Mathematics at Maplewell Hall School

At Maplewell Hall School we believe in careful curriculum planning, which dynamically adheres to students' needs, is the basis of solid student progress. We streamline this through three pathways which are outlined below, however this differs from year to year as we mould our curriculum to our specific cohort of students.

The curriculum is designed to inspire and challenge our students to go on to achieve their potential. We equip them with the skills and knowledge needed to access nationally recognised qualifications and use their knowledge successfully in life in and outside of school.

All of our qualifications (GCSE, Entry Level Certificate) will be taught and assessed in line with the AQA examination board.

Please find the route maps below which outline the topics that will be taught over the course of the year; with a brief breakdown of the skills and knowledge covered in each topic. Students will complete a topic assessment at the end of each topic and two end of term assessments throughout the year (Autumn and Summer).

Our curriculum adopts a spiral approach, building up the knowledge learnt previously, year on year.

Post-16:

Pathway A:

	w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	w15
Autumn term	Establishing routines	Number: Standard Form			Measures				Fractions, Decimals and Percentages					Algebra	Consolidation & End of Term Assessment
Spring term	Algebra...(Cont).				Ratio and Proportion				Statistics			Probability			
Summer term	Shape			Consolidation & revision for GCSE examinations, GCSE exam season.											

Students on this pathway will have previous experience studying GCSE content, and much of this curriculum will be revision and extending into grade 4 and 5 topics.

In Number topics, students will cover multiples and LCM, Factors and HCF, Primes and prime factor decomposition, powers and roots, rounding and estimation, and standard form. Students will be able to apply the four operations to positive and negative integers and decimals, apply the order of operations and calculate with values written in standard form. Students will also explore fractions, decimals and percentages; including equivalent fractions, mixed numbers and improper fractions, applying the four operations to fractions and mixed numbers, equivalent fractions, decimals and percentages, and calculating fractions and percentages of amounts.

In Measures and Shape, students will be familiar with metric units for length, mass and volume, be able to calculate a perimeter of shapes (including the circumference of circles), use formulae to calculate the area of rectangles, triangles, parallelograms, trapezia and circles. To calculate the volume of prisms. To calculate speed, distance and time. Students will also explore properties of shapes, angles, and transformations.

In Algebra, students will explore collecting like terms, multiplying and dividing terms, expanding and factorising, substitution, solving equations, inequalities, graphs and sequences.

In Ratio and Proportion, student will explore using ratio as a comparison tool, equivalent ratio, sharing in a ratio, direct and inverse proportion problems, enlargement, similarity, scale diagrams and multiplicative relationships.

In Statistics, students will learn to collect data using a questionnaire, record data in tallies and frequency tables, draw pictograms, bar charts, pie charts, and scatter graphs and interpret them in order to answer questions. They will also look at calculating averages and spread.

In Probability, student will be introduced to single event probability, listing outcomes, relative and expected frequency before moving on to multiple event probability and tree diagrams.

Pathway B:

	w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	w15
Autumn term	Establishing routines	Properties of Number				The Four Operations			Measures					FDP	Consolidation & End of Term Assessment
Spring term	Fractions, Decimals and Percentages...(Cont.)			Statistics			Algebra						Ratio and Proportion		
Summer term	Shape				Probability		Consolidation & revision for GCSE examinations, GCSE exam season.								

In Number topics, students will cover multiples and LCM, Factors and HCF, Primes and prime factor decomposition, powers and roots. Students will be able to apply the four operations to positive and negative integers and decimals, and apply the order of operations. Students will also explore fractions, decimals and percentages; including equivalent fractions, mixed numbers and improper fractions, applying the four operations to fractions, equivalent fractions, decimals and percentages, and calculating fractions and percentages of amounts.

In Measures and Shape, students will be familiar with metric units for length, mass and volume, be able to calculate a perimeter of shapes, use formulae to calculate the area of rectangles, triangles, and parallelograms. To calculate the volume of cubes and cuboids. Students will also explore properties of shapes, angles, and coordinates.

In Algebra, students will explore collecting like terms, multiplying and dividing terms, expanding and factorising, substitution, solving equations, inequalities, and simple graphs.

In Ratio and Proportion, student will explore using ratio as a comparison tool, equivalent ratio, sharing in a ratio, direct and inverse proportion problems, enlargement, similarity, scale diagrams and multiplicative relationships.

In Statistics, students will learn to collect data using a questionnaire, record data in tallies and frequency tables, draw pictograms, bar charts, pie charts, and scatter graphs and interpret them in order to answer questions. They will also look at calculating averages and spread.

In Probability, student will be introduced to basic single event probability, listing outcomes, two-way tables and Venn diagrams.

Pathway C:

	w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	w15
Autumn term	Properties of Number				The Four Operations				Ratio				Money		
Spring term	Money	The Calendar and Time				Measures				Geometry					
Summer term	Statistics			Portfolio submission mid-May 2025											

Students will be studying skills across eight components as they complete their ELC portfolio.

Properties of Number – Place Value to 10,000, reading and writing numbers in numerals and words, rounding, and times tables.

The Four Operations – to use the column method to add and subtract up to 3-digit numbers including with exchange, to know times tables to 10x10, inverse operations, and problem solving. To use formal written methods for multiplication and division.

Ratio – to explore halves, thirds, quarters, tenths and hundredths, doubling and tripling, 5, 8 and 10 times amounts. To explore fractions on number lines including mixed numbers, equivalent fractions, and adding and subtracting fractions.

Money – to recognise all the British coins and notes, to create amounts, find totals and calculate and give change. To understand the purchasing power of money. To explore decimal notation when working with money and solve real-life problems.

The Calendar and Time – to tell analogue and digital time and convert between them, to explore the days of the week, months of the year and seasons and know how to write the date in numerical format. To read timetables and use calendars.

Measures – to use vocabulary of measures, draw and measure lines and perimeter of shapes, compare and order measures of length, explore mass and capacity with equipment for measuring. Students will also explore temperature.

Geometry – to recognise and name 2D and 3D shapes, alongside their key properties. Explore horizontal, vertical and parallel lines, to recognise, classify and measure angles.

Statistics – to sort and classify objects, to collect data using a survey, record data in lists and tallies, draw pictograms, block diagrams, bar charts, vertical line graphs, two-way tables, and interpret them in order to answer questions.