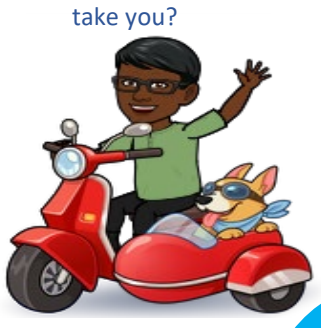
Maths Learning Journey at Bosworth Academy

How can you progress in Maths?

Bosworth Academy

TO LEARN TO ACHIEVE

Many of the best paid and most satisfying jobs involve maths. Where will maths take you?

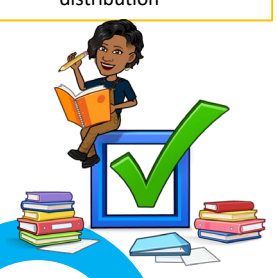


Your future

- Enter the world of work and use your problem solving, money handling and data literacy skills to excel in the role
- Complete advanced apprenticeships in fields like engineering and accountancy
- Complete degrees in maths, physics, chemistry, engineering, philosophy, psychology, sports science, philosophy, economics, computer science or any number of other maths-related courses.
- UCAS: Apply for University through UCAS or alternative post 18 courses

YEAR 13

- Use your number skills to make good financial choices
- Use probability as you face life's opportunities and risks
- Analyse data to help you make wise choices about politics and health
- Solve geometry problems when thinking about your first home
- Use your proportional reasoning to plan and deliver projects
- Use your algebra skills to solve problems in work
- Get ahead at job interviews with good maths qualifications
- Final exams
- Oxbridge entrance exams
- Revision for A2 exams
- Compete against the best in the Senior Maths Challenge
- Maths: Learn to do calculus with exponential and trigonometric functions
- Maths: Discover how calculators trick us into thinking they can solve equations
- Further Maths: Learn the hidden link between complex numbers and trigonometry
- Maths / Further Maths: Learn about differential equations and their power
- Revision for AS exams
- Further Maths: Discover decision maths and the links to AI and computing
- Core Maths: Learn about correlation and regression and the perfect line of best fit.
- Core Maths: Understand tax rates and Value Added Tax
- Maths: Learn projectiles
- Maths: Learn about the normal distribution



YEAR 12

- Choose A Level Maths **and** Further Maths for the deepest, most specialist knowledge
- Choose A Level Maths, to unlock maths, science and other degrees
- Maths/Further Maths: connect learning to physics with mechanics, the maths of movement.
- Maths: Learn about the binomial distributions and counting possible outcomes
- Maths: Learn about the number 'e', seriously
- Maths: discover calculus and unlock a whole new world of problems to solve
- Maths: master quadratic and cubic graphs

- Further Maths: learn the mysteries of complex numbers
- Core: Master taxation, interest rates and loans
- Core: Learn Fermi estimation
- Core: Learn to use spreadsheets to analyse and handle data
- Choose Core Maths, the most useful maths aspects for life
- Gradients and areas under curves
- Test your maths skills in the Intermediate Maths Challenge
- Learn scatter graphs, which allow scientists and psychologists to compare data
- Learn about vectors and transformations, used by 3D artists and game designers
- Carry out and study probability experiments
- Discover trigonometry and why triangles are great for buildings
- Learn about simultaneous equations, used by economists and financial traders
- Solve quadratic equations and learn the link to free kicks in football
- Trigonometry graphs connect algebra and geometry
- March trial exams

YEAR 11

- Learn about Pythagoras's theorem, used to build the pyramids
- Start to separate onto a higher (GCSE 4-9) or foundation (1-5) course, though moving is always possible
- Work more on indices and standard form to solve harder problems and learn about surds
- Work further on averages
- Begin to study Level 2 Further Maths if you're on track for a really high GCSE grade
- Study direct and inverse proportion, used by scientists and financial traders
- November trial exams
- Learn about circle theorems and solve complex geometry problems
- Learn about inequalities, used by computer scientists and game designers

YEAR 10

- Learn pie charts, time series and frequency polygons as used by geographers and historians to continue your data literacy journey
- Learn about tax and National Insurance and see what a pay slip looks like
- Learn about quadratics and further equations in algebra and see how it links to area
- Learn indices and standard form – used by scientists working with big and small numbers all over the world
- Learn more factors and multiples – used in the hospitality industry
- Learn about credit cards, mortgages and exponential growth and decay
- Learn about travel graphs, used by sports scientists and coaches
- Learn about π and circumference / area of circles
- Learn percentages, fractions and recurring decimals to continue learning different number representations
- Learn about rounding and limits – an important part of engineering
- Learn further angles and bearings – as used by pilots and the Navy

YEAR 9

- Learn about how we can use rounding and estimation, useful in construction
- Develop your knowledge of coordinates
- Learn about sequences and straight-line graphs to help you solve more complex problems
- Learn about nets and surface area, useful for fabric and graphic design
- Begin learning probability – a huge topic all about chance and risks. Used in banking, insurance and engineering
- Learn different averages to help you compare data
- Learn about the four operations with fractions
- Learn ratio and percentages – essential skills for working with money
- Test your maths skills in the Junior Maths Challenge
- Learn about more advanced angle problems that will help in architecture and design
- Learn expanding and factorising to continue your algebra journey
- Discover volume – the space taken up by a 3D shape

YEAR 8

- Learn about scale drawing – a really useful skill for engineering, construction and design
- Develop your skills in time and measure, essential if you ever want to run a company
- Solve number problems further with BIDMAS, negatives, decimals , factors and multiples
- Learn to classify shapes and start to become fluent in representations of numbers

YEAR 7

- Start to become data literate as we begin collecting, analysing and representing data about health and wellbeing
- Take your first big steps in algebra, the most powerful problem-solving tool! Learn about equations and expressions.
- Learn new angle, shape and symmetry properties
- Develop fluency with whole numbers and the four operations

PRIMARY

Your own journey to being a **confident, aspirational problem solver**