Bullers Wood School for Boys

Maths

Key Stage 3 | Years 7-9

Our aim

To build fluency, reasoning and confidence, moving from secure number skills into algebra, geometry, ratio, probability and data. Homework is personalised so each boy practises what he needs next, and high-attaining mathematicians are stretched through the UKMT Challenge, the Axiom problem-solving programme and GCSE Further Maths and Statistics.

Each half-term builds fluency in number, algebra, geometry, ratio, data and probability, so that by Year 9 students are working confidently with GCSE-level ideas such as Pythagoras and trigonometry.

	Year 7	Year 8	Year 9
Autumn 1	**Number skills & data** BIDMAS, rounding, negatives, factors and primes, averages, charts	**Number · Statistics** Estimation, powers and roots, HCF & LCM; scatter graphs, stem-and-leaf	**Standard form · Formulae** Significant figures, substitution, rearranging, factorising
Autumn 2	**Data & introductory algebra** Pie charts, two-way tables, function machines, simple equations	**Equations · Area & volume** Expanding and factorising; areas of 2D shapes; cuboids and nets	**Data · Transformations** Grouped data, frequency polygons; plans and elevations; percentage change
Spring 1	**Fractions, decimals, % · Probability** Converting and ordering; probability scales and experiments	**Circles & prisms · Real-life graphs** Circumference, area, cylinders; distance–time graphs	**Equations & inequalities · Prisms** Simultaneous equations, recurring decimals, surface area
Spring 2	**Measures · Ratio & proportion** Unit conversions, perimeter, area; the unitary method	**Decimals & ratio · Lines & angles** Proportion problems; parallel-line and polygon angles	**Circles & Pythagoras · Probability** Bounds, Pythagoras' theorem; Venn and tree diagrams
Summer 1	**Angles · Sequences & graphs** Polygon properties, constructions; nth term, straight-line graphs	**Fractions · Straight-line graphs** All four operations with fractions; y = mx + c, gradients	**Sequences & graphs** Geometric and quadratic sequences; quadratic and cubic graphs
Summer 2	**Transformations** Symmetry, reflection, rotation, translation, enlargement	**Percentages** Increase and decrease, finance problems, equivalences	**Comparing shapes** Congruence, similarity and trigonometry (sin, cos, tan)

Equipment

Scientific calculator, ruler, pen and pencil every lesson.
Stretch: UKMT Maths Challenge and the Axiom programme (by invitation).

Checking progress

- Retrieval quizzes and classwork most lessons
- Formal assessments in Autumn 2, Spring 2 and Summerr

Homework

- Three short Eedi tasks each week, up to an hour in total: two revisit earlier learning, one is personalised to your son.

Help at home

- Short, frequent practice beats one long session
- Keep times tables and number facts sharp
- Corbett Maths, Maths Genie, BBC Bitesize

Bullers Wood School for Boys

Maths

Key Stage 4 | Years 10-11

Every student takes GCSE Mathematics. Students with strong attainment may be invited to add GCSE Statistics in Year 10 or the Level 2 Certificate in Further Mathematics in Year 11.

GCSE Mathematics – Edexcel

Re-read the set texts and learn key quotations; practise timed writing; use BBC Bitesize, Seneca Learning and Massolit for revision.

What you study		How it is assessed
Algebra	**30%**	+ Three equally weighted papers, 1 hr 30 and 80 marks each, at the end of Year 11
Geometry and measures	**20%**	+ Paper 1 non-calculator; Papers 2 and 3 calculator
Ratio, proportion and rates of change	**20%**	+ **Foundation tier** (grades 1–5) or **Higher tier** (grades 4–9), set by prior attainment and reviewed regularly
Number	**15%**	
Statistics and probability	**15%**	

Level 2 Certificate in Further Maths (by invitation) – AQA

What you study	How it is assessed
Algebraic proof, functions and graphs, coordinate geometry, matrices, trigonometry and an introduction to calculus – excellent preparation for A level Maths.	+ **Paper 1 non-calculator:** 1 hr 45 · 80 marks + **Paper 2 calculator:** 1 hr 45 · 80 marks + Studied in Year 11 alongside GCSE Maths, for high attainers at the end of Year 10

GCSE Statistics (by invitation) – Pearson

What you study	How it is assessed
Collecting and sampling data, representing and interpreting it, averages and spread, probability, and running a statistical investigation on real-world data.	+ Two written papers, 1 hr 30 each, at the end of Year 10 + Invitation based on Year 9 performance

Year 10 at home

+ Check homework is completed and encourage your son to take up any support or intervention offered.

Year 11 at home

+ Break revision into short chunks, keep practising past questions, and protect sleep and wellbeing.