

KS5 Maths

Measure- Capacity & Weight

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 gain key skills in capacity and weight so that they are able to use and apply them within their independent life skills such as cooking 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 capacity and weight. Students will be able to use balancing scales to compare weight and use key vocabulary to describe and order concrete resources. Students will use liquids to fill measuring jugs to match a given capacity.	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 to compare the weight of different items. Where appropriate, students will begin to use grams and kilograms to measure and compare weight. Students will also begin to measure capacities in millilitres/litres.	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 equipment available before selecting suitable equipment to complete a given task such as cooking a meal for themselves.
Intent for this topic:	This half term, pupils will build on their knowledge of capacity and weight from the KS3 and KS4 Curriculums. Pupils will access discrete Maths lessons where they will further develop knowledge and skills linked to capacity and weight, 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 and make healthy meals and follow a recipe.	

Key vocabulary taught within this topic:	Measure, capacity, weight, kilograms, grams, millilitres, litres, g, kg, L, ml, balance, scale, jug, heavier than, lighter than, full, nearly full, half full, nearly empty, empty.
Links to other subjects:	-Design technology (manufacturing) -Shape -Cafe

	B2 P 5	B2 P 6-8	B2 step 1c-1b	B2Step 1b-2c	B2Step 2c-2a	B2Step 2a-3a
Subject specific knowledge What do pupils need to know?	<u>To know</u> key words: heavy/light/full/empty <u>To know</u> to place objects next to each other to accurately compare inc. from same starting point	<u>To know</u> key words: heavy/light/full/empty/ nearly full/nearly empty <u>To know</u> the size of object does not always determine the weight e.g. bigger does not always mean heavier	<u>To know</u> what a balance scale is and how to use it <u>To know</u> the side of the balance then touches the table = heaviest and the side that lifts = lightest	<u>To know</u> kg and g are units to measure weight <u>To know</u> you can measure liquids using cups and know each cup must be full for accuracy. <u>To know</u> a measuring jug measures liquids <u>To know</u> liquid is measured in ml and l <u>To know</u> how to use a measuring jug accurately: go to eye level and pour slowly.	<u>To know</u> which is the correct standard unit for a measurement e.g. mm,cm,m,g,kg etc <u>To know</u> what measuring tool is needed to measure something specific	<u>To know</u> how to break down a worded problem related to measure
Subject specific skills What do pupils need to be able to do?	<u>Is able to</u> find heavy and light objects on request. Experience comparing weights by placing objects next to each other.	<u>Is able to</u> use every day language to talk about size in context and through play: Weight, capacity, <u>Is beginning to</u> compare quantities of object e.g. knows whether they have	<u>Is able to</u> measure weight using cubes <u>Is able to</u> use a balance scale to aid comparative vocabulary independently	<u>Is able to</u> compare and describe capacity using 'half full/quarter full/empty' vocabulary <u>Is able to</u> solve practical problems	<u>Is able to</u> use standardised measuring tools to measure capacity or weight <u>Is able to</u> compare and order	<u>Is able to</u> solve worded problems related to measure.

	<p><u>Is able to</u> indicate which of two jugs is the bigger.</p> <p>Experience comparing capacities by placing jugs next to each other</p>	<p>more or less biscuits than their friend</p> <p>Is beginning to compare and describe weights of objects using heavy/light</p> <p>Is beginning to compare and describe capacities using full/empty</p>		<p>for weight and capacity.</p> <p><u>Is able to</u> count out number of cups taken to fill a container</p> <p><u>Is beginning to</u> use a measuring jug by reading the numbers in ml and attempting to measure this out with some accuracy</p>	<p>measurements (ml, g etc)</p>	
<p><u>Suggested teaching activities</u></p> <p>How should I teach this?</p>	<ul style="list-style-type: none"> Line up toys according to weight Measurement stories Compare familiar objects one small and one big 	<ul style="list-style-type: none"> Role play situations with comparative language e.g. shop. Please can I have a heavy item/full bottle of water? 	<ul style="list-style-type: none"> Ordering weights of items in the class Balance weights / hold weights and compare Compare weight of two of the same food grown Use certain amount of cups of water to water crops daily 	<ul style="list-style-type: none"> Measure with different types of scales Fill containers with water how many cups to fill this bowl Measure liquids/weights according to recipe Measure water needed for crops daily Measure marked out areas of soft play using m and cm 	<ul style="list-style-type: none"> Add measurements of liquid together and check with addition method e.g. pour 450ml with 200ml - answer should be 650ml Measure water that has evaporated over the course of a day (link with science and subtraction) Measure out all recipe components Measure area and perimeter of marked out areas of soft play 	

