

# Maths

## Curriculum Intent

Maths is a fundamental part of everyday life, often in ways that are not obvious. An in-depth knowledge of Maths provides the key to understanding why and how things work and the ability to predict how they might change over time and under different conditions. As importantly, Maths increases confidence with numbers so that aspects of everyday life such as personal finance, DIY, shopping, planning a holiday and cooking or baking are more easily understood.

We are passionate about our subject and we believe our curriculum provides pupils the opportunities to become confident in their understanding and application of mathematics. To achieve this, pupils need to become fluent in the fundamentals of mathematics, so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They need to be able to reason mathematically by following a line of enquiry or developing an argument or proof using mathematical language. They should also be able to solve problems by applying their mathematics in a range of contexts.

Through this, pupils develop the skills of resiliency, logical and analytical thinking, the ability to work independently and to solve problems. These skills are useful whatever path pupils should take, although obviously we would expect that path to include more maths.

## KS3

There are six strands in mathematics at Key stage 3 that cover the full breadth of the National Curriculum

Number

Algebra

Ratio, proportion and rates of change

Geometry and measures

Probability

Statistics

Our curriculum is broken down into topic units that last between two and three weeks each.

We use the Pearson Maths Progress (2nd Edition) resources which provide a seamless link to our GCSE course. We group pupils according to mathematical ability.

Pupils are helped to master fundamental knowledge and skills over a series of lessons at the appropriate level of challenge. At an appropriate time, the pupils check their understanding in a short formative assessment and then complete some personalised tasks to strengthen or extend their understanding before taking an end of unit test to determine their progression across the unit.

Pupils are given an outline of the objectives and success criteria at the start of each unit along with video references on the HegartyMaths website to support home learning.

## **KS4**

GCSE Mathematics is split into 5 main topic areas. The areas and some of the topics that will be studied are:

Number - Negative numbers, fractions, decimals

Algebra - Equations, graphs, sequences

Ratio, proportion and rates of change - Ratio and percentages

Geometry and measures - Perimeter, area, volume, trigonometry

Statistics and Probability - Surveys, averages, scatter graphs, listing outcomes, experiments and tree diagrams

All pupils will study content from each area across 2 years. This content builds directly on the units of study from KS3.

Pupils will be taught in ability groups, following either a Higher course (which focuses on grades 4 to 9) or a Foundation course (which focuses on grades 1 to 5)

Pupils' progress will be monitored throughout the course by a combination of shorter end of topic tests and longer end of term assessments. These will use exam style questions to increase confidence and give pupils feedback on what they need to do to improve.

HegartyMaths is used to support home learning.

## **GCSE Exam**

## Maths GCSE EDEXCEL 1MA1

The GCSE Mathematics exam consists of three equally weighted papers each 1 hour and 30 minutes long. Calculators are allowed on two of the three papers. There is no coursework.

### **Career Prospects**

A good maths grade can open the door to a wide range of different careers. Engineering, Computer Science, Accountancy, Medicine, Dentistry, Finance, Architecture, Psychology, Construction and Teaching are just a few of the careers where maths is used, but the options are endless.