MATHS

KEY STAGE 3

At Crofton Academy we recognise the importance of Mathematics in the work place as well as the need to make lessons enjoyable and interesting.

Pupils at Key Stage 3 will focus on mastering calculation methods and key skills to prepare them for demands of the GCSE course. Pupils are placed in ability groups and are given opportunities to apply their mathematic knowledge to solve real life problems. Challenging tasks will encourage pupils to develop a deeper mathematical understanding.

Pupils are taught in sets throughout Years 7, 8 and 9. They follow a course appropriate to their ability and are assessed regularly to ensure they are making maximum progress.

Pupils at Key Stage 4 will follow the Edexcel GCSE examination course at either Foundation or Higher Level. Throughout Years 10 and 11 pupils are taught topics covering Number, Ratio, Proportion & Rates of Change, Algebra, Statistics and Probability and Geometry & Measures.

In lessons there is an emphasis on problem solving and mathematical reasoning, enabling pupils to develop confidence in using maths in everyday situations.

Pupils at Key Stage 3 will focus on mastering calculation methods and key skills to prepare them for the demands of the GCSE course. Pupils are given opportunities to apply their mathematic knowledge to solve real life problems. Challenging tasks will encourage pupils to develop a deeper mathematical understanding.

KEY STAGE 4

All pupils in **Years 10 and 11** will study the GCSE linear course in Mathematics. This subject is entirely assessed by written examination at the end of Year 11, so there is no coursework required from pupils.

Pupils are taught in sets according to ability and will follow either the Foundation or Higher tier syllabus.

The content of the Mathematics GCSE course is grouped into the six main topic areas of Number, Algebra, Geometry & Measures, Statistics, Probability and ratio, proportion and rates of change.

- Number - Pupils will study topics including fractions, percentages, indices, bounds, complex calculations and standard form.

- Algebra - Pupils will study topics including inequalities, solving equations, graphs, quadratic expressions, sequences and algebraic manipulation.

- Geometry & Measures - Pupils will study topics including angles, mensuration, transformations, trigonometry, scale drawing and circle theorems.

- Statistics - Pupils are required to collect, represent, analyse and interpret data using diagrams such as pie charts,   histograms, scatter graphs, cumulative frequency curves and by calculating averages.

- Probability - Pupils are required to list outcomes and calculate probabilities using tree diagrams and venn diagrams.

Ratio, proportion and rates of change - Pupils will study how to solve ratio and proportion problems in real life contexts. They will also be expected to learn how to convert between various compound units.

Throughout the course there is an emphasis on problem solving, mathematical thinking and applying mathematics in a functional context to solve real life problems.

Pupils will also be expected to communicate the mathematical structures they apply which may involve giving reasons for their choices, writing a proof or accurately interpreting a statistical diagram.

Pupils are assessed throughout the course and are given individual targets to work on throughout the year.

All pupils are provided with a personal log in for my maths, which they can access at home or school to assist with homework or revision.