock papers for end of year exams |

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