Hamble Primary School Maths Overview

Year 4

This maths overview shows the key statements for our maths curriculum from which teachers work through addressing specific statements each term. The maps are recursive and weighted, meaning that each half term children spend roughly 2 weeks on selected statements from each of the grey highlighted sections and a week on the white sections.

Term	**Autumn 1** **Spring 1** **Summer 1**	**Autumn 2** **Spring 2** **Summer 2**
Unit	Number and Place Value	Multiplication and Division
	Addition and Subtraction	Fractions
	Geometry (shape)	Geometry (position and direction)
	Measures	Statistics

Number and Place Value

- count in multiples of 6, 7, 9, 25 and 1000
- find 1000 more or less than a given number
- count backwards through zero to include negative numbers
- recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- order and compare numbers beyond 1000
- identify, represent and estimate numbers using different representations
- round any number to the nearest 10, 100 or 1000
- solve number and practical problems that involve all of the above and with increasingly large positive numbers
- read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

Addition and Subtraction

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Geometry (properties of shapes)

- draw compare and classify geometric shapes, including quadrilaterals and triangles**,** based on their properties and sizes
- identify acute and obtuse angles and compare and order angles up to two right angles by size
- identify lines of symmetry in 2-D shapes presented in different orientations
- complete a simple symmetric figure with respect to a specific line of symmetry.

Measures

- Convert between different units of measure [for example, kilometre to metre; hour to minute]
- measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- find the area of rectilinear shapes by counting squares
- estimate, compare and calculate different measures, including money in pounds and pence
- read, write and convert time between analogue and digital 12- and 24-hour clocks
- solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

Half Term

Multiplication and Division

- recall multiplication and division facts for multiplication tables up to 12 × 12
- use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- recognise and use factor pairs and commutativity in mental calculations
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Fractions

- recognise and show, using diagrams, families of common equivalent fractions
- count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundredths
- recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$
- find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places.
- solve simple measure and money problems involving fractions and decimals to two decimal places.

Geometry (position and direction)

- describe positions on a 2-D grid as coordinates in the first quadrant
- describe movements between positions as translations of a given unit to the left/right and up/down
- plot specified points and draw sides to complete a given polygon.

Statistics

- interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Progression

These statements are organised in a progressive manner and year teams select the statements, with guidance from their Learning Leader and / or the maths coordinator to be taught each half term. To inform this, teams use their assessment from prior teaching and links between areas and other curriculum subjects to ascertain the best and most purposeful structure for a given class. Some statements, such as time, are taught incidentally and more frequency in order to further embed learning. Children also have daily arithmetic time to ensure quick recall and fluency of key mathematical operations.

Children revisit statements outside the maths lessons during revisit and enrich sessions and evidence of maths can be seen in other subjects, including our theme topics and Science.

Fluency, Reasoning and Problem Solving

In the autumn term, there is a heavy focus on fluency based activities, with some reasoning and problem solving being introduced once the initial learning has taken place. As the year progresses, and children gain more knowledge, there is an increasing focus on reasoning and problem solving activities to consolidate and begin mastering the knowledge delivered within the year group. While our children are exposed to the same or similar problems, we scaffold their learning depending on individual needs and the levels of challenge required.