

Understanding Capacity and Volume

Adult Guidance with Question Prompts



Children are introduced to volume and capacity, where capacity describes how much a container can hold altogether and volume describes how much is actually in the container. Children use the terms 'less', 'more', 'full', 'nearly full', 'nearly empty' and 'empty' to order and compare volume. They could use water and a range of containers to do these activities practically – you could add food colouring to the water to help children measure the volume.

Do these bottles have the same capacity?

Do they have the same volume of juice inside them?

Do the glasses have the same capacity?

Are they holding the same volume of water?

Do the glasses have the same capacity?

What can you tell me about the volume of water in each one? Can you put them in order from empty to full?

Can you show me an empty or full container?

Can you change the volume so that it is nearly full or empty?

Use a different container to show these volumes: empty, nearly empty, nearly full and full.

Find two containers.

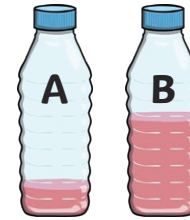
Which has the greatest capacity? Which has the smallest capacity?

Can you prove it?

Understanding Capacity and Volume

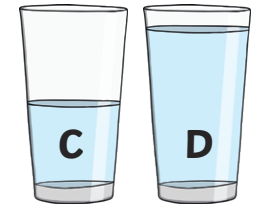


More or less?



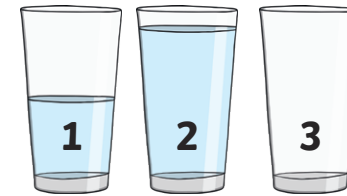
less

more



A has _____ than B.

D has _____ than C.

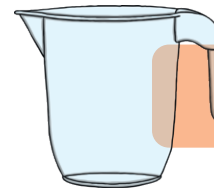


Put them in order from empty to full.



empty

full



Pour water to show each volume.

empty

nearly empty

nearly full

full

Understanding Capacity and Volume

Adult Guidance with Question Prompts



Children are introduced to volume and capacity, where capacity describes how much a container can hold altogether and volume describes how much is actually in the container. Children use the terms 'full', 'nearly full', 'half full', 'nearly empty' or 'empty' to compare volume. They match key vocabulary to pictures, work out which vocabulary is missing and investigate different sizes of containers that are half full.

Do these bottles have the same capacity?

Do they have the same volume of water in them?

Can you find the labels to match the different volumes of water? How can you work out which labels are missing?

Do the soap bottles have the same capacity?

Which one has the greatest capacity? Which one has the smallest capacity?

If each bottle were full, which would hold the most or least?

Do you agree with the statement? Do the soap bottles have the same volume of soap?

Could you use containers and water to make a challenge like this for your friend? What can you tell me about the capacity of the containers? Can you investigate these volumes: nearly full, nearly empty or full?

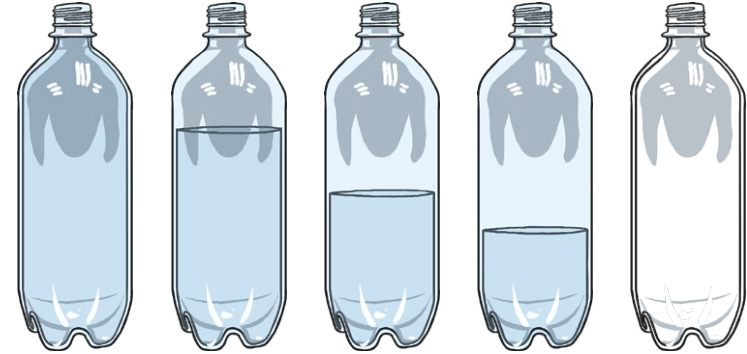
Find three containers.

Can you order them from the smallest to the greatest capacity? What can you do to check if you are correct?

Understanding Capacity and Volume



Match the labels with the pictures.



half full

nearly empty

nearly full

Which labels are missing?



Freya

These are all half full so they all have the same amount of soap.



Do you agree?

Understanding Capacity and Volume

Adult Guidance with Question Prompts



Children are introduced to volume and capacity, where capacity describes how much a container can hold altogether and volume describes how much is actually in the container. They use the terms 'full', 'nearly full', 'nearly empty' or 'empty' to compare volume. They match the correct soap bottle to each child and then investigate a statement about capacity and volume (they could investigate this practically).

Do these soap bottles all have the same capacity? How do you know?

Which soap bottle has a smaller volume than the green soap bottle?

Is there more than one answer?

Which soap bottle has a greater volume than the red soap bottle?

Is there more than one answer?

How could the children describe the volume of their soap bottles more clearly? Here are some words that might help: full, nearly full, half full, nearly empty, empty.

Will a shorter container always have a smaller capacity than a taller container? Can you think of any examples?

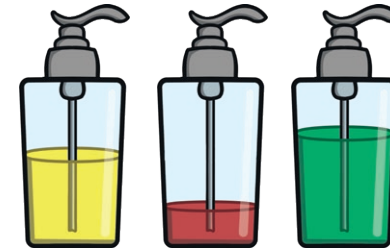
Will a shorter container always have a smaller volume than a taller container? Can you find a way to prove it?

Can you make a similar challenge for your friend?

Understanding Capacity and Volume



Match the soap bottles with the children.
Is there more than 1 answer?



My soap bottle has less soap than the green soap bottle.

My soap bottle has more soap than the red soap bottle.



Ava

Tom



Shorter containers always hold less than taller containers.

Geordi

What do you think?

The bottles have the same capacity. They don't have the same volume of juice. Bottle A has less juice than bottle B.



The glasses have the same capacity. They don't have the same volume of water. Glass D has more than glass C.

The three glasses have the same capacity. They don't have the same volume of water. In order from empty to full: 3, 1, 2

The bottles have the same capacity. They have different volumes of water in them.



The missing labels are 'full' and 'empty'.

Each soap bottle has a different capacity. This means that even though each one is half full, they do not have the same volume of soap. The largest container has the most soap.

The soap bottles all have the same capacity but they contain different volumes of soap.



Tom could have the red or yellow soap bottle.

Ava could have the yellow or green soap bottle.

Some taller containers have a greater capacity than shorter containers, but not always.

Some taller vessels can contain a greater volume than shorter vessels, but not always.

Children could demonstrate this with water and different containers.

Capacity

To understand capacity and volume.



Look at the pairs of containers

Tick the containers with the **greatest** capacity.

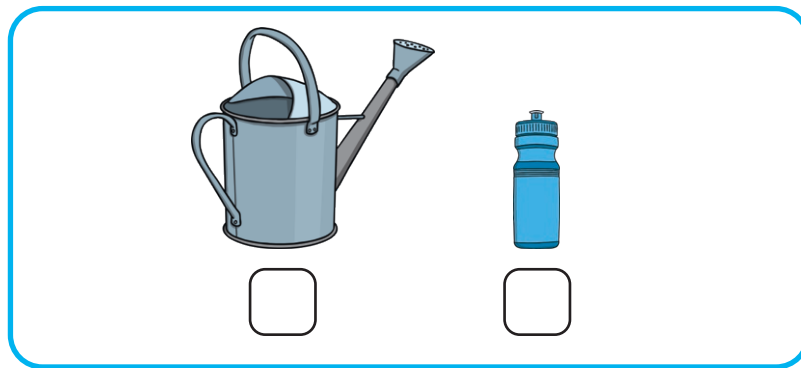
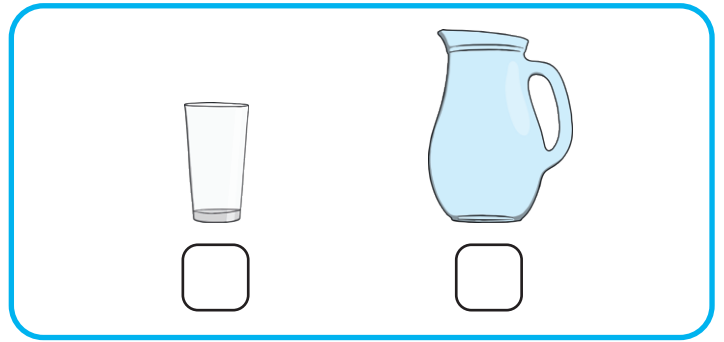
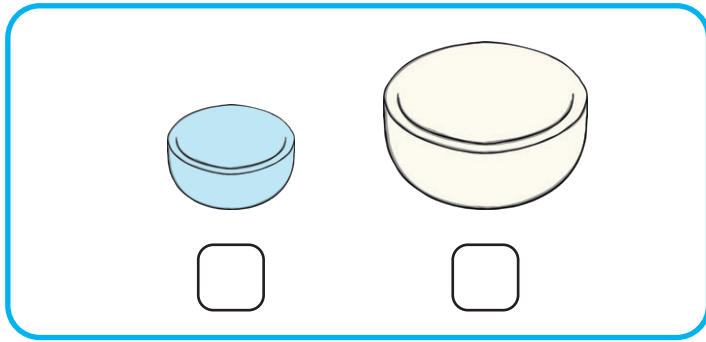


Find and draw 2 containers.

Tick the one with the greatest capacity.

Look at the pairs of containers

Tick the containers with the **smallest** capacity.



Find and draw 2 containers.

Tick the one with the smallest capacity.




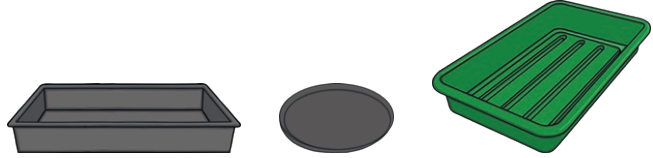

Capacity

To understand capacity and volume.



Look at the sets of containers.

Tick the containers with the **greatest** capacity.



Find and draw 3 containers.

Tick the one with the greatest capacity.



Look at the sets of containers

Tick the containers with the **smallest** capacity.

Three containers are shown in a row: a small white cup, a tall yellow mug, and a large colorful striped mug. Below each container is a square box for marking.

Three bowls are shown in a row: a large white bowl, a medium teal bowl, and a small light blue bowl. Below each bowl is a square box for marking.

Three containers are shown in a row: a light blue measuring jug, a large blue pitcher, and a tall clear glass. Below each container is a square box for marking.

Find and draw 3 containers.

Tick the one with the smallest capacity.

Capacity

To understand capacity and volume.

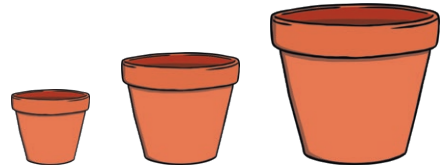


These must have the same capacity because they are the same shape.



Do you agree?

Find containers of the same shape.
Do they all have the same capacity?
What can you do to check?



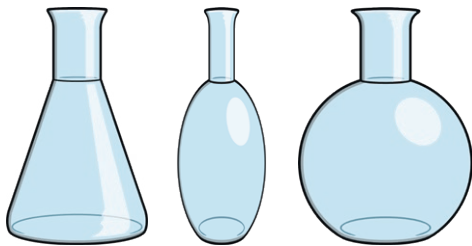
Which word would you choose to finish the sentence?

always

sometimes

never

Containers of the same shape have the same capacity.



These must have the same capacity because they are the same height.

Do you agree?

Find containers of the same height.
Do they all have the same capacity?
What can you do to check?

Which word would you choose to finish the sentence?

always

sometimes

never

Containers of the same height have the same capacity.

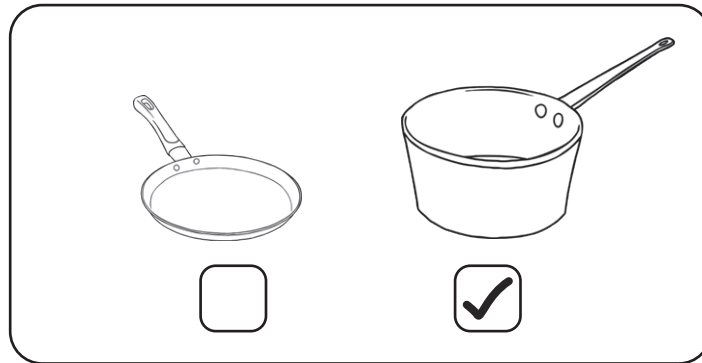
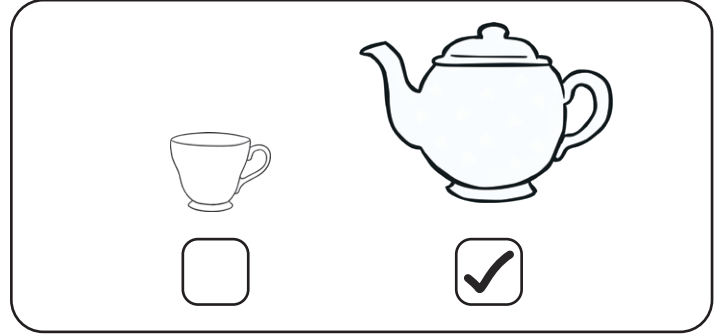
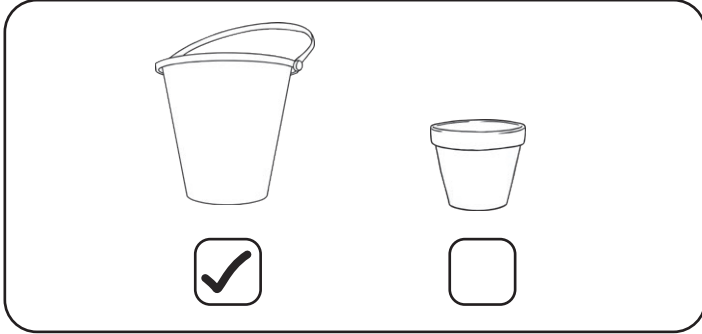
Capacity Answers

To understand capacity and volume.



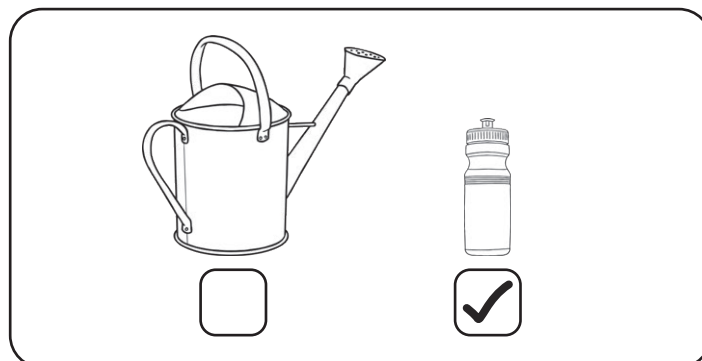
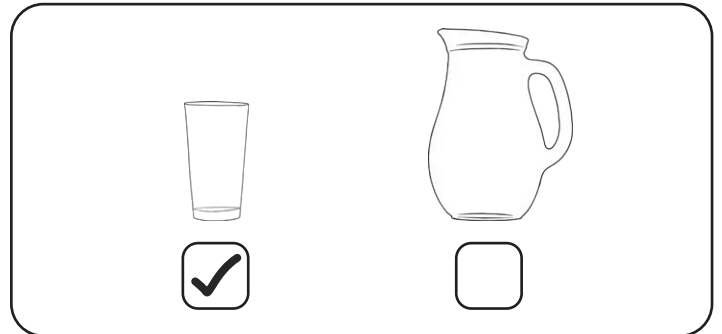
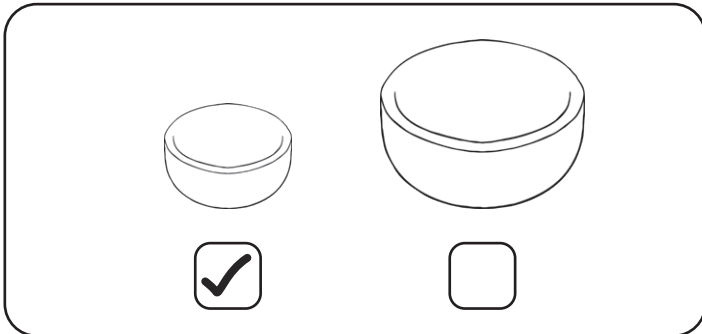
Look at the pairs of containers

Tick the containers with the **greatest** capacity.



Look at the pairs of containers

Tick the containers with the **smallest** capacity.



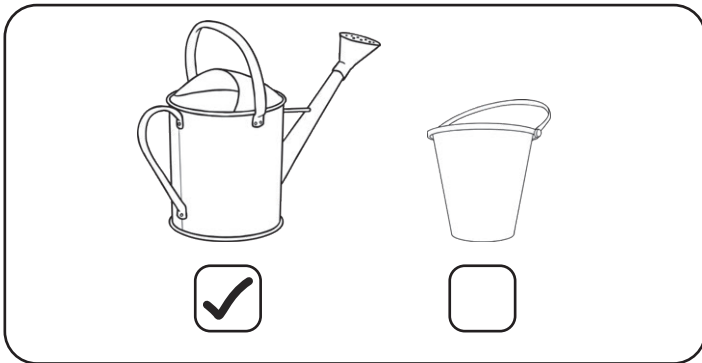
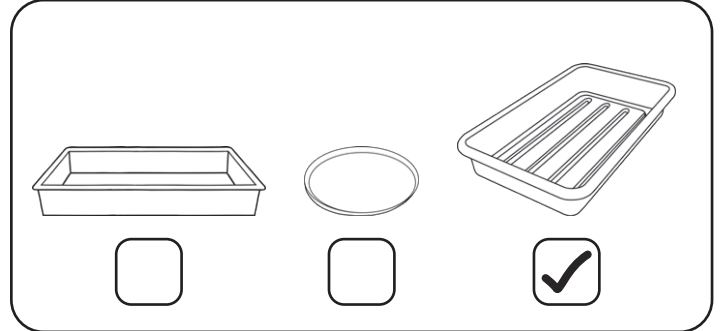
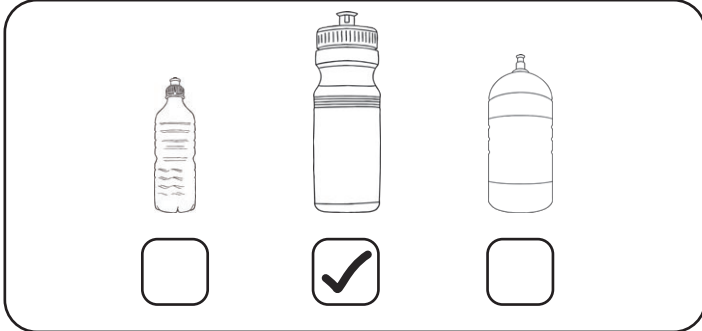
Capacity Answers

To understand capacity and volume.



Look at the sets of containers

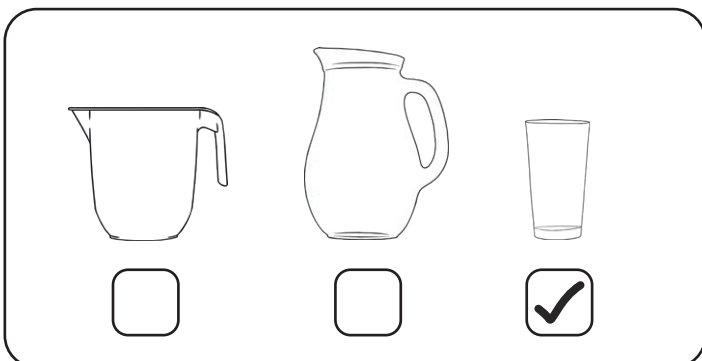
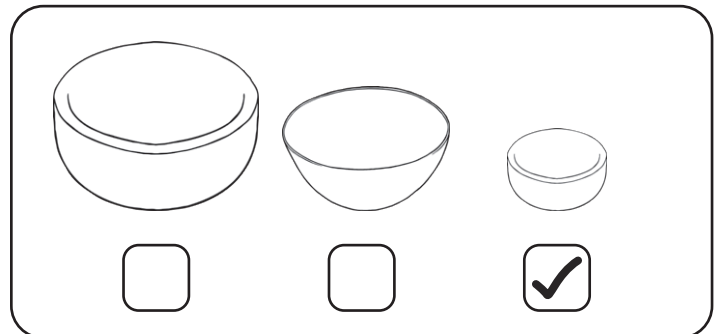
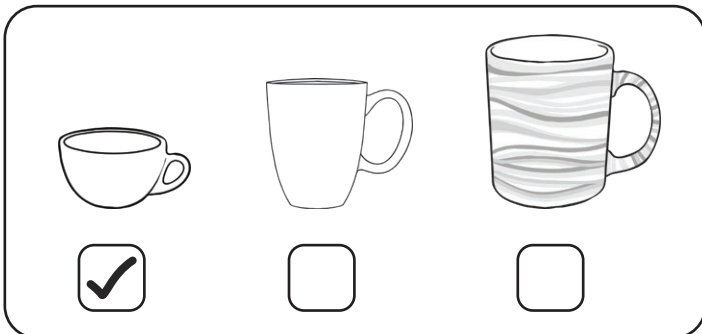
Tick the containers with the **greatest** capacity.



Find and draw 3 containers.
Tick the one with the greatest capacity.

Look at the pairs of containers

Tick the containers with the **smallest** capacity.



Find and draw 3 containers.
Tick the one with the smallest capacity.

Capacity Answers

To understand capacity and volume.

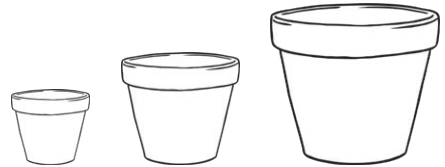


These must have the same capacity because they are the same shape.



Do you agree?

Find containers of the same shape.
Do they all have the same capacity?
What can you do to check?



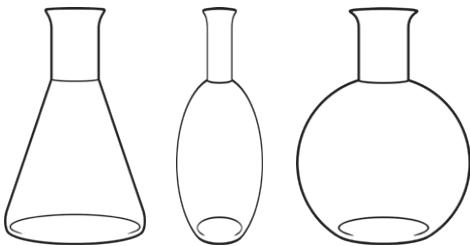
Which word would you choose to finish the sentence?

always

sometimes

never

Containers of the same shape **sometimes** have the same capacity.



These must have the same capacity because they are the same height.

Do you agree?

Find containers of the same height.
Do they all have the same capacity?
What can you do to check?

Which word would you choose to finish the sentence?

always

sometimes

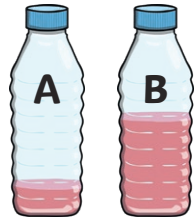
never

Containers of the same height **sometimes** have the same capacity.

Understanding Capacity and Volume

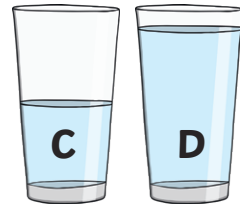


More or less?

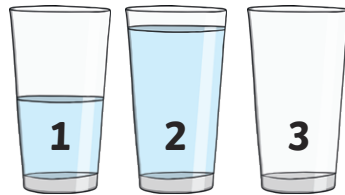


less

more



A has _____ than B. D has _____ than C.

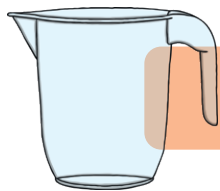


Put them in order from empty to full.



empty

full



Pour water to show each volume.

empty

nearly empty

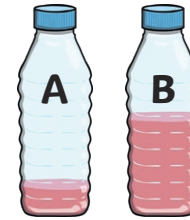
nearly full

full

Understanding Capacity and Volume

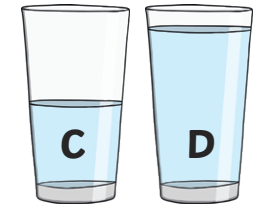


More or less?

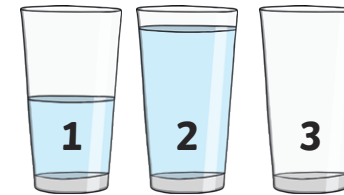


less

more



A has _____ than B. D has _____ than C.

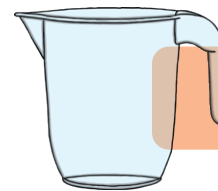


Put them in order from empty to full.



empty

full



Pour water to show each volume.

empty

nearly empty

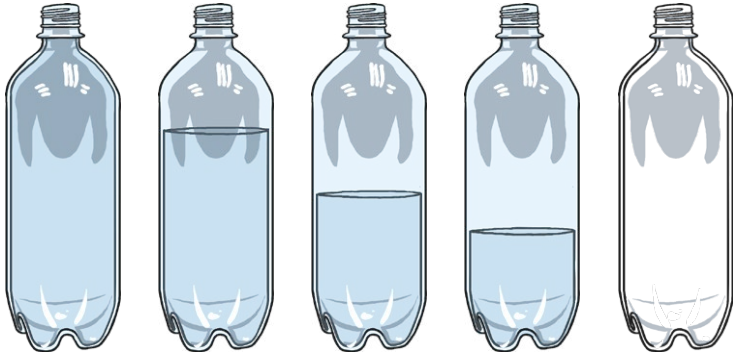
nearly full

full

Understanding Capacity and Volume



Match the labels with the pictures.



half full

nearly empty

nearly full

Which labels are missing?



These are all half full so they all have the same amount of soap.

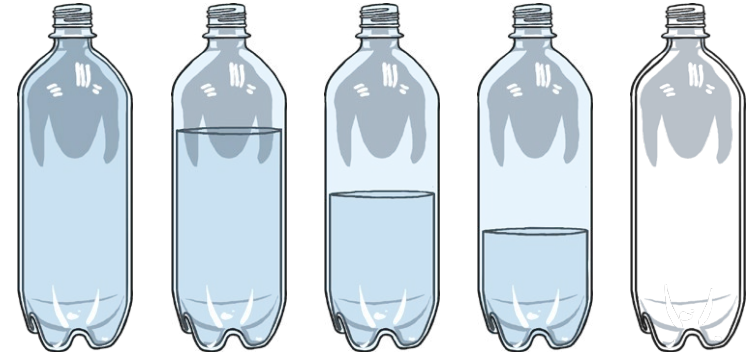


Do you agree?

Understanding Capacity and Volume



Match the labels with the pictures.



half full

nearly empty

nearly full

Which labels are missing?



These are all half full so they all have the same amount of soap.



Do you agree?

Understanding Capacity and Volume



Match the soap bottles with the children.
Is there more than 1 answer?



My soap bottle has less soap than the green soap bottle.

My soap bottle has more soap than the red soap bottle.



Ava

Tom



Shorter containers always hold less than taller containers.

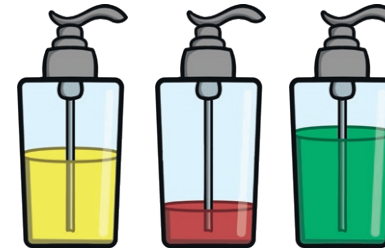
Geordi

What do you think?

Understanding Capacity and Volume



Match the soap bottles with the children.
Is there more than 1 answer?



My soap bottle has less soap than the green soap bottle.

My soap bottle has more soap than the red soap bottle.



Ava

Tom



Shorter containers always hold less than taller containers.

Geordi

What do you think?

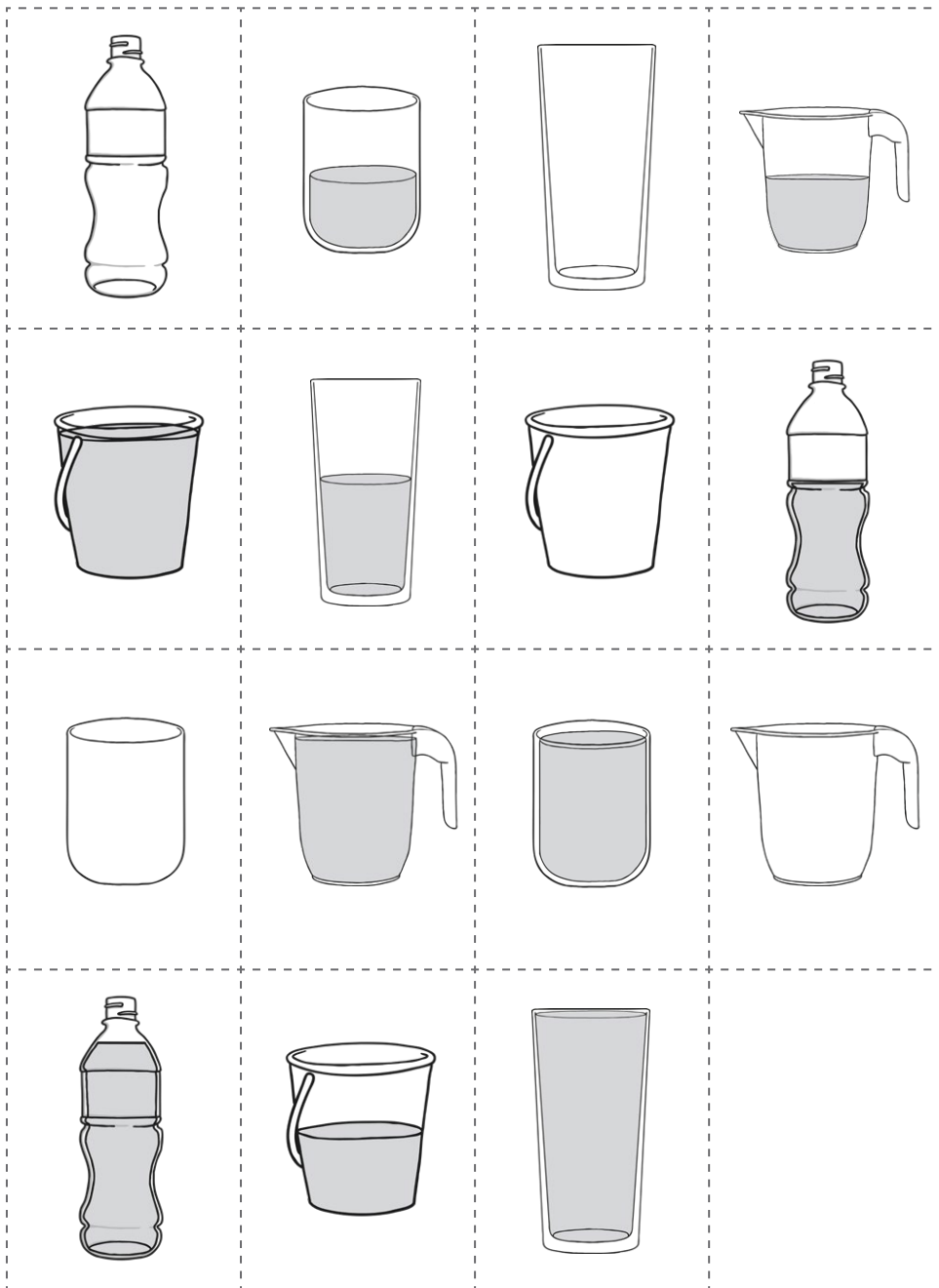
Volume

To understand capacity and volume.



Cut out the containers and decide if they are empty, half full or full.
Then sort them into the table.

Empty	Half Full	Full

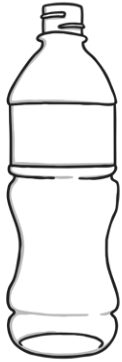


Volume

To understand capacity and volume.



Draw the liquid in the bottle to match the volume.



full



empty

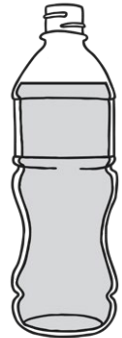
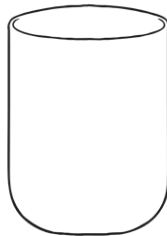
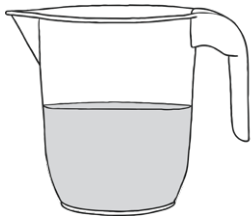
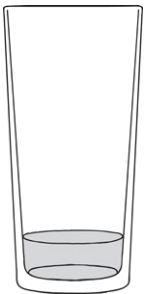


nearly empty



half full

Draw a line connecting the pictures with the correct volume.



full

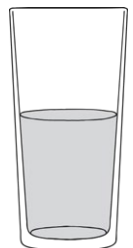
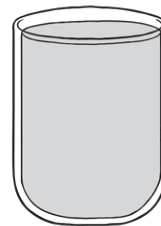
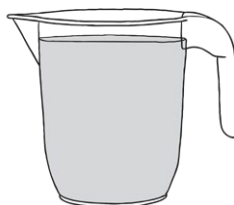
nearly empty

half full

nearly full

empty

Tick the container that is half full.

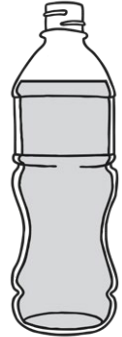
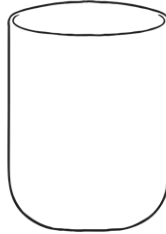
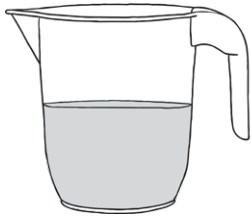
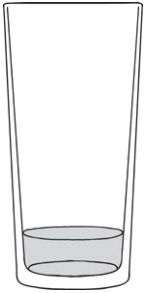


Volume

To understand capacity and volume.



Draw a line connecting the pictures with the correct volume.



full

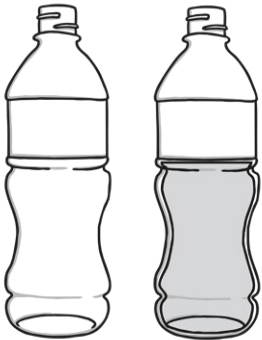
nearly empty

half full

nearly full

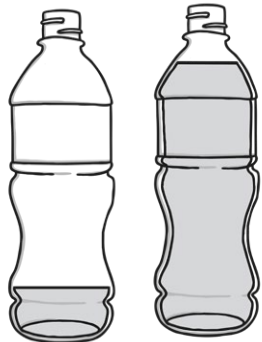
empty

Write a sentence to describe the volume. The first one is done for you.



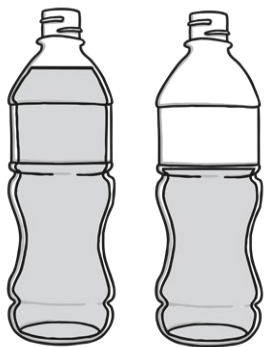
The first bottle is **empty**.

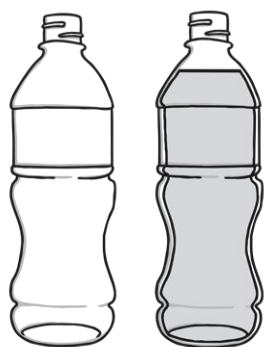
The second bottle is _____



The first bottle is _____

The second bottle is _____



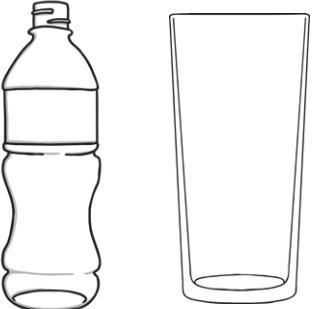
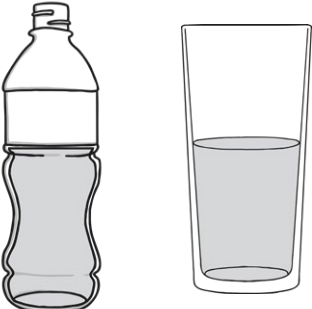
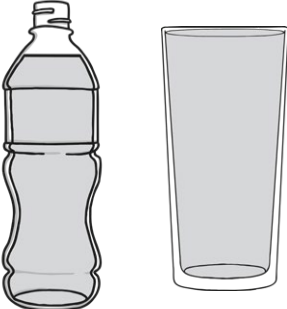



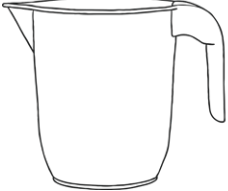
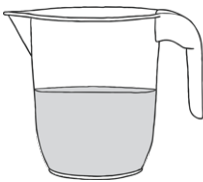
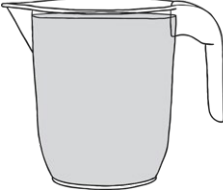

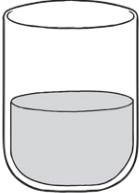



Volume Answers

To understand capacity and volume.



Cut out the containers and decide if they are empty, half full or full.
Then sort them into the table.

Empty	Half Full	Full
		
		
		
		

Volume Answers

To understand capacity and volume.



Draw the liquid in the bottle to match the volume.

full **empty** **nearly empty** **half full**

Draw a line connecting the pictures with the correct volume.

full **nearly empty** **half full** **nearly full** **empty**

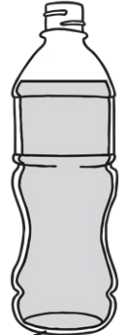
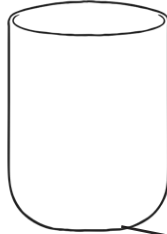
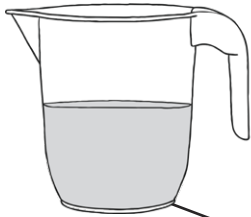
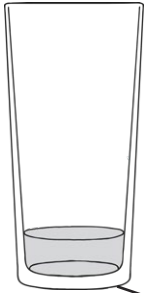
Tick the container that is half full.

Volume Answers

To understand capacity and volume.



Draw a line connecting the right word to the right volume.



full

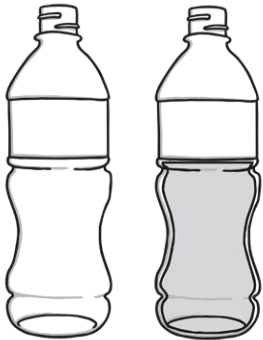
nearly empty

half full

nearly full

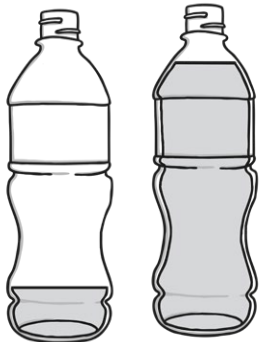
empty

Write a sentence to describe the volume. The first one is done for you.



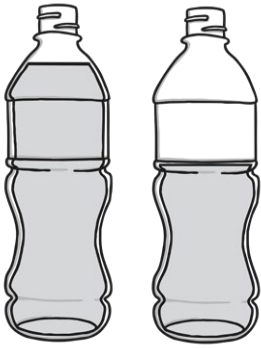
The first bottle is **empty**.

The second bottle is **half full or half empty**.



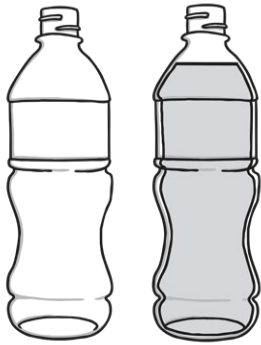
The first bottle is **nearly empty**.

The second bottle is **full**.



The first bottle is full.

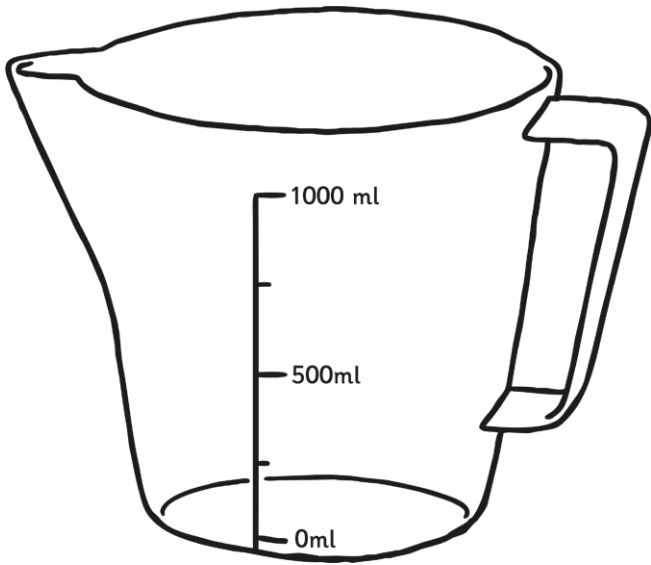
The second bottle is half full or half empty.



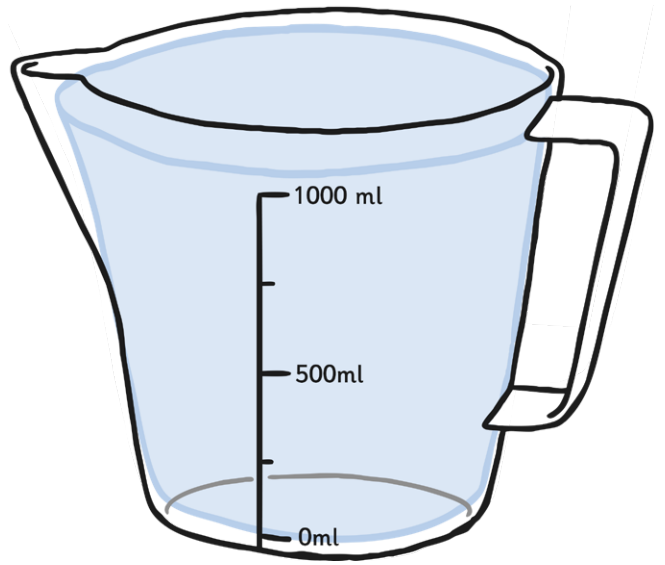
The first bottle is empty.

The second bottle is full.

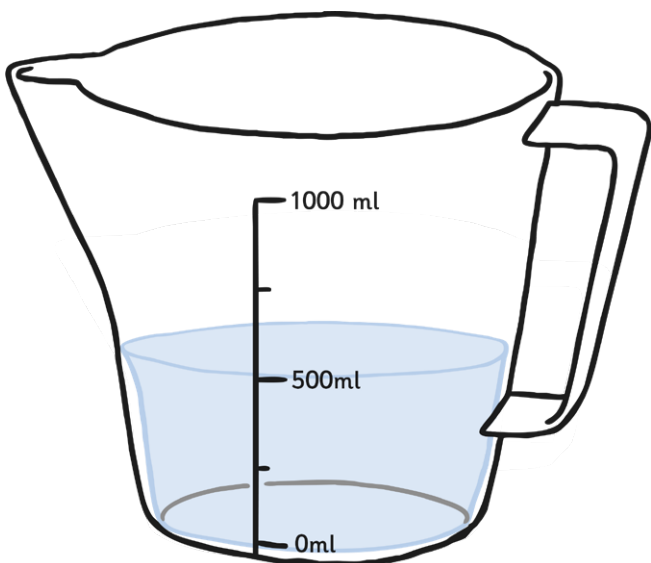
empty



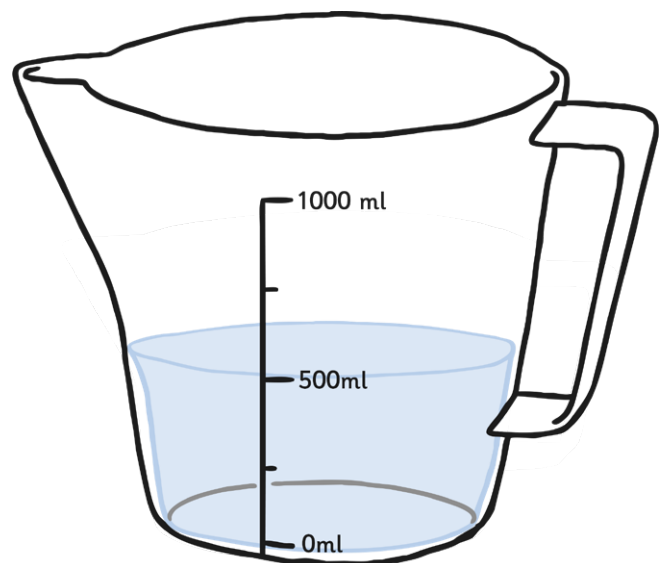
full



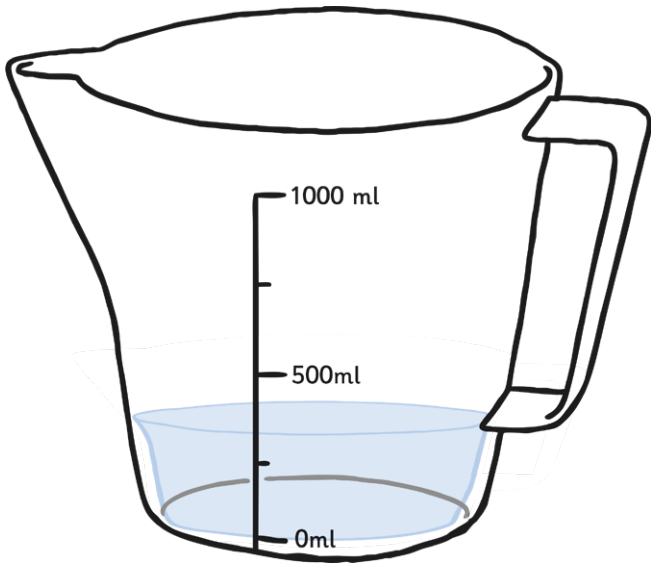
half empty



half full



nearly empty



nearly full

