



Measurement

Using Measures					
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"> lengths and heights (longer/shorter, tall/short, double/half) mass/weight (heavy/light, heavier than, lighter than) capacity and volume (full/empty, more than/less than, half full) time (quicker, slower, earlier, later) 	<p>Choose and use appropriate standard units to estimate and measure:</p> <ul style="list-style-type: none"> length and height (m/cm) mass (kg/g) temperature (Celsius) capacity (litres/ml) 	<p>Measure, compare, add and subtract;</p> <ul style="list-style-type: none"> lengths (m/cm/mm) mass (kg/g) capacity (l/ml) 	<p>Convert between units of measure (e.g. km into m)</p>	<p>Convert between different units of metric measures (e.g. km into m).</p>	<p>Solve problems involving the calculation and conversion of units measure, up to 3dp.</p>
<p>Measure and begin to record the following:</p> <ul style="list-style-type: none"> lengths and heights 	<p>Use appropriate methods to measure including thermometers, rulers, scales and</p>	<p>Accurately measure within 5mm.</p>	<p>Estimate, compare and calculate different measures.</p>	<p>Understand and use approximate equivalences between metric units and common</p>	<p>Use, read, write and convert between standard units across length, mass, volume</p>



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<ul style="list-style-type: none"> • mass/weight • capacity and volume • time 	<p>measuring vessels.</p>			<p>imperial units such as inches, pounds and pints.</p>	<p>and time (up to 3 dp).</p>
	<p>Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$.</p>			<p>Use all four operations to solved problems involving measures using decimal notation, including scaling.</p>	<p>Convert between miles and kilometres.</p>
<p>Top tips</p> <p>How do you know that this (object) is heavier/longer/taller than this one? Explain how you know?</p> <p>Application (practical)</p> <p><i>Which two pieces of string are the same lengths as this book?</i></p>	<p>Top tips</p> <p>Put these measurements in order starting with the smallest:</p> <p>a) 75 g b) 100g c) 85g</p> <p>Position the symbols</p> <p><i>Place the correct symbol between the measurements ($>$ or $<$):</i></p>	<p>Top tips</p> <p>Put these measurements in order starting with the largest:</p> <p>a) Half a litre b) Quarter of a litre c) 300ml</p> <p>Explain your thinking.</p> <p>Position the symbols</p> <p><i>Place the correct symbol between the measurements ($>$ or $<$):</i></p>	<p>Top tips</p> <p>Put these amounts in order starting with the largest:</p> <p>a) Half of three litres b) Quarter of two litres c) 300ml</p> <p>Explain your thinking.</p> <p>The answer is...</p> <p>225 metres</p>	<p>The answer is...</p> <p>0.3km</p> <p>What is the question?</p> <p>Write more statement</p> <p>Write more statements</p> <p><i>Mr Smith needs to fill buckets of water. A large bucket holds 6l and a small bucket</i></p>	<p>The answer is...</p> <p>24 metres cubed</p> <p>What is the question?</p> <p>Write more statements</p> <p>Chen, Megan and Sam have parcels. Megan's parcel weighs 1.2kg, Chen's parcel is 1500g and Sam's parcel is half the weight of Megan's. Write down</p>

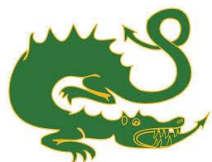


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	<p>36 cm ? 63cm</p> <p>130 ml ? 103ml</p> <p>Explain how you know.</p> <p>The answer is...</p> <p>3 hours</p> <p>What is the question?</p> <p>Application (practical)</p> <p>Draw lines whose lengths differ by 4cm.</p>	<p>306cm ? Half a metre</p> <p>930ml ? 1 litre</p> <p>Explain how you know.</p> <p>The answer is...</p> <p>25 minutes</p> <p>What is the question?</p> <p>Write more statements (can be practical)</p> <p>If there are 630ml of water in a jug. How much water do you need to add to up with a litre of water?</p> <p>What is there was 450ml to start with?</p> <p>Make up some more statements like this.</p>	<p>What is the question?</p> <p>Write more statements</p> <p>One battery weights the same as 60 paperclip.</p> <p>One pencil sharper weights the same as 20 paperclips.</p> <p>Write down some more things you know weighs the same as x paperclips.</p>	<p>holds 4l. If a jug holds 250ml and the bottle 500ml, suggest some ways these can be used to fill up the buckets.</p>	<p>other statements about the parcels.</p>
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Money

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise and know the value of different	Recognise and use symbols for pounds (£) and	Add and subtract amounts of money to	Estimate, compare and calculate	Use all four operations to solve problems involving	



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denominations of coins and notes.	pence (p) and combine amounts to make a particular value.	give change, using both £ and p.	different measures, including money.	measure, including money.	
	Find different combinations of coins that equal the same amount of money.				
	Solve simple problems in practical contexts using addition and subtraction of money of the same unit, including giving change.				
Possibilities Ella has two silver coins. How much money might she have?	Possibilities How many different ways can you make 63p using only 20p, 10p and 1p coins.	Possibilities I bought a book which cost between £9 and £10 and I paid with a ten pound note. My change was between 50p and £1 and was all	Possibilities Adult tickets cost £8 and child tickets cost £4. How many adult and children's tickets could I buy for £100 exactly? Can you find more		



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		in silver coins. What price could I have paid?	<p>than one way of doing this?</p> <p>Position the symbols</p> <p><i>Place the correct symbols between the measurements. > or <.</i></p> <p><i>£23.61 2326p 2623p</i></p> <p><i>Explain your thinking.</i></p>		
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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.	<p>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12/24 hr clocks.</p> <p>Know how many seconds in a minute, minutes in an hour, days in a month/year.</p>	Read, write and convert time between analogue and digital 12 and 24-hour clocks.	Solve problems involving converting between units of time.	Use, read, write and convert standard measurements of time, converting between two of these.
Recognise and use language	Know the number of minutes in an	Estimate and read time with increasing accuracy	Solve problems involving converting from:		



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relating to dates; days, weeks, months and years.	hour and number of hours in a day.	to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock.	<ul style="list-style-type: none"> • hours to minutes • minutes to seconds • years to months • weeks to days 		
Sequence events in chronological order using language (e.g. before/after, next, first, today, yesterday, tomorrow, afternoon and evening).	Compare and sequence intervals of time.	Use vocabulary such as: <ul style="list-style-type: none"> • a.m/p.m • morning/afternoon • noon/midnight 			
		Compare and sequence intervals of time.			
<p>Explain thinking</p> <p>Ask pupils to reason and make statements about the order of daily routines in school.</p>	<p>Undoing</p> <p>The film finishes two hours after it starts. It finishes at 4:30pm. What time did it start? Draw the clock at the start and the finish of the film.</p>	<p>Undoing</p> <p>A programme lasting 45 minutes finishes at 5:20. At what time did it start? Draw the clock at the start and the finish time.</p> <p>Working backwards</p>	<p>Undoing</p> <p>Imran's swimming lesson lasts 50 minutes and it takes 15 minutes to change and get ready for the lesson. What time does Imran need to arrive if his lesson finishes at 6:15pm?</p>	<p>Undoing</p> <p>A school play ends at 6:45pm. The play lasted 2 hours and 35 minutes. What time did it start?</p> <p>Working backwards</p>	<p>Undoing</p> <p>A film lasting 200 minutes finished at 17:45. At what time did it start?</p>



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<p>e.g. We go to PE after we go to lunch. Is this true or false?</p>	<p>Working backwards</p> <p><i>Draw hands on the clock faces to show when break started and when it finished 15 minutes later at 10:35.</i></p> <p>Explain thinking</p> <p>The time is 3:15pm. Kate says that in two hours she will be at her football game which starts at 4:15. Is Kate right? Explain why.</p> <p>What do you notice?</p> <p><i>What do you notice?</i> $1 \text{ hour} = 60 \text{ mins}$ $\frac{1}{2} \text{ hour} = 30 \text{ mins}$ $\frac{1}{4} = 15 \text{ minutes}$</p>	<p><i>Tom's bus journey takes half an hour. He arrives at his destination at 9:25. At what time did his bus leave?</i></p> <p>Explain thinking</p> <p>Salha says that 100 minutes is the same as 1 hour. Is Salha right? Explain why.</p> <p>What do you notice?</p> <p><i>What do you notice?</i> $1 \text{ minute} = 60 \text{ seconds}$ $2 \text{ minutes} = 120 \text{ seconds}$ <i>Continue this pattern.</i></p>	<p>Working backwards</p> <p><i>Put these times of the day in order, starting with the earliest time.</i></p> <ul style="list-style-type: none">a) Quarter to four in the afternoonb) 07:56c) Six minutes to nine in the eveningd) 14:36 <p>Explain thinking</p> <p>The time is 10:35am. Jack says that the time is closer to 11:00am than 10:00am. Is Jack right? Explain why.</p> <p>What do you notice?</p> <p><i>What do you notice?</i> $1:00\text{pm} = 13:00$ $2:00\text{pm} = 14:00$</p> <p><i>Continue the pattern.</i></p>	<p><i>Put these lengths of time in order starting with the longest time.</i></p> <ul style="list-style-type: none">a) 105 minsb) 1 hr 15 minsc) 6360 secs <p>What do you notice?</p> <p>What do you notice?</p> <p>1 minute = 60 seconds 60 minutes = ? seconds</p> <p>Fill in the missing number of seconds.</p>	
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Measurement

Perimeter, Area and Volume

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Measure the perimeter of simple 2D shapes.	Measure and calculate the perimeter of a rectilinear shape 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.
			Find the area of rectilinear shapes by counting squares.	Calculate and compare the area of rectangles, using units such as centimetres and metres squared.	Recognise when it is possible to use formulae for area and volume (e.g. $a = h \times w$, $v = h \times w \times d$).
			Find the area of rectilinear shapes by using $h \times w$ (or $l \times b$).	Estimate volume (for examples using 1 centimetres cubed blocks to build cuboids).	Calculate estimate and compare volume of cubes and cuboids using standard units and extending to millimetres and kilometres cubed.
		Testing conditions A square has sides of a who number of cms. Which of the following	Testing conditions If the width of a rectangle is 3 metres less than the length and the perimeter	Testing conditions Shape A is a rectangle that is	Top Tips Put these amounts in order starting with the largest:



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measurements could represent its perimeter?

- a) 8cm
- b) 18cm
- c) 24cm
- d) 25cm

is between 20 and 30 metres. What could the dimensions be?

Always, sometimes, never

If you double the area of a rectangle, you double the perimeter.

4m long and 3m wide.

Shape B is a square with sides 3m.

The rectangle and squares are put together side by side to make a path which has perimeter between 20 and 30m (example given).

Can you draw some other arrangements where the perimeter is between 20 and 30m?

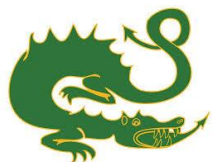
Top Tips

Put these amounts in order starting with the largest:

- a) 130000 cm²
- b) 1.2m²
- c) 13m²

- a) 100 cm³
- b) 1000000 mm³
- c) 1m³

Explain your thinking.



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Vocabulary					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
full	minute	century	convert	imperial unit	arrive
half full	second	leap year	standard unit	pint	depart
empty	quarter to	celsius	metric unit	gallon	miles per hour
container	quarter past	degrees	millennium	pounds	profit
weighs	digital	calendar	area	inches	loss
balances	analogue	date	square centimetre	discount	yard
heavier	temperature	morning/ am	kilometre km	currency	feet/foot
lighter	pounds	afternoon/ pm	square metre		tonne
scales	penny	midnight			ounce oz
seasons	notes	noon			centilitre cl
day	change	earliest			cubic metre
week	furthest	latest			cubic millimetre
month	centimetre cm	roman numerals			cubic kilometre
year	metre m	more/most			
quickest	kilogram kg	expensive			
slowest	gram g	least/less expensive			
oldest	measuring scale	amount			
newest		value			
time		worth			
money		approximately			
coins		distance			
length		litre l			
width		millilitre ml			
height		millimetre mm			
mass/weight		milligrams mg			
capacity/volume					



In partnership with:



Measurement

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