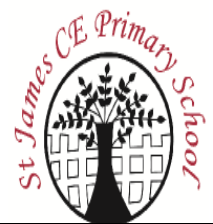


# St James Measurement Journey



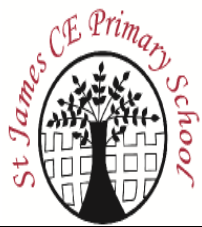
COMPARING AND ESTIMATING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>ELG - Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.</b>	Compare, describe and solve practical problems for: * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] <i>Small world toys</i>	Compare and order lengths and record the results using >, < and = <i>Measuring tape</i>			<b>calculate and compare the area of squares and rectangles</b> including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and <b>estimate the area of irregular shapes</b> (also included in measuring) <i>Coloured card Squared paper Bar models Part whole models</i>	calculate, estimate and compare <b>volume</b> of cubes and cuboids using standard units, including centimetre cubed (cm <sup>3</sup> ) and cubic metres (m <sup>3</sup> ), and extending to other units such as mm <sup>3</sup> and km <sup>3</sup> . <i>Cubes 3-D shapes Meter rulers</i>
	Compare, describe and solve practical problems for: * mass/weight [e.g. heavy/light, heavier than, lighter than]	Compare and order, mass and record the results using >, < and = <i>Balancing scales</i>			<b>estimate volume</b> using 1 cm <sup>3</sup> blocks to build cubes and cuboids <i>Cubes</i>	

Black – The objective

Blue – The manipulatives that need to be used

Orange – Taught discretely or taught during mental maths/rapid recall

Purple – Covered in within other lessons/objectives.



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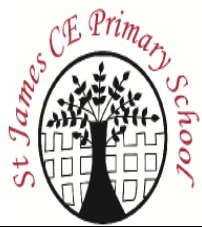
	Balancing scales					
Measure short periods of time in simple ways	Compare, describe and solve practical problems for: * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] Bottles of liquid	Compare and order volume/capacity and record the results using $>$ , $<$ and $=$ Bottles of liquid Measuring cylinders				estimate volume and capacity (e.g. using water) Cubes Measuring cylinders
	Compare, describe and solve practical problems for: *time [e.g. quicker, slower, earlier, later]					

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# St James Measurement Journey



<p>Order and sequences familiar events.</p>	<p>sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]  <i>Visual aids of events</i></p>	<p>compare and sequence intervals of time  <i>Clocks</i></p>	<p>compare <b>durations</b> of events, for example to calculate the time taken by particular events or tasks  <i>Clocks</i>  <i>Stopwatch</i>  <i>Calendars</i></p> <p><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 (appears also in Telling the Time)</i></p>			
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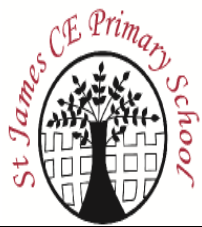
MEASURING and CALCULATING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Order two or three	Measure and begin	choose and use	measure <b>lengths</b>	estimate, compare	<i>use all four</i>	solve problems

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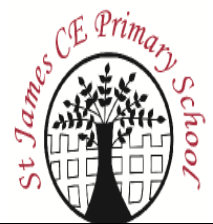
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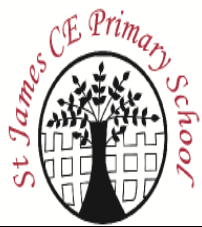
items by length or height.	to record the following: * <b>lengths and heights</b> Metre rulers Rulers Tape measures	appropriate standard units to estimate and measure <b>length/height</b> in any direction (m/cm) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Metre rulers Rulers Tape measures	(m/cm/mm); Tape measure Rulers	and calculate <b>different measures</b> , including <b>money in pounds and pence</b> (appears also in Comparing) Coins Notes Part whole Bar models Number lines	operations to solve problems involving measure (e.g. <b>length, mass, volume, money</b> ) using decimal notation including scaling.	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)
Order two items by weight or capacity			Compare <b>lengths</b> (m/cm/mm);	calculate <b>different measures of mass</b> Weighing scales Bar models Number line		
	Measure and begin to record the following: * <b>mass/weight</b> Weighing scales (simple scale)	choose and use appropriate standard units to estimate and measure <b>mass</b> (kg/g) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	add and subtract: <b>lengths</b> (m/cm/mm); Bar models Part whole Column	calculate <b>different measures of volume</b> Measuring cylinders Bar models Number line		
			measure, <b>mass</b> (kg/g); Scales	calculate <b>different measures of height and length</b>		

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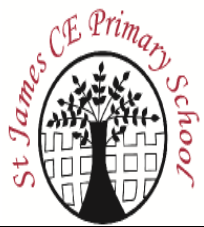
		<b>Weighing scales (simple scale)</b>		<b>Rulers</b> <b>Bar model</b>		
Measure and begin to record the following: * <b>capacity and volume</b> <b>Measuring cylinders</b>	Choose and use appropriate standard units to estimate and measure <b>capacity</b> (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels <b>Measuring cylinders</b>	compare, add and subtract: <b>mass</b> (kg/g); <b>Bar models</b> <b>Column</b> <b>Scales</b>	measure, <b>volume/capacity</b> (l/ml) <b>Beakers</b> <b>Bar models</b>			
		choose and use appropriate standard units to estimate and measure <b>temperature</b> (°C) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels				
Measure and begin to record the following: * <b>time</b> (hours, minutes, seconds) <b>Stopwatches</b>			measure the <b>perimeter</b> of simple	measure and calculate the	measure and calculate the	recognise that shapes with the

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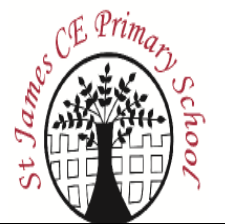
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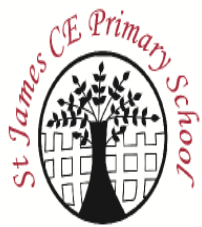
		Thermometers	2-D shapes Column	<b>perimeter</b> of a rectilinear figure (including squares) in centimetres and metres Bar models	<b>perimeter</b> of composite rectilinear shapes in centimetres and metres Squared paper Rulers	same <b>areas</b> can have different <b>perimeters</b> and vice versa Squared paper
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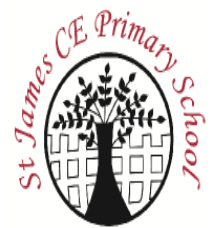
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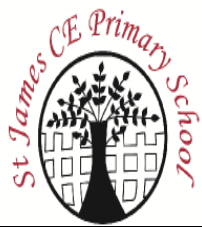
MEASURING and CALCULATING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Beginning to use everyday language related to money	Recognise and know the value of different denominations of <b>coins and notes</b> Coins Base 10	recognise and use symbols for pounds ( <b>£</b> ) and pence ( <b>p</b> ); combine amounts to make a particular value Coins Base 10 – understand value amounts.	add amounts of <b>money</b> to give change, using both £ and p in practical contexts Coins Notes Part Wholes	Estimate, compare and calculate money in <b>pounds and pence</b> . Coins Bar models Part wholes 100 squares Number lines		
		find different combinations of coins that equal the same amounts of money Coins Base 10 – understand value amounts.	subtract amounts of <b>money</b> to give change, using both £ and p in practical contexts Coins Notes Part Wholes			
		<b>solve simple</b>				

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# St James Measurement Journey



		<p><b>problems</b> in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p>Bar model Coins Base 10 – understand value amounts.</p>		<p>find the <b>area</b> of rectilinear shapes by counting squares</p> <p>Coloured card Squared paper</p>	<p><i>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></p>	<p>calculate the <b>area of parallelograms and triangles</b></p> <p>Squared paper Coloured card</p>
					<p><i>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) (copied from Multiplication and Division)</i></p>	<p>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>].</p>
						<p>recognise when it is possible to use formulae for area</p>

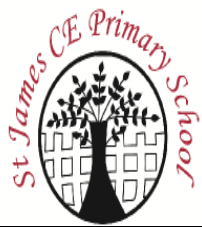
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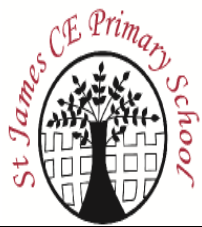
						and volume of shapes
TELLING THE TIME						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measures short periods of time in simple ways.	tell the time to the hour and draw the hands on a clock face to show these times. <b>Clocks</b>	tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times. <b>Clocks</b>	tell and write the time from an <b>analogue clock</b> , including using <b>Roman numerals</b> from I to XII, and 12-hour and 24-hour clocks <b>Clocks</b> <b>Watches</b> <b>Digital clocks</b>	<b>read analogue and digital 12 and 24-hour clocks</b> (appears also in Converting) <b>Number lines</b> <b>Digital clocks</b> <b>Analogue clocks</b>	solve problems involving converting between units of <b>time</b> <b>Part wholes</b> <b>Bar models</b> <b>Calendars</b>	
	tell the time half past the hour and draw the hands on a clock face to show these times. <b>Clocks</b>	tell and write the time to five minutes and draw the hands on a clock face to show these times. <b>Clocks</b>	<b>convert time</b> between analogue and digital 12 and 24-hour clocks (appears also in Converting) <b>Digital clocks</b> <b>Analogue clocks</b>			

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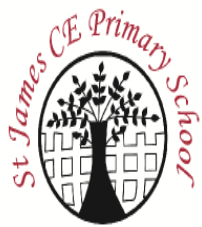
<p>Uses everyday language related to time.</p>	<p>recognise and use language relating to dates, including days of the week, weeks, months and years</p>	<p>know the number of minutes in an hour and the number of hours in a day. (appears also in Converting)</p>	<p>estimate and read time with increasing 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 Comparing and Estimating)</p> <p>Clocks Stopwatches Number lines Digital clocks Partitioning</p>	<p><i>solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting)</i></p>		
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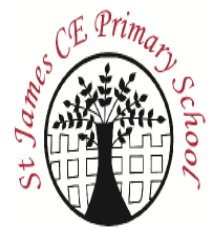
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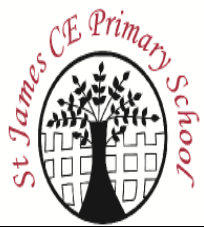
CONVERTING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)	know the number of seconds in a minute and the number of days in each month, year and leap year	convert between different units of mass <i>Bar models</i> <i>Weighing scales</i>	<b>convert</b> between different units of <b>metric</b> measure (e.g. <b>kilometre and metre; centimetre and millimetre</b> ) <i>Rulers</i> <i>Part wholes</i>	use, read, write and convert between standard units, <b>converting measurements of length, mass, volume and time</b> from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
			convert between different units of volume <i>Number lines</i> <i>Bar models</i>	<b>convert</b> between different units of <b>metric</b> measure (e.g. <b>gram and kilogram; litre and millilitre</b> ) <i>Weighing scales</i> <i>Part wholes</i> <i>Bar models</i> <i>Weights</i>		
			convert between different units of length <i>Bar models</i>	<i>solve problems involving converting between units of</i>		
			<i>read, write and convert time between analogue</i>	<i>solve problems involving the calculation and</i>		

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## St James Measurement Journey

				and digital 12 and 24-hour clocks	<b>time</b>	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 Number lines	understand and use equivalences between <b>metric units</b> and common <b>imperial units</b> such as inches, pounds and pints	convert between <b>miles and kilometres</b> Graph paper

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