

Maths Knowledge Progression

This document sets out the expectation for Maths learning in each term for each year group. It is divided into sections within different parts of the maths curriculum.

Garden Class

	EYFS			Year 1			Year 2		
	Measurement								
	Autumn	Spring	Summer	Autumn	Spring	Summer	Autumn	Spring	Summer
Comparing and estimating	To Compare size, mass and capacity	To compare mass, length, height and capacity			To compare, describe and solve practical problems for: <ul style="list-style-type: none"> 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] 	To compare, describe and solve practical problems for: <ul style="list-style-type: none"> time [for example, quicker, slower, earlier, later] 		To compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$	To compare and sequence intervals of time
		To explore Capacity, length and height				To sequence events in chronological order using language [for example, before and after, next, first, today, yesterday,			

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						tomorrow, morning, afternoon and evening]			
Measuring and Calculating		To find a balance			To measure and begin to record the following: <ul style="list-style-type: none"> lengths and heights mass/weight capacity and volume 	To measure and begin to record the following: <ul style="list-style-type: none"> time (hours, minutes, seconds) 		To recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	
						To recognise and know the value of different denominations of coins and notes		To find different combinations of coins that equal the same amounts of money	
								To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	
								To 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	

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Telling The Time		To talk about time.				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 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
		To order and sequence time.				To recognise and use language relating to dates, including days of the week, weeks, months and years			To know the number of minutes in an hour and the number of hours in a day
Converting									To know the number of minutes in an hour and the number of hours in a day

Lower KS2

		Year 3			Year 4		
		Measurement					
		Autumn	Spring	Summer	Autumn	Spring	Summer
Comparing and Estimating	To 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, am/pm, morning, afternoon, noon and midnight	To 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, am/pm, morning, afternoon, noon and midnight				To estimate, compare and calculate different measures, including money in pounds and pence	To estimate, compare and calculate different measures, including money in pounds and pence
	To compare durations of events [for example, to calculate the time taken by particular events or tasks]	To compare durations of events [for example, to calculate the time taken by particular events or tasks]					
Measuring and Calculating	To measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	To measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	To measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	To find the area of rectilinear shapes by counting squares	To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	
	To add and subtract amounts of money to give change, using both £ and p in practical contexts	To add and subtract amounts of money to give change, using both £ and p in practical contexts	To measure the perimeter of simple 2-D shapes	To find the area of rectilinear shapes by counting squares		To find the area of rectilinear shapes by counting squares	
Telling The Time	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 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 read, write and convert time between analogue and digital 12- and 24-hour clocks		To read, write and convert time between analogue and digital 12- and 24-hour clocks	
	To 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, am/pm, morning, afternoon, noon and midnight	To 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, am/pm, morning, afternoon, noon and midnight		To solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days		To solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days	

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	To know the number of seconds in a minute and the number of days in each month, year and leap year		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 [for example, to calculate the time taken by particular events or tasks]		To compare durations of events [for example, to calculate the time taken by particular events or tasks]			
Converting	To know the number of seconds in a minute and the number of days in each month, year and leap year		To know the number of seconds in a minute and the number of days in each month, year and leap year	To convert between different units of measure [for example, kilometre to metre; hour to minute]	To convert between different units of measure [for example, kilometre to metre; hour to minute]	To convert between different units of measure [for example, kilometre to metre; hour to minute]
				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 from hours to minutes, minutes to seconds, years to months, weeks to days		

Upper KS2

		Year 5			Year 6		
		Measurement					
		Autumn	Spring	Summer	Autumn	Spring	Summer
Comparing and Estimating	To calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm ²) and square metres (m ²), and estimate the area of irregular shapes	To calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm ²) and square metres (m ²), and estimate the area of irregular shapes	To calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm ²) and square metres (m ²), and estimate the area of irregular shapes				
		To estimate volume [for example, using 1 cm ³ blocks to build cuboids (including cubes)] and capacity [for example, using water]					
Measuring and Calculating	To use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	To use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	To use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	To recognise that shapes with the same areas can have different perimeters and vice versa	To use the number line, pupils use, add and subtract positive and negative integers for measures such as temperature. (Non Statutory)	
	To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	To recognise when it is possible to use formulae for area and volume of shapes	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].	To calculate the area of parallelograms and triangles	
	To calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm ²) and square metres (m ²), and estimate the area of irregular shapes	To calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm ²) and square metres (m ²), and estimate the area of irregular shapes	To calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm ²) and square metres (m ²), and estimate the area of irregular shapes				
Telling The Time	To solve problems involving converting between units of time						

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Converting	To convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]	To convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]		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	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	
	To solve problems involving converting between units of time			To convert between miles and kilometres	Pupils connect conversion (for example, from kilometres to miles) to a graphical representation as preparation for understanding linear/proportional graphs. (Non Statutory)	
		To understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	To understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints		To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	