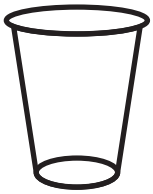
Volume and capacity – capacity of containers

When we find out how much a container can hold, we are measuring capacity.

1 How would you describe how full these containers are? There are some ideas on the help strip below.

Answers will vary and may include:

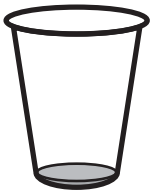
a  **empty**

b  **full**

c  **a little full/$\frac{1}{4}$/$\frac{1}{3}$**

d  **nearly full/$\frac{3}{4}$ full**

e  **nearly full**

f  **nearly empty**

2 What sort of container do you think could be filled with 5 cups of water? Draw it.

Answers will vary.

Container would have a capacity of 1.25 L

full	empty	half	between	quarter
a bit	three quarters		nearly	

Volume and capacity – capacity of containers

You will need: a partner, a spoon, a cup, a bucket, sand or water, a lunchbox

What to do:

a How many spoonfuls of water or sand will fill your cup?

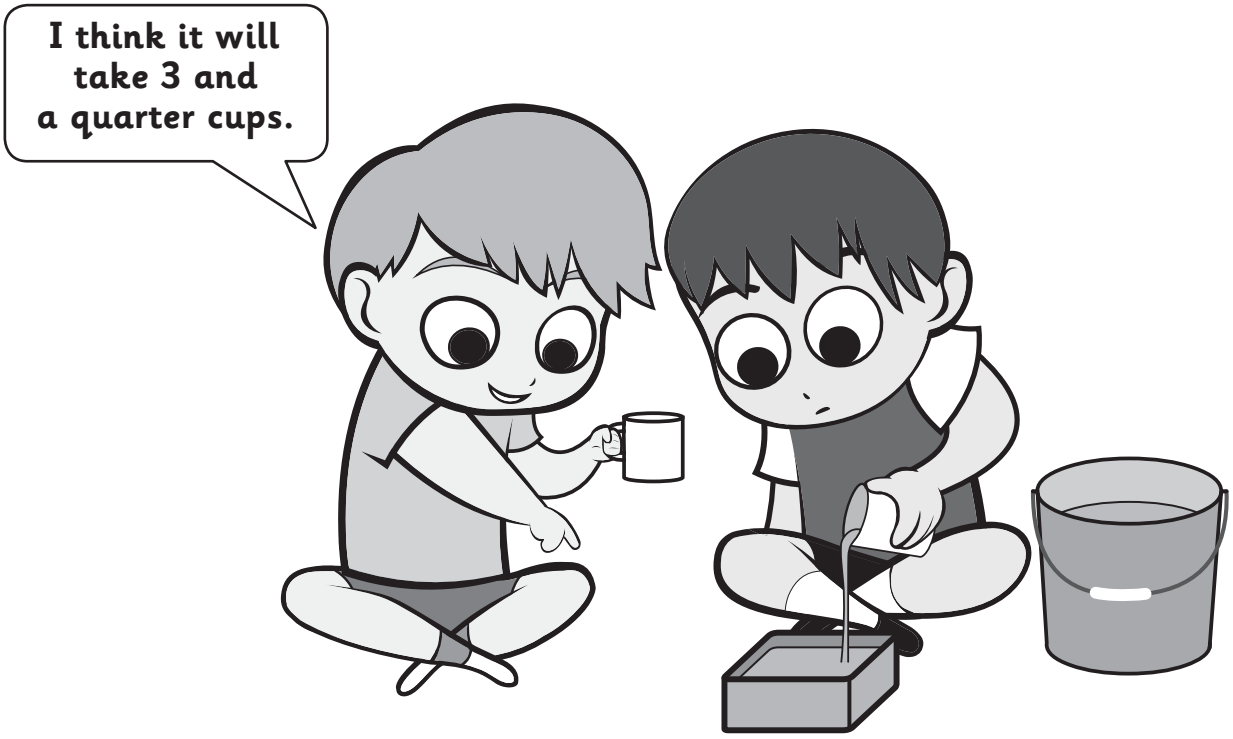
estimate ☐ **Answers will vary.** **measure** ☐

b How many cups of water or sand will fill your lunchbox?

estimate ☐ **Answers will vary.** **measure** ☐

c How many lunchboxes of water or sand will fill your bucket?

estimate ☐ **Answers will vary.** **measure** ☐



Volume and capacity – capacity of containers

You will need: a partner, a cup, a 2 L plastic bottle, a funnel, sand or water, a permanent marker

What to do:

a Can you see the markers on the side of the jug? These tell us how full the jug is and help us if we need a set amount. Can you think of a time we would use them?

recipes/cooking

b You are going to make your own specially marked container. Pour cups of water or sand into the plastic bottle until the bottle is full. Use a funnel if you have one to make it easier. Each time you pour a cupful in, mark the side of the bottle.

What to do next:

a Pour 2 cups of water or sand out of the bottle. How will you know you have done this correctly?

The capacity will have decreased by 2 markers.

b How much is left in the bottle? Show how you know.

Answers will vary, depending on size of bottle used.

c Take turns telling each other how much to pour out of the bottle until it's all gone. Check each other's decisions.

Answers will vary. Students may say, "Pour out 3 cups …".

Volume and capacity – compare and order

You will need: a partner, a cup, a mug, a jug, sand or water, a lunchbox

What to do:

a Order your containers from the one that holds the least to the one that holds the most. How will you prove this?

Answers will vary.

b Draw the containers in order in the boxes below and explain how you worked it out.

least **most**

Answers will vary.

Volume and capacity – compare and order

You will need: a partner, cups, lunchboxes, sand or water, jugs or bottles

What to do:

a Fill a container with sand or water. Can you find a different shaped container with the same or nearly the same capacity? Draw the two containers in the box below.

Answers will vary.

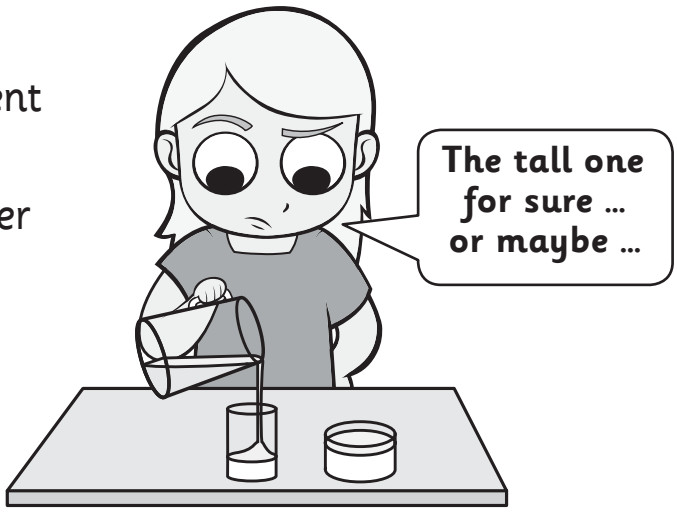
b Would you have expected that they had the same capacity? Why or why not?

Answers will vary.

What to do next:

Take turns giving each other 2 different shaped containers. Ask each other to predict which one will have the greater capacity. Measure them and see.

Answers will vary.

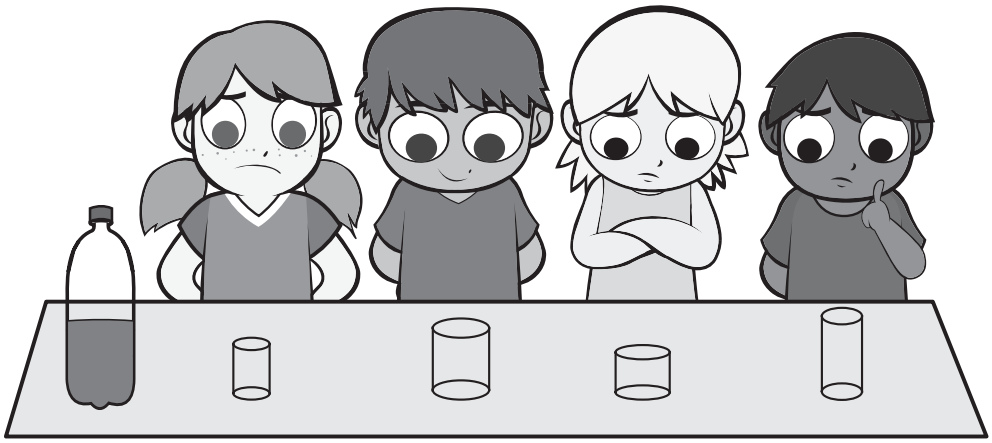


Volume and capacity – compare and order

You will need: a group of 4 kids, a 1.25 L plastic bottle, 4 different sized cups or small containers, measuring equipment, a spoon

What to do:

Half fill the plastic bottle with water. Choose a cup to be your own. Now, find a way to share the water out between the 4 cups so that each of you has a fair share. How will you know you have done it? Are you all happy with your share?



Answers will vary.

What to do next:

a For this activity you will need water, a spoon and a cup. Half fill the cup using the spoon. How many spoonfuls of water did it take?

Answers will vary.

b Can you work out how many spoonfuls in a whole cup? Do you have to keep filling spoonful by spoonful or is there a different way to work it out?

Double the answer in question a.

Volume and capacity – volume

When we find out how much space a container or object takes up, we are measuring volume. The more space an object takes up, the more volume it has.

One way of measuring volume is to fill it and count how many objects are in it.

You will need:  a partner  cubes  lunchboxes

What to do:

a Estimate how many cubes it will take to fill your lunchbox. Write your estimate.

Answers will vary.

estimate ☐

b Do you think your lunchbox has a greater or smaller volume than your partner's lunchbox? Write why you think so.

Answers will vary.

c Fill your lunchbox with cubes.

Answers will vary.

measure ☐

d Whose lunchbox had greater volume? Did this surprise you?

Answers will vary.

What to do next:

Estimate the volume of a tote tray in cubes.

estimate ☐ **measure** ☐