

KS5 Maths

Measure- Length & size

Subject curriculum intent:	<p>We want our pupils to be able to develop functional measurement skills so that they can be as independent as possible in their adulthood. Depending on the cognitive ability of the pupil, our intention is that pupils are able to consider length and size when planning ahead for things such as organising and purchasing house furniture or thinking about the sizing of clothing they will be purchasing for themselves.</p> <p>We want our pupils to...</p> <ol style="list-style-type: none">1. develop fluency in the fundamentals of mathematics so that they are efficient in using and selecting the appropriate strategies to use time skills including mental methods, underpinned by mathematical concepts2. can solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios3. can reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language. <p>In all math lessons, teachers plan engaging lessons with the aim that pupils:</p> <ul style="list-style-type: none">• master skills in maths which they are then able to apply to a range of contexts within the school and home context• embed their new skills and understanding to a range of contexts; thus supporting application and progress in learning• acquire core mathematical skills to support their independence as they progress through the school• are able to apply their understanding; supporting them in other areas of the curriculum	
End of KS3 intent/outcome	End of KS4 intent/outcome	End of KS5 intent/outcome
Students will be introduced into key vocabulary linked to length and size. Students will be able to describe concrete items using their key vocabulary and will use this to help them order and compare items based on length and size.	Students continue to build on their learning from key stage 3. Students will be able to use a variety of concrete resources such as cubes or rulers to measure and compare the length and size of different items. Students will record the length and size of items using relevant units (cm,m).	Students will continue to experience measuring items. Students will be able to apply measuring in a number of different contexts. Students will be able to compare measurements and space available and identify if size/length of items is suitable for the space available.
Intent for this topic:	This half term, pupils will build on their knowledge of length and size from the KS3 and KS4 Curriculums. Pupils will access discrete Maths lessons where they will further develop knowledge and skills linked to length and size, starting at their last learning point in the topic from the previous key stage. Pupils will be more confident in identifying and using these skills in wider contexts and understand how these skills will important in their adulthood. Pupils will be learning how to apply their knowledge and understanding of measuring to be able to consider how to plan furniture arrangements (length), DIY (length & size) or when buying clothing (size).	

Key vocabulary taught within this topic:	Measure, Length, height, long(er), short(er), tall(er), wide(r), narrow(er), millimeters, centimeters, meter, ruler, measuring tape, size, big(ger), small(er), large(r)
Links to other subjects:	-Design technology (manufacturing) -Shape

	<u>B2 P 5</u>	<u>B2 P 6-8</u>	<u>B2 step 1c-1b</u>	<u>B2Step 1b-2c</u>	<u>B2Step 2c-2a</u>	<u>B2Step 2a-3a</u>
<p><u>Subject specific knowledge</u></p> <p>What do pupils need to know?</p>	<p><u>To know</u> key words: big/small tall/short</p> <p><u>To know</u> to place objects next to each other to accurately compare inc. from same starting point</p>	<p><u>To know</u> key words: bigger / smaller taller / shorter</p>	<p><u>To know</u> they can measure lengths using cubes, objects or hand-spans</p>	<p><u>To know</u> a ruler measures length</p> <p><u>To know</u> how to use a ruler correctly: start at zero and not end of ruler, then see where the object ends</p> <p><u>To know</u> rulers only accurately measure straight objects - not curved.</p> <p><u>To know</u> cm and mm are units to measure length</p> <p><u>To know</u> 10 mm = 1cm</p>	<p><u>To know</u> which is the correct standard unit for a measurement e.g. mm,cm,m</p> <p><u>To know</u> what measuring tool is more efficient to measure a particular item</p>	<p><u>To know</u> how to break down a worded problem related to measure</p>
<p><u>Subject specific skills</u></p> <p>What do pupils need</p>	<p><u>Is able to</u> find big and small objects on request.</p>	<p><u>Is able to</u> use every day language to talk about length and size in context and through play</p>	<p><u>Is able to</u> measure lengths using cubes/objects/ Hand-spans</p>	<p><u>Is able to</u> measure the perimeter of 2d shapes (cm)</p> <p><u>Is able to</u> compare and describe lengths</p>	<p><u>Is able to</u> use the correct standardised measuring tools to measure length, (deciding to use a</p>	<p><u>Is able to</u> solve worded problems related to measure.</p>

<p>to be able to do?</p>	<p><u>Is able to find long/tall/ and short objects on request.</u></p> <p><u>Is beginning to compare heights/lengths by placing objects next to each other.</u></p> <p><u>Is beginning to compare sizes by placing objects next to each other</u></p>	<p>Is able to describe an object as: Small / big Small / large Short / long Short / tall</p> <p><u>Is able to use comparative language:</u> Smaller / bigger Smaller / larger Shorter / longer Shorter / taller describe length and size of objects</p> <p><u>Is able to place objects in order of size or length</u></p>	<p><u>Is able to use a balance scale to aid comparative vocabulary independently</u></p>	<p>and heights using 'double/half' vocabulary</p> <p><u>Is beginning to use standardised measuring tools to measure length e.g. ruler (start with whole cm, then move onto cm & mm combined)</u></p> <p><u>Is able to solve practical problems for length and size</u></p>	<p>ruler, tape measure or meter ruler)</p> <p><u>Is able to compare and order measurements (mm, cm, m)</u></p>	
<p><u>Suggested teaching activities</u></p> <p>How should I teach this?</p>						