Mathematics

Mrs S McGladdery (SMG) Curriculum Leader for Maths

Mrs J Holland (JHL) ASSISTANT Curriculum Leader for Maths

Mr T Lindsay (TLI) Teacher of Maths

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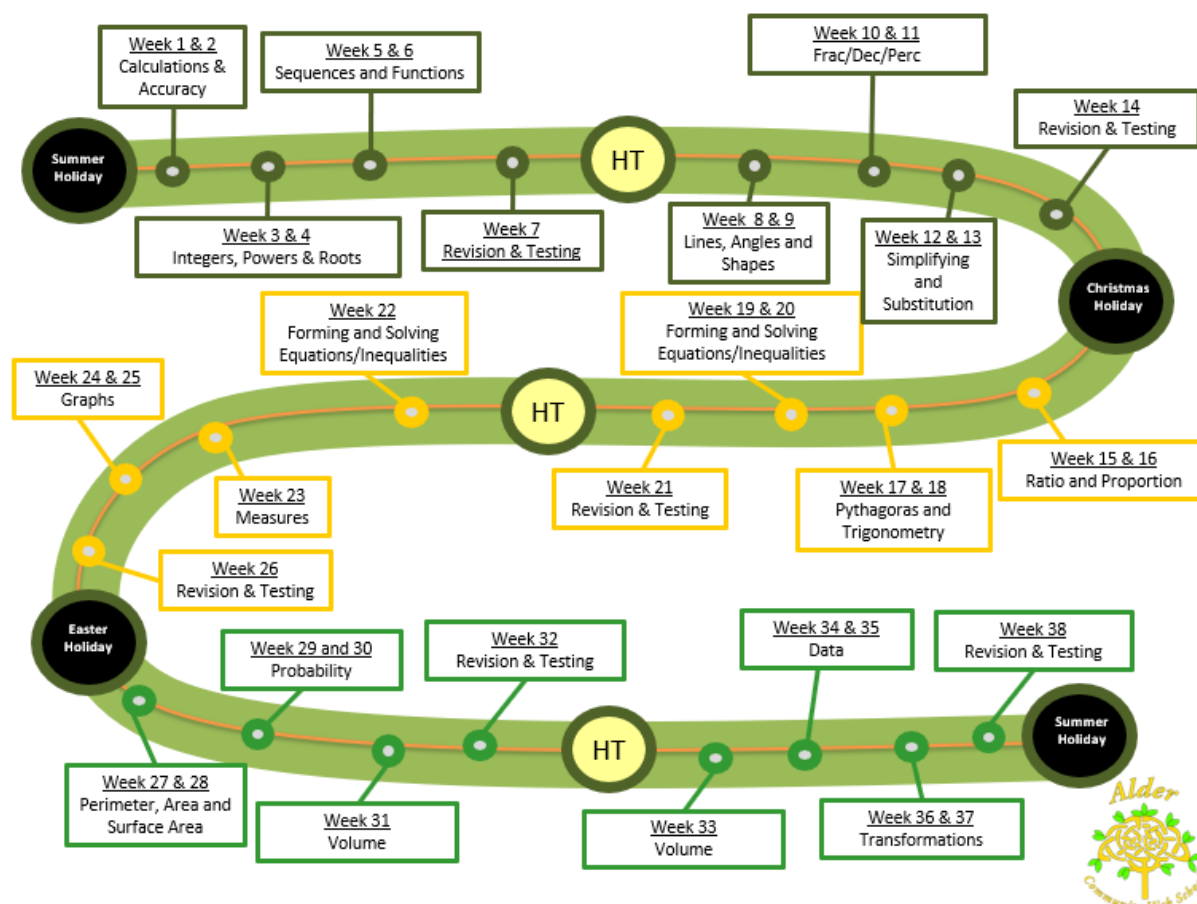
Mr T Rosedale (TRO) teacher of Maths

Departmental curriculum intent

In Maths we aim to create academic and highly achieving students.

We ensure that we:

- Provide a sequenced, knowledge rich curriculum that embeds (and builds upon) the fundamental mathematical knowledge of all learners.
- Ensure our students know the value of maths in everyday life and the wider world.
- Equip our students with an in-depth understanding of exam vocabulary.
- Expose students to interesting and engaging mathematical stories, showing how maths enriches the world.
- Build confidence in their own mathematical ability, using every mistake as a learning opportunity.

KS3 curriculum

Week 1 & 2 Calculations & Accuracy

Week 5 & 6 Sequences and Functions

Week 10 & 11 Frac/Dec/Perc

Week 14 Revision & Testing

Week 3 & 4 Integers, Powers & Roots

Week 7 Revision & Testing

Week 8 & 9 Lines, Angles and Shapes

Week 12 & 13 Simplifying and Substitution

Week 22 Forming and Solving Equations/Inequalities

Week 19 & 20 Forming and Solving Equations/Inequalities

Week 24 & 25 Graphs

Week 23 Measures

Week 21 Revision & Testing

Week 17 & 18 Pythagoras and Trigonometry

Week 15 & 16 Ratio and Proportion

Week 26 Revision & Testing

Week 29 and 30 Probability

Week 32 Revision & Testing

Week 34 & 35 Data

Week 38 Revision & Testing

Week 27 & 28 Perimeter, Area and Surface Area

Week 31 Volume

Week 33 Volume

Week 36 & 37 Transformations

KS4 Curriculum
Edexcel GCSE Mathematics

Assessment

Overview		
Tier	**Topic**	**Weighting**
Foundation	Number	22 - 28%
	Algebra	17 - 23%
	Ratio, Proportion and Rates of change	22 - 28%
	Geometry and Measures	12 - 18%
	Statistics & Probability	12 - 18%
Higher	Number	12 - 18%
	Algebra	27 - 33%
	Ratio, Proportion and Rates of change	17 - 23%
	Geometry and Measures	17 - 23%
	Statistics & Probability	12 - 18%

FOUNDATION - Year 10	FOUNDATION - Year 11
Autumn half term 1	**Autumn half term 1**
<u>Unit 1: Number</u> Integers and place value Decimals Indices, powers and roots Factors, multiples and primes <u>Unit 2: Algebra</u> Algebra: the basics Expressions and substitution into formulae	<u>Unit 13: Probability</u> Probability <u>Unit 14: Multiplicative reasoning</u> Multiplicative reasoning <u>Unit 15: Constructions, loci and bearings</u> Plans and elevations
Autumn half term 2	**Autumn half term 2**
<u>Unit 3: Graphs, tables and charts</u> Tables, charts and graphs Pie charts Scatter graphs <u>Unit 4: Fractions and percentages</u> Fractions, decimals and percentages Percentages	<u>Unit 15: Constructions, loci and bearings</u> Constructions, loci and bearings <u>Unit 16: Quadratic equations and graphs</u> Quadratic equations: expanding and factorising Quadratic equations: graphs <u>Unit 17: Perimeter, area and volume 2</u> Circles, cylinders, cones and spheres
Spring half term 1	**Spring half term 1**
<u>Unit 5: Equations, inequalities and sequences</u> Equations and inequalities Sequences <u>Unit 6: Angles</u> Properties of shapes, parallel lines & angle facts Interior and exterior angles of polygons	<u>Unit 18:Fractions, indices and standard form</u> Fractions and reciprocals Indices and standard form <u>Unit 19: Congruence, similarity and vectors</u> Similarity and congruence in 2D Vectors
Spring half term 2	**Spring half term 2**
<u>Unit 7: Averages and range</u> Statistics, sampling and the averages <u>Unit 8: Perimeter, area and volume</u> Perimeter, area and volume	<u>Unit 20: More algebra</u> Rearranging equations, Graphs of cubic and reciprocal functions Simultaneous equations
Summer half term 1	**Summer half term 1**
<u>Unit 9: Graphs</u> Real-life graphs Straight-line graphs <u>Unit 10: Transformations</u> Transformations	Exams
Summer half term 2	**Summer half term 2**
<u>Unit 11: Ratio and proportion</u> Ratio Proportion <u>Unit 12: Right-angled triangles</u> Right-angled triangles: Pythagoras and trigonometry	Exams

HIGHER - Year 10	HIGHER - Year 11
Autumn half term 1	**Autumn half term 1**
Unit 1: Number Calculations, checking and rounding Indices, roots, reciprocals and hierarchy of operations Factors, multiples, primes, standard form and surds Unit 2: Algebra The basics, setting up, rearranging, solving equations Sequences	Unit 12: Similarity and congruence Similarity and congruence in 2D and 3D Unit 13: More trigonometry Graphs of trigonometric functions Further trigonometry Unit 14: Further statistics Collecting data Cumulative frequency, box plots and histograms
Autumn half term 2	**Autumn half term 2**
Unit 3: Interpreting and representing data Averages and range Representing and interpreting data and scatter graphs Unit 4: Fractions, ratio and percentages Fractions and percentages Ratio and proportion	Unit 15: Equations and graphs Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, graphs of cubes and quadratics Unit 16: Circle theorems Circle theorems Circle geometry Unit 17: More algebra Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof
Spring half term 1	**Spring half term 1**
Unit 5: Angles and trigonometry Polygons, angles and parallel lines Pythagoras' Theorem and trigonometry Unit 6: Graphs Graphs: the basics and real-life graphs Linear graphs and coordinate geometry	Unit 18: Vectors and geometric proof Vectors and geometric proof Unit 19: Proportion and graphs Reciprocal and exponential graphs; Gradient and area under graphs Direct and inverse proportion
Spring half term 2	**Spring half term 2**
Unit 6: Graphs Linear graphs and coordinate geometry Quadratic, cubic and other graphs Unit 7: Area and volume Perimeter, area and circles 3D forms and volume, cylinders, cones and spheres Accuracy and bounds Unit 8: Transformations and constructions Transformations	Revision

Summer half term 1	Summer half term 1
Unit 8: Transformations and constructions Transformations Constructions, loci and bearings **Unit 9: Equations and inequalities** Solving quadratic and simultaneous equations	Exams
Summer half term 2	**Summer half term 2**
Unit 9: Equations and inequalities Inequalities **Unit 10: Probability** Probability **Unit 11: Multiplicative reasoning** Multiplicative reasoning	Exams