

Mathematics Curriculum – KS3

Intent:

The programme of study for key stage 3 is organised into 6 key areas, but pupils should develop and consolidate connections across mathematical ideas. Students should build on key stage 2 and connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge in science, geography, computing and other subjects.



Topics: Broad topic headings below:

Year 7 and Year 8 (Depth into topics increased)

Number :

Numbers and the number system
Calculating
Checking, approximating and estimating
Counting and comparing numbers
Exploring fractions, decimals and percentages
Calculating fractions, decimals and percentages

Algebra :

Notation, vocabulary and manipulation
Simplifying expressions
Expanding brackets
Sequences
Solving equations
Graphs

Ratio, proportion and rates of change :

Simplifying ratio
Ratio of amounts

Geometry and measures :

Constructions
Angles
Investigating properties of shapes
Units of measurements
Area and perimeter
Volume
Transformations
Bearings
Compound measures

Probability :

Probability of events
Experiments and Sample diagrams
Theoretical and relative frequencies
Venn diagrams and set notation

Statistics:

Presentation of data
Measuring data
Scatter graphs

Key skills and concepts developed in Mathematics

Numeracy skills,
Developing memory and recall
Resilience and risk taking
Problem solving skills and how to link topics and transfer their knowledge to unknown contexts in maths and other subjects such as science, geography and business studies etc.
How to set out workings and logically work through problems.
Develop knowledge and understanding of the 6 key areas of the curriculum:
Number, algebra, ratio, Proportion and rates of change, Geometry and measures,
Probability and statistics

Wider Impact

Contribution to Cultural Capital/British Values and Wider Society/Careers/SMSC

Mathematics underpins the world around us. Just by paying bills, measuring home improvements and making everyday decisions, people do maths, often without realising. Maths helps shape our understanding of computing, art, music, science, nature and the world at large. It is used in everyday life and in many careers: Actuary, Accountant, Data analyst, Maths teacher, Statistician, Systems developer, Financial trader, Insurance underwriter, Meteorologist, Quantity surveyor, Software tester.