








Measurement: Understanding Capacity and Volume

Aim: Compare, describe and solve practical problems for capacity and volume. To understand capacity and volume.	Success Criteria: I can compare the capacity of different containers. I can describe the capacity of different containers. I can compare the volume in different containers. I can describe the volume in different containers.	Resources: Lesson Pack Water or sand trays A variety of containers Glue sticks and scissors for one of the Volume and Capacity Activity Sheets
	Key/New Words: Volume, capacity, full, empty, half, less, more, nearly, most, least, compare, greatest, smallest.	Preparation: Volume Cards – as required Differentiated Volume and Capacity Activity Sheets – one per child Diving into Mastery Activity Cards – as required

Prior Learning: It will be helpful if children have some previous experience of using language related to capacity and volume.

Learning Sequence

	Remember It: Following the Lesson Presentation , children decide which vessel contains more or less liquid. They move to the side of the whiteboard nearest their chosen container to show their answer. Ask children to explain how they know.	
	Capacity: Using the Lesson Presentation , explain that capacity is a measure of how much a container can hold. Children then compare different containers and identify which have the greatest or smallest capacity; which would hold the most or least. Ask children how they can tell. Can the children compare and describe the capacity of different containers?	
	Volume: Using the Lesson Presentation , explain that volume describes how much a container is holding. Children do not need to be able to explain the difference between capacity and volume. Children work with talk partners to describe the volume shown in different containers. They use the terms full, nearly full, half full, nearly empty and empty. Can the children compare and describe the volume in different containers?	
	Capacity and Volume: Children complete the differentiated Capacity and Volume Activity Sheets , comparing and describing the capacity of different containers and the volume shown in different containers. Provide water or sand and a variety of containers for children to use. Can the children compare and describe the capacity of different containers? Can the children compare and describe the volume in different containers?	
Volume Activity Sheet Children cut out images of different containers and sort them into a table to show whether they are full, half full or empty.	Volume Activity Sheet Children draw liquid in bottles to match the volume descriptions, compare containers and label pictures of containers with the correct term.	Volume Activity Sheet Children label pictures of containers with the correct term and write comparison statements.
Capacity Activity Sheet Children compare pairs of containers and identify those with the greatest capacity and those with the smallest capacity. They also compare the capacity of real containers.	Capacity Activity Sheet Children compare groups of containers and identify those with the greatest capacity and those with the smallest capacity. They also compare the capacity of real containers.	Capacity Activity Sheet Children look at generalisations about capacity and investigate if these are always, sometimes or never true.

	<p>Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative activity. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.</p> <p> Children use the terms more and less to describe different volumes. They order three volumes from empty to full. Children can use containers and water to demonstrate their understanding of volume, using the terms 'empty', 'nearly empty', 'nearly full' and 'full'.</p> <p> Children match different volumes with the labels 'nearly full', 'half full' and 'nearly empty'. They work out which volume-related vocabulary is missing. Children then reason whether containers of different sizes that are half full have the same volume or not, explaining their thinking.</p> <p> Children match pictures with clues that describe their volume where there is more than one possible answer. They investigate the statement 'Shorter containers always hold less than taller containers.' This requires them to consider both capacity and volume. They could prove their answers practically.</p>	
	<p>Show Me: Set up a water tray at the front of the classroom so all the children can see it. Ask a few children up at a time to show the volumes shown on the Lesson Presentation using different containers. Ask other children to describe the level of water in containers in whole sentences using mathematical vocabulary. Can the children describe the volume in different containers?</p>	

Exploreit

Exploreit: Leave the water tray, containers and Volume Cards set up for children to experiment independently.

Checkit: Continue to investigate capacity and volume with these [Everyday Objects Capacity and Volume Sheets](#).

Plantit: Water plants in an outdoor area using different containers, encouraging children to compare the capacity of the containers they are using.

Explainit: Fill a jar half full of coloured liquid and tightly close the lid. Lay it on its side. Is it still half full? Can children explain their reasoning?

Learnit: Children will find this visually exciting [Knowledge Organiser](#) a useful tool to support their understanding of weight, mass, capacity and volume.