Measurement Progression

The Programmes of Study are organised in distinct domains, however, in practise they are not taught so discreetly and are interwoven with other areas, for example place value and the four operations. For further detail on how this achieved through our mastery curriculum, the approximate amount of time spent on each focus termly and specific teaching areas, please see our Maths Sequence of Learning Progressions.

	Autumn	Spring	Summer
Year 1		**Length and height (with addition and subtraction)** • Measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes & seconds). • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ♦ – 9. • Compare, describe and solve practical problems for: - lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) - mass/weight (for example, heavy/light, heavier than, lighter than) - capacity and volume (for example, full/empty, more than, less than, half, half full, quarter) - time (for example, quicker, slower, earlier, later) **Weight and volume (with addition and subtraction)** • Compare, describe and solve practical problems for: - lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) - mass/weight (for example, heavy/light, heavier than, lighter than) - capacity and volume (for example, full/empty, more than, less than, half, half full, quarter) - time (for example, quicker, slower, earlier, later) • Measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ♦ – 9.	**Time (with addition and subtraction)** • Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening). • Recognise and use language relating to dates, including days of the week, weeks, months and years. • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times • Measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) • Compare, describe and solve practical problems for: - lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) - mass/weight (for example, heavy/light, heavier than, lighter than) - capacity and volume (for example, full/empty, more than, less than, half, half full, quarter) - time (for example, quicker, slower, earlier, later) • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = • – 9. **Money** • Recognise and know the value of different denominations of coins and notes. • Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.

Year 2	Autumn	Spring	Summer
	Money • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. • Find different combinations of coins that equal the same amounts of money. • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	**Length and height** • Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. • Compare and order lengths, mass, volume/capacity and record the results using >, < and = • Solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods.	**Time** • Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. • Know the number of minutes in an hour and the number of hours in a day • Compare and sequence intervals of time • Know the number of minutes in an hour and the number of hours in a day. **Weight, volume and temperature** • Compare and order lengths, mass, volume/capacity and record the results using >, < and =. • Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.
Year 3	Autumn	Spring	Summer
		Money • Add and subtract amounts of money to give change, using both £ and p in practical contexts. **Length with addition and subtraction** • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Measure the perimeter of simple 2D shapes.	**Time** • Know the number of seconds in a minute and the number of days in each month, year and leap year • Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. • Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. • Compare durations of events (for example to calculate the time taken by particular events or tasks). **Mass and capacity** • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Year 4	Autumn	Spring	Summer
	Measurement Perimeter • 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	**Measurement Area** • Find the area of rectilinear shapes by counting squares • Estimate, compare and calculate different measures, including money in pounds and pence.	**Money and decimals** • Estimate, compare and calculate different measures, including money in pounds and pence • Solve simple measure and money problems involving fractions and decimals to two decimal places **Time** • Convert between different units of measure (for example, kilometre to metre; hour to minute). • 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
Year 5	Autumn	Spring	Summer
	Area and perimeter • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.		**Converting units** • Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). • Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Solve problems involving converting between units of time. • Complete, read and interpret information in tables, including timetables. • Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling. **Volume and capacity** • Estimate volume (for example, using 1 cm3 blocks to build cuboids (including cubes)) and capacity (for example, using water).

Year 6	Autumn	Spring	Summer
		Imperial and metric measures • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • Convert between miles and kilometres. **Perimeter, area and volume** • Recognise that shapes with the same areas can have different perimeters and vice versa. • Recognise when it is possible to use formulae for area and volume of shapes. • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units (for example, mm3 and km3).	**Problem solving** • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.