COURSE

Students are placed into 6 groups and taught Key Stage 3 Mathematics over 2 years.

The course builds on the Mathematics learnt at primary school in the areas of Number, Algebra, Geometry, Measure and Statistics.

At the start of year 7, there will inevitably be some cross over between work done at primary school and secondary school as we find out the ability and experience of the students.

Students may change sets over the course of the two years, with a number of changes happening annually from year 7 to year 8. At the end of year 8, students are placed in 7 groups for year 9 and so there are more major set changes at this point. Set changes are made based on performance throughout the year, performance in tests and exams and teachers personal assessment of the students.

TOPICS

TOPICS	DURING
Transformations : Carry out and describe problems involving Rotation, Reflection, Translation and Enlargement. Identify symmetry in 3D objects. Understand the effect of Enlargement on the perimeter of 2D shapes. Explore the effect of area and volume on enlargements of objects.	SPRING TERM
Fractions, Decimals, Percentages : Convert recurring decimals to fractions, compare percentages, perform percentage change with and without a calculator, compound interest and depreciation.	SPRING TERM
Constructions and Loci : Construct triangles accurately with protractors and compasses, draw nets of shapes accurately, Construct line and angle bisectors with compasses, Construct Loci accurately.	SPRING TERM

TOPICS

TOPICS	DURING
Factors and Powers : Prime factorisation, Index Laws, BIDMAS with powers, Rounding to 1sf for use in Standard Form notation.	AUTUMN TERM
Working with Powers : Simplifying expressions with powers, factorization of algebraic expressions involving powers, expanding brackets with powers, substitute positive and negative terms into expressions and formula involving powers.	AUTUMN TERM
2D and 3D Shapes : Use standard formulae for Area, Surface Area and Volume, Calculate perimeter and area of a circle, use Pythagoras Theorem to solve problems involving triangles.	AUTUMN TERM
Real Life Graphs : interpret and draw graphs showing direct proportion, exchange rate graphs, distance/time graphs. Interpret misleading statistical graphs.	AUTUMN TERM

TOPICS

TOPICS	DURING
Probability : Understand the probability scale, Understand the probability of a set of events adds to 1, understand the probability of an event NOT occurring, use relative frequency to make estimates, know the difference between actual and experimental probability, Use tree diagrams to work out probability problems	SUMMER TERM
Scale drawings and measures : Use scale factors, use scale diagrams, use maps, interpret scale drawings, know and use the criteria for congruence of triangles, identify and construct congruent triangles.	SUMMER TERM
Graphs : Work with coordinates in all 4 quadrants, plot graphs of linear functions, use y=mx+c to describe equations of straight lines, understand parallel gradients, explore graphs of linear functions and their inverses	SUMMER TERM