Structured Department Maths
Measure- Capacity, weight and size

Subject curriculum intent:	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 use measurement skills to be able to make themselves simple drinks, snacks and meals for themselves. We also want them to be able to understand size to support them in identifing clothes and shoes that fit them. We want our pupils to… 1. develop **fluency** in the fundamentals of mathematics so that they are efficient in using and selecting the appropriate strategies to **use measure skills** including mental methods, underpinned by mathematical concepts 2. can **solve problems by** applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios 3. can **reason mathematically** by following a line of enquiry and develop and present a justification, argument or proof using mathematical language. **In all math lessons, teachers plan engaging lessons with the aim that pupils:** • 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
Intent for this topic:	This half term, pupils will develop their understanding of capacity, weight and size starting from their last learning point. Pupils will develop an understanding of the keywords linked to capacity, weight and size. Students will use symbol supported activities to order items based on size and connect these to clothing. Students will begin by experiencing weight through tactile and sensory resources. They will move onto using balancing scales and non-standard units measure weights before comparing and ordering items. When ready, students will begin to weight in grams and kilograms. Students will also measure volumes in non-standard and standard units linked to measure capacity and experience this in a multisensory way. Students will access heavily practical and active lessons that will support their sensory needs. In addition to this, students will continue to access workstation activities to further support and develop their understanding of capacity, weight and size.

Key vocabulary taught within this topic:	Measure, more, less Weight, grams, kilograms, scales, balance scale, heavy/heavier, light/lighter, Capacity, volume, millilitre, litre, full, half full, nearly full, nearly empty, empty Size, small, medium, large, too small, too large, bigger, smaller
Links to other subjects:	- Theme (Celebrations) e.g. making drinks and food for celebrations - Life skill (cooking) - Life skills – dressing/clothing

Suggested flow:

This flow is to be used as a guide. Teachers to adapt the flow to meet the needs and abilities of students within their class.

LA/Sensory/Experiential suggested flow of learning (pupils working at pre-subject specific levels):

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Size: Identifying small and big. Sorting items and images into groups based on size.		**Weight:** Experiencing weight Sorting items into heavy/light. Measuring the weight of items using non-standard measurements (E.g cubes and balance scale).		**Capacity:** Experiencing capacity Sorting and ordering representations and images into empty/full. Making full/half full/empty jugs of water.	

HA suggested flow of learning

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Size: Recap previous learning and knowledge. Identifying and sorting items into groups based on size.	**Capacity:** Making full/half full/empty jugs of water. Sorting volumes into empty/full/half full. Making and measuring capacities in millilitres/litres (where appropriate)		**Weight:** Weighing items using non-standard units (E.g cubes and balance scale).	**Weight:** Weighing items using standard units – grams and kilograms	**Weight-use and apply:** Measuring ingredients within a recipe to make a simple meal or snack
Link to life skills – clothing and dressing skills	Link to life skills – making drinks				Food technology

	B2 P5	B2 P6-8	B2 step 1c-1b	B2 Step 1b-2c	B2 Step 2c-2a	B2 Step 2a-3a
Subject specific knowledge **What do pupils need to know?**	To know key words: big/small tall/short To know to place objects next to each other to accurately compare inc. from same starting point	To know key words: heavy(ier)/light(er) To know the size of object does not always determine the weight e.g. bigger does not always mean heavier	To know what a balance scale is and how to use it To know the side of the balance then touches the table = heaviest and the side that lifts = lightest To know you can measure liquids using cups and know each cup must be full for accuracy.	To know how weight is measured in grams and kilograms. To know how to use a scale To know a measuring jug measures liquids To know liquid is measured in ml and l To know how to use a measuring jug accurately: go to eye level and pour slowly.	To know which is the correct standard unit for a measurement e.g. mm,cm,m,g,kg etc To know what measuring tool is needed to measure something specific To know how to problem solve when they have measured too much or too little of an item/ingredient e.g. add or subtract	To know how to break down a worded problem related to measure
Subject specific skills **What do pupils need to be able to do?**	Is able to find big and small objects on request. Is able to indicate which of two saucepans is the bigger/holds more. Experience comparing sizes by	Is able to use every day language to talk about size in context and through play: Weight, capacity, size Is beginning to compare and describe weights of objects	Is able to use a balance scale to aid comparative vocabulary independently when measuring weight Is able to count out number of cups taken to fill a container	Is able to use a range of scales to measure weight in standard units When weighing ingredients, is able to add slowly 'bit by bit' until the desired weight is acquired.	Is able to use standardised measuring tools to measure capacity or weight Is able to compare and order measurements (cm, ml, g etc)	Is able to solve worded problems related to measure.

	placing objects next to each other	using heavy(ier)/light(er)	Is able to compare and describe capacity using 'half full/quarter full/empty' vocabulary	Is beginning to use a measuring jug by reading the numbers in ml and attempting to measure this out with some accuracy Is able to solve practical problems for size, weight and capacity.	Is able to add or subtract ingredients/items to get to the desired weight and does so slowly for accuracy	
Suggested teaching activities	Size: • Sized items linked to the thematic curriculum (celebrations) • Clothing items – self dressing skills with problem solving. Which fits? Which is too small/big? Weight: • Experiencing weight through touch (sensory items) • Sensory items to be weighed using balance scales and cubes as non-standard units. • Create sensory dough by weighting out ingredients needed • Make a simple meal or snack by using weighing skills Capacity: • Water play • Create fruit juice drinks					