Mathematics Department Curriculum Overview

Year 7

KEY STAGE 3

UK National Curriculum

Autumn Term

- Using numbers
- Sequences
- Perimeter, area and volume
- Decimal numbers
- Working with numbers
- Statistics
- Algebra
- Fractions
- Angles
- Coordinates and graphs
- Percentages
- Probability
- Symmetry
- Equations
- Interpreting data
- 3D shapes
- Ratio

Spring Term

- Working with numbers
- Geometry
- Probability
- Percentages
- Sequences
- Area and volume
- Graphs
- Number
- Interpreting data
- Algebra
- Shape and ratio
- Fractions and decimals
- Proportion
- Circles
- Equations and formulae
- Comparing data

Summer Term

- Percentages
- Equations and formulae
- Polygons
- Using data
- Applications of graphs
- Pythagoras' Theorem
- Fractions
- Algebra
- Decimal numbers
- Surface area and volume
- Solving equations graphically
- Compound units
- Similar triangles
- IGCSE Number
- IGCSE Algebra
- IGCSE Graphs

Year 8

KEY STAGE 3

UK National Curriculum

Autumn Term

- Working with numbers
- Geometry
- Probability
- Percentages
- Sequences
- Area and volume
- Graphs
- Number
- Interpreting data
- Algebra
- Shape and ratio
- Fractions and decimals
- Proportion
- Circles
- Equations and formulae
- Comparing data

Spring Term

- Percentages
- Equations and formulae
- Polygons
- Using data
- Applications of graphs
- Pythagoras' Theorem
- Fractions
- Algebra
- Decimal numbers
- Surface area and volume
- Solving equations graphically
- Compound units
- Similar triangles
- IGCSE Number
- IGCSE Algebra
- IGCSE Graphs

Year 9

KEY STAGE 3

UK National Curriculum

Autumn Term

- Using numbers
- Sequences
- Perimeter, area and volume
- Decimal numbers
- Working with numbers
- Statistics
- Algebra
- Fractions
- Angles
- Coordinates and graphs
- Percentages
- Probability
- Symmetry
- Equations
- Interpreting data
- 3D shapes
- Ratio

Spring Term

- Working with numbers
- Geometry
- Probability
- Percentages
- Sequences
- Area and volume
- Graphs
- Number
- Interpreting data
- Algebra
- Shape and ratio
- Fractions and decimals
- Proportion
- Circles
- Equations and formulae
- Comparing data

Summer Term

- Percentages
- Equations and formulae
- Polygons
- Using data
- Applications of graphs
- Pythagoras' Theorem
- Fractions
- Algebra
- Decimal numbers
- Surface area and volume
- Solving equations graphically
- Compound units
- Similar triangles
- IGCSE Number
- IGCSE Algebra
- IGCSE Graphs

Year 10

KEY STAGE 4

Edexcel IGCSE Mathematics A

Autumn Term

- Shape and space
- Sets
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Sequences
- Shape and space
- Handling data

Spring Term

- Number
- Algebra
- Graphs
- Shape and space
- Sets
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Revision/study leave

Year 11

KEY STAGE 4

Edexcel IGCSE Mathematics A

Autumn Term

- Shape and space
- Sets
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Sequences
- Shape and space
- Handling data

Spring Term

- Number
- Algebra
- Graphs
- Shape and space
- Sets
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Number
- Algebra
- Graphs
- Shape and space
- Handling data
- Revision/study leave

Year 12

KEY STAGE 5

Edexcel IAL Mathematics

Autumn Term

C1/2 – Algebra & functions; coordinate geometry; sequences & series

M1 – Mathematical models; kinetics of a particle; dynamics of a particle

S1 – measures of location; measures of dispersion; representation of data; probability

D1 – algorithms; graphs and networks, algorithms on networks, route inspection

Spring Term

C1/2 – exponentials and logarithms; trigonometry; differentiation; integration

M1 – statics of a particle; moments; vectors

S1 – correlation; regression; discrete random variables; normal distribution

D1 – critical path analysis; linear programming; matchings

Year 13

KEY STAGE 5

Edexcel IAL Mathematics

Autumn Term

C3/4 – algebra & functions; binomial theorem; trigonometry; exponentials & logarithms

M2 – kinematics of a particle; centres of mass; work, energy and power

S2 – binomial distribution; poisson distribtuion; continuous random variables

D2 – transportation problems; allocation problems; travelling salesman problem

Spring Term

C3/4 – parametric equations; differentiation; integration; numerical methods

M2 – collisions; statics of rigid bodies

S2 – continuous uniform distribution; normal approximations; population and samples; hypothesis testing

D2 – further linear programming; game theory; network flows; dynamic programming