

Your Shavington Mathematics Journey

Everything we do in the Maths department is designed to help pupils believe they can do Maths. This is the key aim that underpins all our lessons.

All pupils will work their way through a carefully sequenced programme of lessons each academic year, which can be seen on the following pages.

This ensures that pupils can secure, develop, and deepen their understanding of Mathematics, enabling them to become capable mathematicians beyond the age of 16 and apply their skills in the real world.

In KS3, all pupils follow the same curriculum. In Year 10, pupils will be placed into either the Higher or Foundation tier.

Homework - Maths

For students in **Years 7-10**, Maths homework is set using **SPARX Maths**. Homework is assigned each week and is due every **Wednesday**.

SPARX Maths is an excellent tool for helping students consolidate the learning that has taken place in class. The personalised homework tasks provide valuable opportunities to practise key skills, strengthen understanding, and build confidence in Mathematics. It also encourages students to develop independent learning habits, helping them take greater ownership of their progress and success.

For **Year 11**, students are set **bespoke exam-focused homework** designed to support their GCSE preparation. These tasks are carefully selected to target key areas of the specification, develop examination technique, and provide valuable practice with GCSE-style questions.

Regular completion of Maths homework is an important part of supporting achievement and ensuring that learning is embedded over time. Whether through SPARX Maths or bespoke Year 11 tasks, homework provides students with an opportunity to revisit prior learning, deepen their understanding, and prepare effectively for future assessments and examinations.

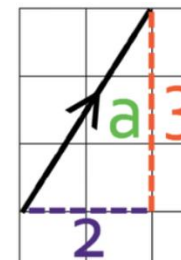
Year 7 Overview

$$\begin{array}{l} 2 > -3 \\ 0.999... = 1 \\ \pi \approx 3.14 \\ \sqrt{2} \\ 1 + 2 \cdot 3 \\ 5^2 \\ (1 - 2) + 3 \\ 101_2 = 5_{10} \end{array}$$

Types of Number – Factors
Multiples, primes and Negatives



Statistics – Common
graphs, characteristics
and how to draw them



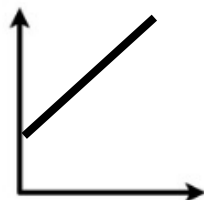
Geometry –
Translations



Number – Multiply
and Divide with
Negatives



Algebra –
Introduction and
how to write



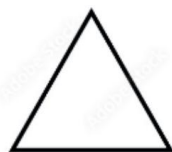
Algebra – using variables in different
situations (e.g. graphs and
sequences)



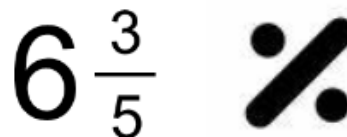
Number – Rounding and
decimal calculations



Algebra – Indices, simplifying
and expanding



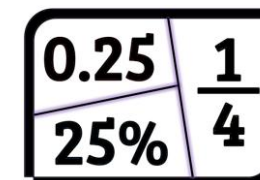
Geometry – Shape
properties and Area



Number– Percentages
and Fraction basics



Geometry – using
a protractor



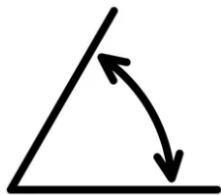
Number– Fraction, Decimal,
Percentage conversions



Year 8 Overview

$$\begin{array}{l} 2 > -3 \\ 0.999... = 1 \\ \pi \approx 3.14 \\ \sqrt{2} \\ 1 + 2 \cdot 3 \\ (1 - 2) + 3 \\ 5(2 + 2) \\ 101_2 = 5_{10} \end{array}$$

Number – Index
Laws and BIDMAS



Geometry – Construction

$$\frac{x}{y}$$

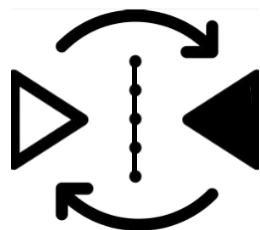
Algebra – expanding and
factorising



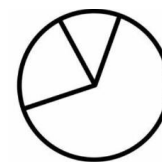
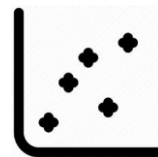
Number – limits of
number and estimating



Ratio and Proportion –
Introduction to Probability



Geometry – Rotations
and Enlargements



Statistics – averages and
analysing data



Ratio and Proportion –
introduction to ratio



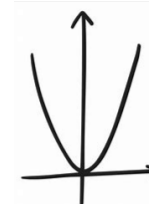
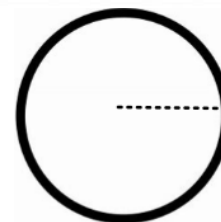
$$\begin{array}{l} 2 > -3 \\ 0.999... = 1 \\ \pi \approx 3.14 \\ \sqrt{2} \\ 1 + 2 \cdot 3 \\ (1 - 2) + 3 \\ 5(2 + 2) \\ 101_2 = 5_{10} \end{array}$$

Number – HCF
and LCM

$$f_x$$

$$\begin{array}{l} < > \\ \neq = \end{array}$$

Algebra – solving
equations and inequalities



Algebra and Geometry – substitution for
graphs, area and volume

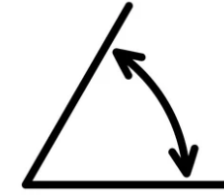


Year 9 Overview

$$a^2 + b^2 = c^2$$

0.25	$\frac{1}{4}$
25%	


$$16:9$$

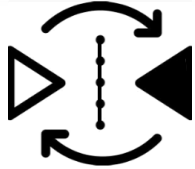


Geometry –
Pythagoras

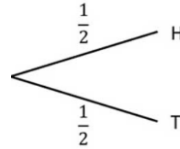
Number – Standard
Form and FDP

Ratio and Proportion –
unitary methods

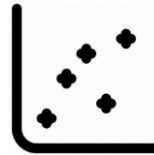
Geometry - Angles in parallel
lines and polygons



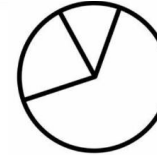
Geometry – Congruence,
Similarity and Describing
Transformations



Probability – Multiple
Events



Statistics – scatter graphs,
pie charts and averages
from grouped data



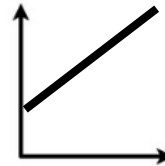
$$\frac{x}{y} \quad f_x$$

Algebra – Solving Equations,
Substitution and
expand/factorise quadratics

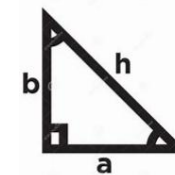


$$12\sqrt{10}$$

Number – roots and
surds



Ratio and Proportion –
conversions, S/D/T and graphs



Geometry – Trapezia and
Trigonometry



Year 10 - The start of Key Stage 4

GCSE Mathematics remains a two tier subject.

All pupils will either sit:

Foundation Tier; Grades 1 – 5 accessible

Higher Tier; Grades 3 – 9 accessible

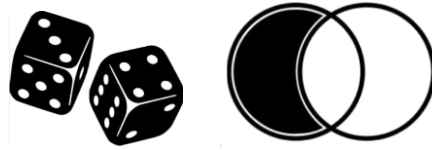
Year 9 is a key year where coverage of core, high frequency topics that occur on both tiers of GCSE Mathematics are covered by all pupils.

At the end of Year 9 an in-depth assessment takes place, and pupils are then put into either a Higher or Foundation pathway. We always aim to ensure that pupils are placed where they are most likely to succeed and be confident about Maths.

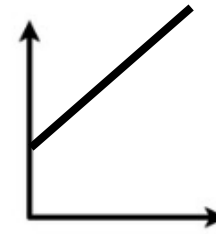
Year 10 Foundation Overview

$$6\frac{3}{5}$$

Number – Fraction calculation recap



Ratio and Proportion – Probability; sample space, venn and tree diagrams



Algebra –linear equations, inequalities and graphs

$$\begin{matrix} < & > \\ \neq & = \end{matrix}$$

Number – Error Intervals and Standard Form



Ratio and Proportion – simplifying 1:n and n:1

$$12\sqrt{10}$$

Number – Roots and powers

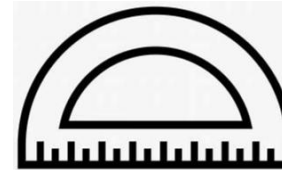
MOCKS



Number – Percentages



Ratio and Proportion – Finding an amount (ratio), recipes and best buys

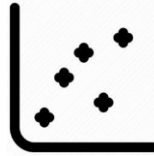
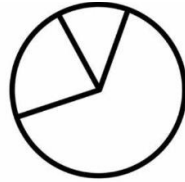
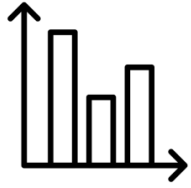


Geometry – Constructions, Bearings and Pythagoras

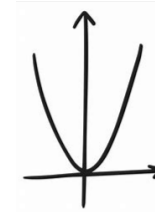
$$a^2+b^2=c^2$$



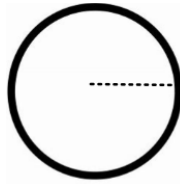
Year 11 Foundation Overview



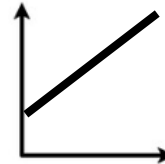
Statistics – scatter graphs, pie charts and averages from grouped data



Algebra – sequences, linear graphs and quadratic recap



Geometry - Area, perimeter, circles, plans and elevations



Proportion - Compound measures (S/D/T, M/D/V, P/F/A)



MOCKS

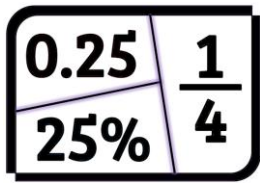


Targeted teaching and Feedback

**GCSE
Exams**



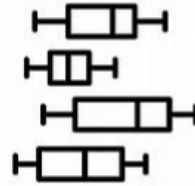
Year 10 Higher Overview



Number – Recurring decimals

$$f_x$$

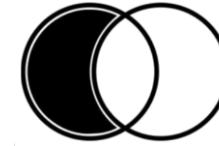
Algebra – Quadratics and Fractions



Statistics – Cumulative frequency and box plots

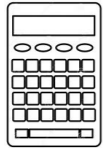


Probability; Venn and tree diagrams



Algebra – Quadratic Sequences

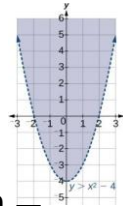
Number – Negative and Fractional Indices



Ratio and Proportion – direct and inverse proportion



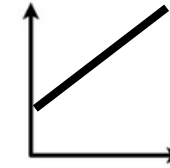
Number – Reverse percentages and compound interest



Algebra – Representing Inequalities



Number – Using Bounds



Algebra - linear graphs and solving quadratics

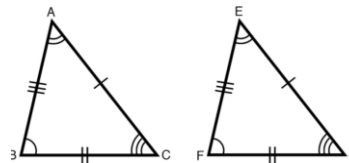


Geometry – Transformations

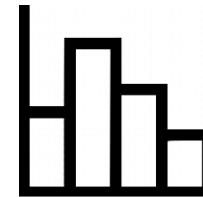


Number – Standard Form Sums and Surds

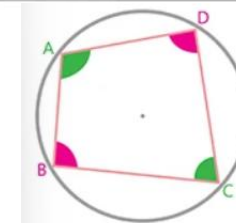
$$\sqrt{2}$$



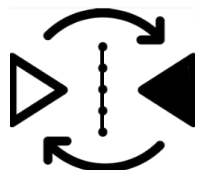
Geometry – Similarity and Congruence



Statistics – histograms



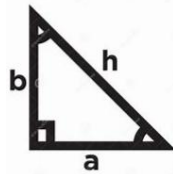
Geometry – Circle Theorems



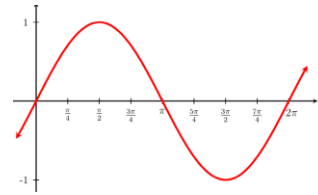
Year 11 Higher Overview

$$X+Y=Z$$

Algebra –
Simultaneous
Equations)



Geometry – Non
Right Angled
Trigonometry



Algebra – Transformations
of Graphs – Completing the
Square

$$2^2 \times 3 \times 5$$

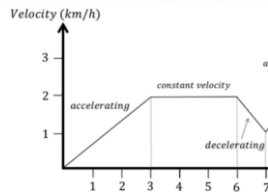
Number –
HCF / LCM

f_x

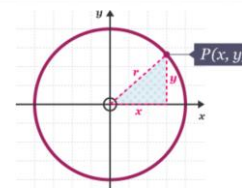
Functions,
Iterations and
Proof



Geometry –
Loci and
Constructions



Algebra –
Velocity Time
Graphs



Algebra –
Equation of a
Circle



Geometry – Volume
and Surface Area



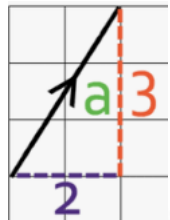
MOCKS



Targeted teaching and Feedback



**GCSE
Exams**



Geometry – Vectors

