

Compare capacity and volume

Notes and guidance

Building on their understanding of litres and millilitres, in this small step children compare capacities and volumes.

Children first compare capacities or volumes purely by visual estimation, for example a bath must have a greater capacity than a cup. They also use language such as “full”, “nearly full”, “half full” and “nearly empty” to compare volumes without measuring. They then progress to using “greater than” and “less than” as well as the inequality symbols ($<$, $>$, $=$) to compare capacities and volumes that can be measured.

It is important to explore the common misconceptions that a taller container must have a greater capacity, and that if the level of liquid is higher up a scale, the volume must be greater. Initially, children compare the same units of measure, but then move on to comparing litres to millilitres, building on the work done in Step 8

Things to look out for

- Children may find the relationship between litres and millilitres confusing, leading to statements such as “300 ml is greater than 3 litres.”

Key questions

- What is the difference between capacity and volume?
- Which container do you think has the greater capacity? Why?
- Which container do you think has the greater volume of liquid in? Why?
- How can you work out the actual capacity of each container?
- What is each interval worth?
- How can you work out halfway between two marks?
- What unit is the volume/capacity measured in?
- How many millilitres are there in _____ litres?

Possible sentence stems

- The capacity of the first container is _____ than the capacity of the second container because ...
- The volume of liquid in the first container is _____ than the volume in the second container because ...
- There are _____ millilitres in _____ litre.

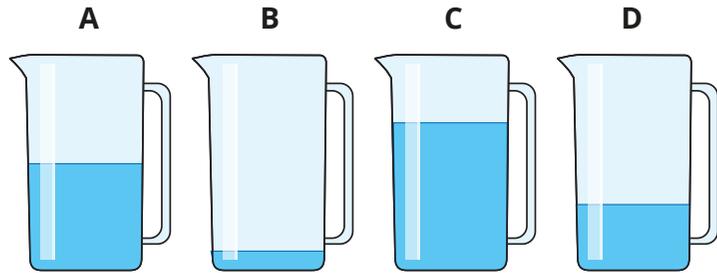
National Curriculum links

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Compare capacity and volume

Key learning

- Each container has the same capacity.

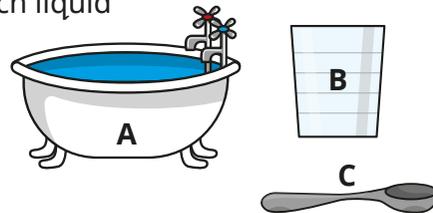


Put the containers in order of the volume of liquid they contain.

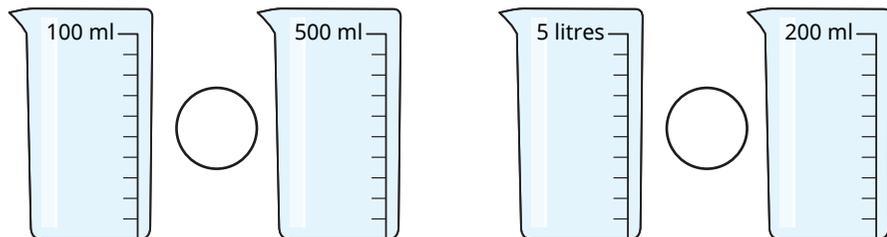
Start with the container with the greatest volume.

- Put the objects in order of how much liquid they can contain.

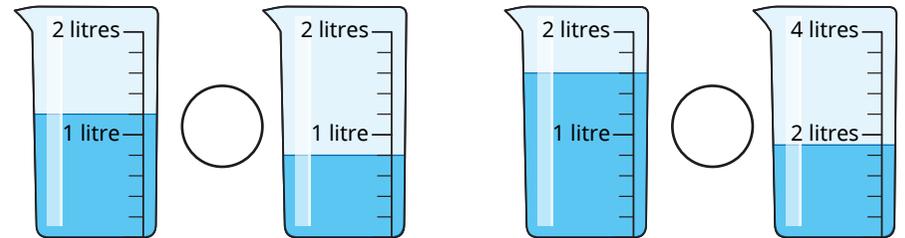
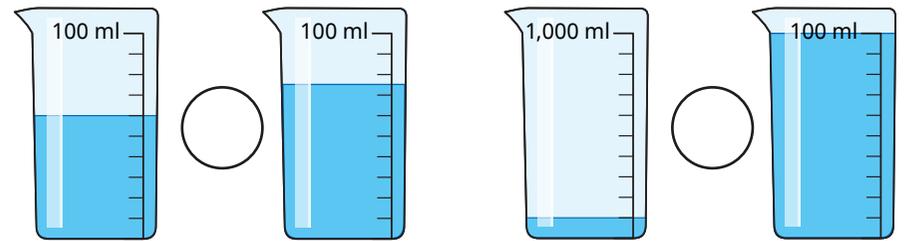
Start with the greatest capacity.



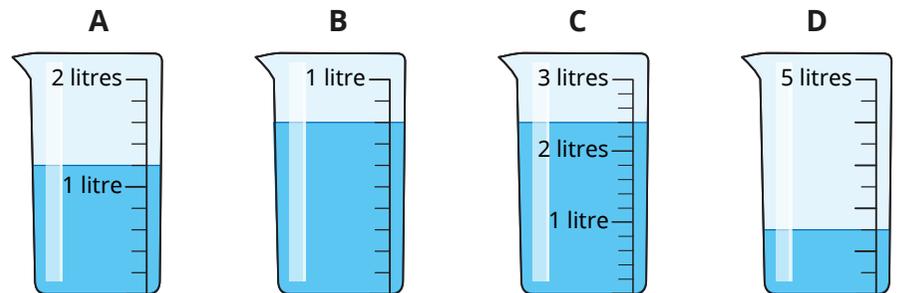
- Write $<$, $>$ or $=$ to compare the capacities.



- Write $<$, $>$ or $=$ to compare the volumes.



- Put the containers in order of the volume of liquid they contain. Start with the smallest volume.



Compare capacity and volume

Reasoning and problem solving

Rosie's water Max's water

Max has more water than Rosie, because 500 is greater than 1

Do you agree with Tiny?
Explain your answer.

No

Is the statement true or false?

The volume of water in jug A is greater than the volume of water in jug B.

A B

False
jug A:
approximately
650 ml
jug B:
approximately
700 ml

Explain your answer.