



# Measurement

COMPARING AND ESTIMATING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<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> <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>compare and order lengths, mass, volume/capacity and record the results using <math>\times</math>, <math>q</math> and <math>=</math></p>		<p>estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)</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 (also included in measuring)</p> <p>estimate volume (e.g. using <math>1 \text{ cm}^3</math> blocks to build cubes and cuboids) and capacity (e.g. using water)</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 as <math>\text{mm}^3</math> and <math>\text{km}^3</math>.</p>
<p>sequence events in chronological order using language [e.g. <b>before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening</b>]</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>compare measures including multiples e.g. half as high, twice as wide</p>	<p>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 (appears also in Telling the Time)</p>			

# Measurement

MEASURING and CALCULATING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
measure and begin to record the following: * <b>lengths and heights</b> * <b>mass/weight</b> * <b>capacity and volume</b> * <b>time</b> (hours, minutes, seconds)	choose and use appropriate standard units to estimate and measure <b>length/height</b> in any direction (m/cm); <b>mass</b> (kg/g); <b>temperature</b> (°C); <b>capacity</b> (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	measure, compare, add and subtract: <b>lengths</b> (m/cm/mm); <b>mass</b> (kg/g); <b>volume/capacity</b> (l/ml)	estimate, compare and calculate <b>different measures</b> , including <b>money in pounds and pence</b> (appears also in Comparing)	use all four operations to solve problems involving measure (e.g. <b>length, mass, volume, money</b> ) using decimal notation including scaling.	solve problems involving the calculation and conversion of <b>units of measure</b> , using decimal notation up to three decimal places where appropriate (appears also in Converting)
begin to use measuring tools such as a ruler, weighing scales and containers	use the appropriate language and recording using standard abbreviations (l, ml, m, cm, kg, g, km)	measure the <b>perimeter</b> of simple 2-D shapes	measure and calculate the <b>perimeter</b> of a rectilinear figure (including squares) in centimetres and metres	measure and calculate the <b>perimeter</b> of composite rectilinear shapes in centimetres and metres, including using the relations of perimeter or area to find unknown lengths.	recognise that shapes with the same areas can have different <b>perimeters</b> and vice versa

# Measurement

MEASURING and CALCULATING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
recognise and know the value of different denominations of <b>coins and notes</b>	recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	add and subtract amounts of <b>money</b> to give change, using both £ and p in practical contexts  continue to become fluent recognizing the value of coins by adding and subtracting amounts, including mixed units and giving change using manageable amounts	build on understanding of place value and decimal notation to record metric measures including money		
	find different combinations of coins that equal the same amounts of money				
	<b>solve simple problems</b> in a practical context involving addition and subtraction of money of the same unit, including giving change				
		Continue to measure using appropriate tools and units, progressing to a wider range of measure and mixed units e.g. 1kg and 220g as well as equivalents – 5m=500cm	find the area of rectilinear shapes by counting squares  relate area to arrays and multiplication	calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and estimate the area of irregular shapes  <i>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)</i> (copied from Multiplication and Division)	calculate the area of parallelograms and triangles  calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm <sup>3</sup> ) and cubic metres (m <sup>3</sup> ), and extending to other units [e.g. mm <sup>3</sup> and km <sup>3</sup> ].  recognise when it is possible to use formulae for area and volume of shapes

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TELLING THE TIME					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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 use both analogue and digital 12 hour clocks to record time	read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)		
recognise and use language relating to dates, including <b>days of the week, weeks, months and years</b>	know the number of minutes in an hour and the number of hours in a day. (appears also in Converting)	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 (appears also in Comparing and Estimating)			
		compare durations of events e.g. calculate the time taken by a particular event or task	solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting)	solve problems involving converting between units of time	

# Measurement

CONVERTING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)	know the number of seconds in a minute and the number of days in each month, year and leap year	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 (appears also in Converting)	solve problems involving converting between units of time	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (appears also in Measuring and Calculating)
			solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Telling the Time)	understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	convert between miles and kilometres know approximate conversions to tell if an answer is sensible