



## Mathematics Curriculum Progression Map

### Number: Measurement

<u>EYFS</u>		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
<u>3-4 Year olds</u>	<u>Reception</u>						
<b><u>Comparing and Estimating</u></b>							
<p>Make comparisons between objects relating to size, length, weight and capacity</p> <p><i>(Provide experience of size changes, e.g. "Can you</i></p>	<p>Compare length, weight and capacity</p> <p><i>(Model comparative language using "than"; "This is heavier than that."</i></p>	<p>Compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> <li>○ lengths and heights e.g. long/short, longer/shorter, tall/short, double/half</li> <li>○ mass/weight e.g. heavy/light, heavier than, lighter than</li> </ul>	<p>Compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math></p>		<p>Estimate, compare and calculate different measures, including money in pounds and pence</p> <p><i>(cross reference - Measuring)</i></p>	<p>Calculate and compare the area of squares and rectangles including using standard units, square centimetres (<math>\text{cm}^2</math>) and square metres (<math>\text{m}^2</math>) and estimate the area of irregular shapes <i>(cross</i></p>	<p>Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (<math>\text{cm}^3</math>) and cubic metres (<math>\text{m}^3</math>), and extending to other units such</p>

<p><i>make a puddle smaller?"</i>  <i>Talk with the children about their everyday ways of comparing size, length, weight and capacity. Model specific techniques, such as lining up ends of lengths and straightening ribbons, discussing accuracy: "Is it exactly...?"</i></p>	<p><i>Ask the children to make and test predictions: "What if we pour the jugful into the teapot? Which holds more?"</i></p>	<ul style="list-style-type: none"> <li>○ capacity and volume e.g. full/empty, more than, less than, half, half full, quarter</li> <li>○ time e.g. quicker, slower, earlier, later</li> </ul>				<p><i>reference - measuring)</i></p>	<p>as mm<sup>3</sup> and km<sup>3</sup>  <i>(cross reference – measuring and calculating)</i></p>
		<p>Sequence events in chronological order using language e.g. before and after, next, first, today, yesterday, tomorrow, morning,</p>	<p>Compare and sequence intervals of time</p>	<p>Compare durations of events, for example to calculate the time taken by particular events or tasks</p>		<p>Estimate volume, e.g. using 1 cm<sup>3</sup> blocks to build cubes and cuboids; and capacity e.g. using water</p>	

		afternoon and evening					
				Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight <i>(cross reference - Telling the Time)</i>			
<b>Measuring and Calculating</b>							
		Measure and begin to record the following: <ul style="list-style-type: none"> <li>○ lengths and heights</li> <li>○ mass/weight</li> <li>○ capacity and volume</li> <li>○ time (hours, minutes, seconds)</li> </ul>	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,	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Estimate, compare and calculate different measures, including money in pounds and pence <i>(cross reference - Comparing)</i>	Use all four operations to solve problems involving measure, e.g. length, mass, volume and money; using decimal notation including scaling <i>(cross reference – Problem Solving)</i>	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate <i>(cross reference - Converting and Problem Solving)</i>

			using rulers, scales, thermometers and measuring vessels				
				Measure the perimeter of simple 2-D shapes	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Recognise that shapes with the same areas can have different perimeters and vice versa
		Recognise and know the value of different denominations of coins and notes	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	Add and subtract amounts of money to give change, using both £ and p in practical contexts			
			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 ( <i>cross-reference Problem Solving</i> )				
					Find the area of rectilinear shapes by counting squares	Calculate and compare the area of squares and rectangles including using standard units, square centimetres ( $\text{cm}^2$ ) and square metres ( $\text{m}^2$ ) and estimate the area of irregular shapes ( <i>cross reference - comparing and estimating</i> )  <i>Recognise and use square numbers and cube numbers, and the notation for squared (<math>^2</math>) and cubed (<math>^3</math>) (cross reference - Multiplication and Division)</i>	Calculate the area of parallelograms and triangles  Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ), and extending to other units such as $\text{mm}^3$ and $\text{km}^3$ ( <i>cross reference – comparing and estimating</i> )  Recognise when it is possible to use formulae for area and volume of shapes

<u>Telling the Time</u>							
		Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	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.	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	Read, write and convert time between analogue and digital 12 and 24-hour clocks <i>(cross reference - Converting)</i>		
		Recognise and use language relating to dates, including days of the week, weeks, months and years	Know the number of minutes in an hour and the number of hours in a day. <i>(cross reference - Converting)</i>	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight <i>(cross reference- Comparing and Estimating)</i>  Know the number of seconds in a minute and the number of days in			

				each month, year and leap year <i>(cross reference - Telling the Time)</i>			
					Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days <i>(cross reference - Converting and Problem Solving)</i>	Solve problems involving converting between units of time <i>(cross-reference - Converting and Problem Solving)</i>	
<b>Converting</b>							
			Know the number of minutes in an hour and the number of hours in a day. <i>(cross reference - Telling the Time)</i>	Know the number of seconds in a minute and the number of days in each month, year and leap year <i>(cross reference - Telling the Time)</i>	Convert between different units of measure (e.g. kilometre to metre; hour to minute)	Convert between different units of metric measure, e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre	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
					Read, write and convert time between analogue and digital 12 and 24-hour clocks <i>(cross reference - Converting)</i>	Solve problems involving converting between units of time <i>(cross reference – telling the Time and Problem Solving)</i>	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate <i>(cross reference - Measuring and Calculating; and Problem Solving)</i>
					Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days <i>(cross reference - Telling the Time and Problem Solving)</i>	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	Convert between miles and kilometres
<b>Problem Solving</b>							
			Solve simple problems in a		Solve problems involving	Solve problems involving	Solve problems involving the



			<p>practical context involving addition and subtraction of money of the same unit, including giving change (<i>cross reference – Measuring and Calculating</i>)</p>		<p>converting from hours to minutes; minutes to seconds; years to months; weeks to days (<i>cross reference – Telling the Time and Converting</i>)</p>	<p>converting between units of time (<i>cross reference – Telling the Time and Converting</i>)</p>	<p>calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (<i>cross reference – Converting and Measuring and Calculating</i>)</p>
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