Whole-School Maths Progression: Measures

Measurement	EYFS	Statutory Curriculum Guidance *Non-Statutory Curriculum Guidance* Teacher Assessment Framework		Statutory Curriculum Guidance *Non-Statutory Curriculum Guidance*			
Describe, measure, compare and solve	Three and Four-Year-Olds Reception Early Learning Goals	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Make comparisons between objects relating to size, length, weight and capacity. Compare length, weight and capacity.	To compare, describe and solve practical problems for: lengths and heights, mass/weight, capacity and volume, time. To measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time. *To move from using and comparing different types of quantities and measures using non-standard*	To choose and use appropriate standard units *with increasing accuracy using their knowledge of the number system* 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.	To measure *using the appropriate tools and units*, compare (*including simple scaling by integers)* add and subtract *using mixed units*: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).	To estimate, compare and calculate different measures, including money in pounds and pence.	To use all four operations to solve problems involving measure using decimal notation, including scaling *and conversions*.	*To use a number line, to add and subtract positive and negative integers for measures such as temperature.* To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.

Whole-School Maths Progression: Measures

		units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units using measuring tools, such as a ruler, weighing scales and containers.	*To use the appropriate language and record using standard abbreviations.* To compare and order lengths, mass, volume/capacity and record the results using >, < and =. *To compare measures including simple multiples such as 'half as high'; 'twice as wide'.*				
Compare units of measure					To use multiplication to convert from larger to smaller units. To convert between different units of measure and build on their understanding of place value and decimal notation to record metric	To use the knowledge of place value and multiplication and division to convert between standard units. To convert between different units of metric measure. To understand	To 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.

Whole-School Maths Progression: Measures

					measures, including money.	and use approximate equivalences between metric units and common imperial units.	To convert between miles and kilometres. To know approximate conversions to tell if an answer is sensible.
Telling the Time	Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...'	To sequence events in chronological order using language. To recognise and use language relating to dates, including days of the week, weeks, months and years. To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	To read, tell and write the time to five minutes, including quarter past/to the hour/half hour and draw the hands on a clock face to show these times. To become fluent in telling the time on analogue clocks and recording it. To know the number of minutes in an hour and the number of hours in a day.	To tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. To begin to use digital 12-hour clocks and record their times in preparation for using digital 24-hour clocks in year 4. To estimate and read time with increasing accuracy to the nearest minute; record and compare time in	To read, write and convert time between analogue and digital 12- and 24-hour clocks. To solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	To solve problems involving converting between units of time.	

Whole-School Maths Progression: Measures

			To compare and sequence intervals of time.	terms of seconds, minutes and hours. To use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. To know the number of seconds in a minute and the number of days in each month, year and leap year. To compare durations of events.			
Perimeter, Area and Volume				To measure the perimeter of simple 2D shapes.	To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. To know perimeter can be expressed algebraically as	To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres including using the relations of perimeter. Note: Missing measures questions can be expressed	To recognise that shapes with the same areas can have different perimeters and vice versa. To recognise when it is possible to use formulae for area and volume of shapes.

Whole-School Maths Progression: Measures

					2(a + b) where a and b are the dimensions in the same unit. To find the area of rectilinear shapes by counting squares. To relate area to arrays and multiplication.	algebraically. To calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2), use the area of rectangles to find unknown lengths and estimate the area of irregular shapes. Note: Missing measures questions can be expressed algebraically. To calculate the area from scale drawings using given measurements. To estimate volume.	To relate the area of rectangles to parallelograms and triangles and calculate their areas, understanding and using the formulae (in words or symbols) to do this. To calculate the area of parallelograms and triangles. To calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units (for example, mm^3 and km^3).
New Vocabulary Introduced	Measure Measurement Size	Length Height Long	Greater than >\ Less than < Equals =	Duration Time taken Nearest minute	Estimate Rectilinear figure	Square centimetres (cm2) Square metres	Decimal notation Cubic centimetres (cm3)

Whole-School Maths Progression: Measures

	Weight Capacity Compare Solve Problems Object Time	Short Longer Shorter Tall Double Half Mass Heavy Light Heavier than Lighter than Volume Full Empty More than Less than Half Half full Quarter Quicker Slower Earlier Later Sequence events Chronological order Before After Next First Today Yesterday Tomorrow Morning Afternoon	Intervals Standard units Estimate Direction Temperature Unit Scales Rulers Thermometers Measuring vessels Metres Centimetres Kilograms Grams Degrees Celsius Litres Millilitres Symbols Money Pounds (£) Pence (p) Different combinations Change Five past Ten past Quarter past Twenty past Twenty-five past Half past Twenty-five to Twenty to Quarter to Ten to	Record Seconds a.m. p.m. noon midnight kilometre add subtract millimetres perimeter simple 2-D shapes analogue clock roman numerals 12-hour 24-hour Leap year	Area Rectilinear shapes Convert	(m2) Irregular shapes Volume (cm3) Cubes Cuboids Square numbers Cube numbers Metric measure Metric units Imperial units Inches Pounds Pints	Cubic metres (m3) Cubic millimetre (mm3) Cubic kilometre (Km3) Decimal places formula

Whole-School Maths Progression: Measures

		Evening Record Hours Minutes Hour Half past O clock Hands Clock face Seconds Coins Notes Dates Days Weeks Months	Five to				