



Maths - Year 10 FT

Topic list Autumn 1	Topic list Autumn 2	Topic list Spring 1	Topic list Spring 2	Topic list Summer 1	Topic list Summer 2
- Number - Algebra - Graphs, tables & charts	- Fractions & percentages - Equations, Inequalities & Sequences	- Angles - Averages and range - Perimeter, area & volume 1	- Graphs - Transformations	- Ratio & Proportion - Right-angled triangles - Probability	- Multiplicative Reasoning - Constructions, Loci & Bearings
Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now
- Number will support all the number manipulations to follow in following units. - Algebra will support advance algebraic manipulations such as algebraic fractions advance rearranging of formulae, solving simultaneous equations both linear and non linear. - Graphs, tables & charts will support advance statically analysis required in other topics such as, histogram, cumulative frequency and box plots	- Now pupils will be able to convert between fractions, decimals and percentages to make calculations easier. - To set up, solve and interpret the answers in growth and decay problems, including compound interest - Enhance pupils' understanding of equations, Inequalities & Sequences - Students to be able to apply skills learnt in KS3 to problem solve.	- To apply learning for real life scenarios using averages and range. Understand which is the appropriate average to use. - Students to be able to apply perimeter, area and volume skills in real life context and problem solve.	- Draw and recognise different types of graphs – links to algebra - Students to be able to use graphs to understand connections between two variables - To use basic skills learnt in transformations in KS3 and to apply to questions which use combined transformations and answer exam related questions	- Use knowledge and skills learnt in KS3 - Apply in real life context and problem solve. - Use Pythagoras' Theorem to calculate a missing side on a right-angled triangles. - Pupils will have the opportunity to study different forms of probability and how they can be applied to real life situations	- Calculations involving value for money are a good reasoning opportunity that utilise different skills - Working out best value of items using different currencies given an exchange rate. Real life context - Use bearings in a real-life context to describe the bearing between two towns on a map
Tier 3 Vocabulary and Reading		Tier 3 Vocabulary and Reading		Tier 3 Vocabulary and Reading	
Murderous Maths: Trigonometry the Fiendish Angletron by Kjartan Poskitt Integer, negative, estimate, power, roots, factor, multiple, primes, square, cube	Dr. Math Explains Algebra: Learning Algebra Is Easy! Just Ask Dr. Math! by The Math Forum Decimal, percentage, inverse, mixed, improper, recurring, integer, terminating, percentage, VAT, increase, decrease, multiplier, profit, loss	Do you feel lucky? Murderous Maths Mean, median, mode, range, average, discrete, continuous, qualitative, quantitative, data, sample, population, stem and leaf, frequency, table, sort, pie chart, interval, midpoint, survey	Sir Cumference and the Dragon of Pi: A Math Adventure by Cindy Neuschwander Transformation, rotation, reflection, enlargement, translation, single, combination, scale factor, mirror line, centre of rotation, centre of enlargement, column vector, vector, similarity, congruent, angle, direction, coordinate, describe	Fractions in disguise by Edward Einhorn Right angle, Pythagoras' Theorem, sine, cosine, tan, trigonometry, opposite, hypotenuse, adjacent, ratio, elevation, depression, length, accuracy	Murderous Maths: The Perfect Sausage by Kjartan Poskitt Construct, circle, arc, sector, face, edge, vertex, two-dimensional, three-dimensional, solid, elevations, congruent, regular, irregular, bearing, degree, bisect, perpendicular, loci, map, scale, plan, region



Maths - Year 11 FT

Topic list Autumn 1	Topic list Autumn 2	Topic list Spring 1	Topic list Spring 2	Topic list Summer 1	Topic list Summer 2
Quadratic equations & Graphs	Perimeter, area and volume 2	Fractions & reciprocals	- Congruence, similarity and vectors - More Algebra	- Exam prep - Revision	- Exam prep - Revision
Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now
- Use skills learnt in KS3 and year 10 to solve quadratic equations using a range of techniques - Use of graphs to solve quadratic equations	- Use skills learnt in KS3 and year 10 to find surface areas and volumes of 3D shapes. - Apply knowledge learnt about area and circumference of a circle to calculate area of a sector and arc lengths. - Use skills learnt to problem solve and answer questions in real life context.	- Develop basic skills to answer worded questions involving basic fractions arithmetic. - Explore the use of reciprocals	- Use of key skills of enlargement and scale factor learned in KS3 and year 10 is applied this shape unit. - Further extend use and knowledge of algebra, such as setting up equations and problem solving.	Recognise gaps in knowledge using mock exams and address during revision sessions.	Recognise gaps in knowledge using mock exams and address during revision sessions.
Tier 3 Vocabulary and Reading		Tier 3 Vocabulary and Reading		Tier 3 Vocabulary and Reading	
The Life-Changing Magic of Numbers by Bobby Seagull Quadratic, function, solve, expand, factorise, simplify, expression, graph, curve, factor, coefficient, bracket	Area, perimeter, formula, measurement, volume, circle, segment, arc, sector, cylinder, circumference, radius, diameter, pi, sphere, cone, hemisphere, segment, accuracy, surface area	Add, subtract, multiply, divide, mixed, improper, fraction, decimal, indices, standard form, power, reciprocal, index	Vector, direction, magnitude, scalar, multiple, parallel, collinear, ratio, column vector, congruence, side, angle, compass, construction, shape, volume, length, area, volume, scale factor, enlargement, similar, perimeter.		