Litres or Millilitres?

Sort these containers into those that hold litres and those that hold millilitres.

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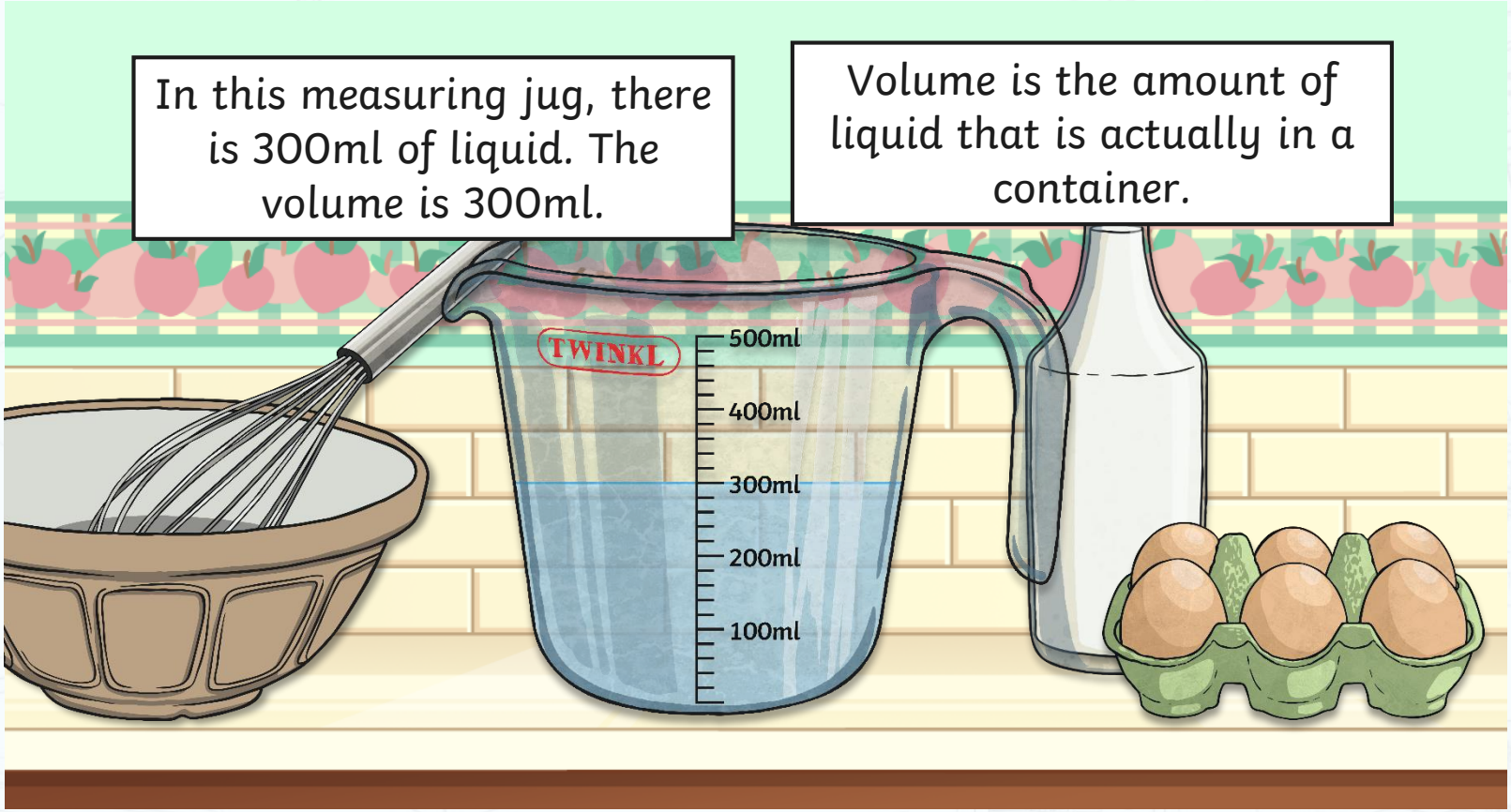
Volume or Capacity?

Before we begin our work on volume and capacity, let's make sure we understand what these two words mean.

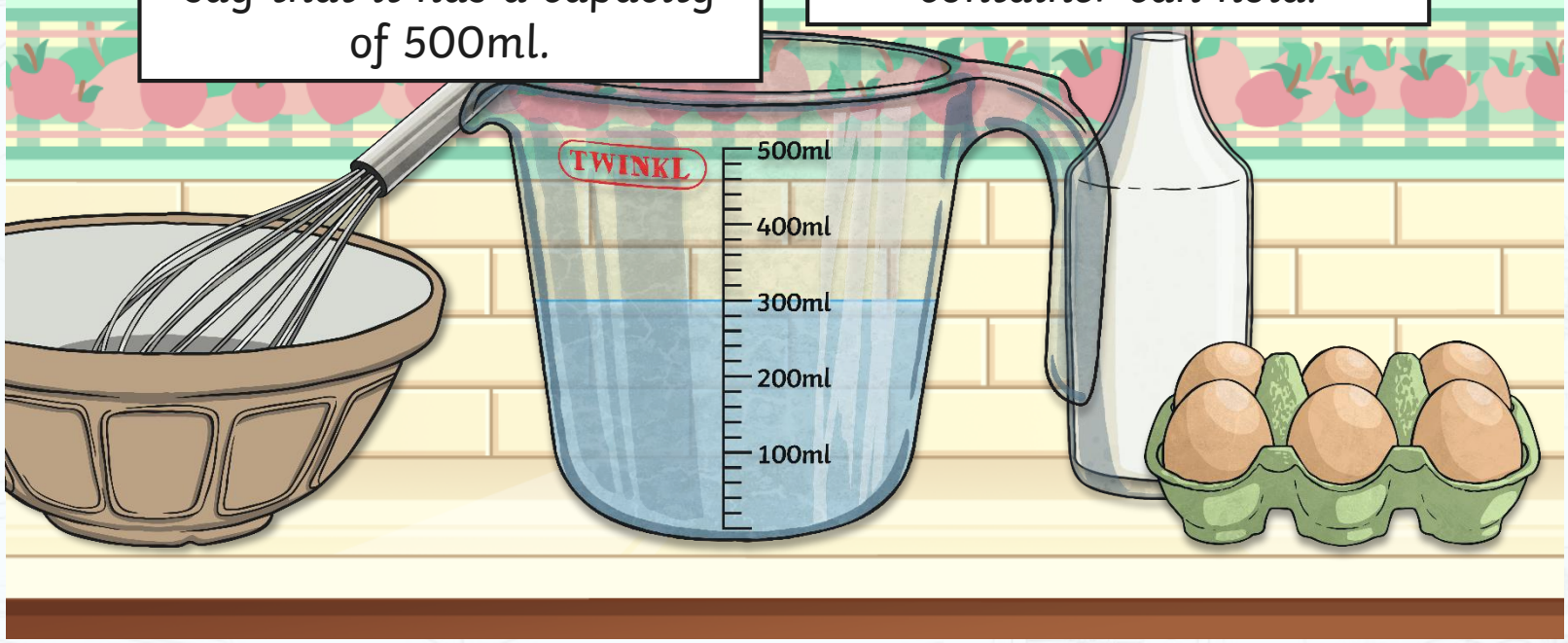


Volume or Capacity?

Before we begin our work on volume and capacity, let's make sure we understand what these two words mean.

This measuring jug measures up to 500ml. We say that it has a capacity of 500ml.

Capacity is the total amount of liquid that a container can hold.



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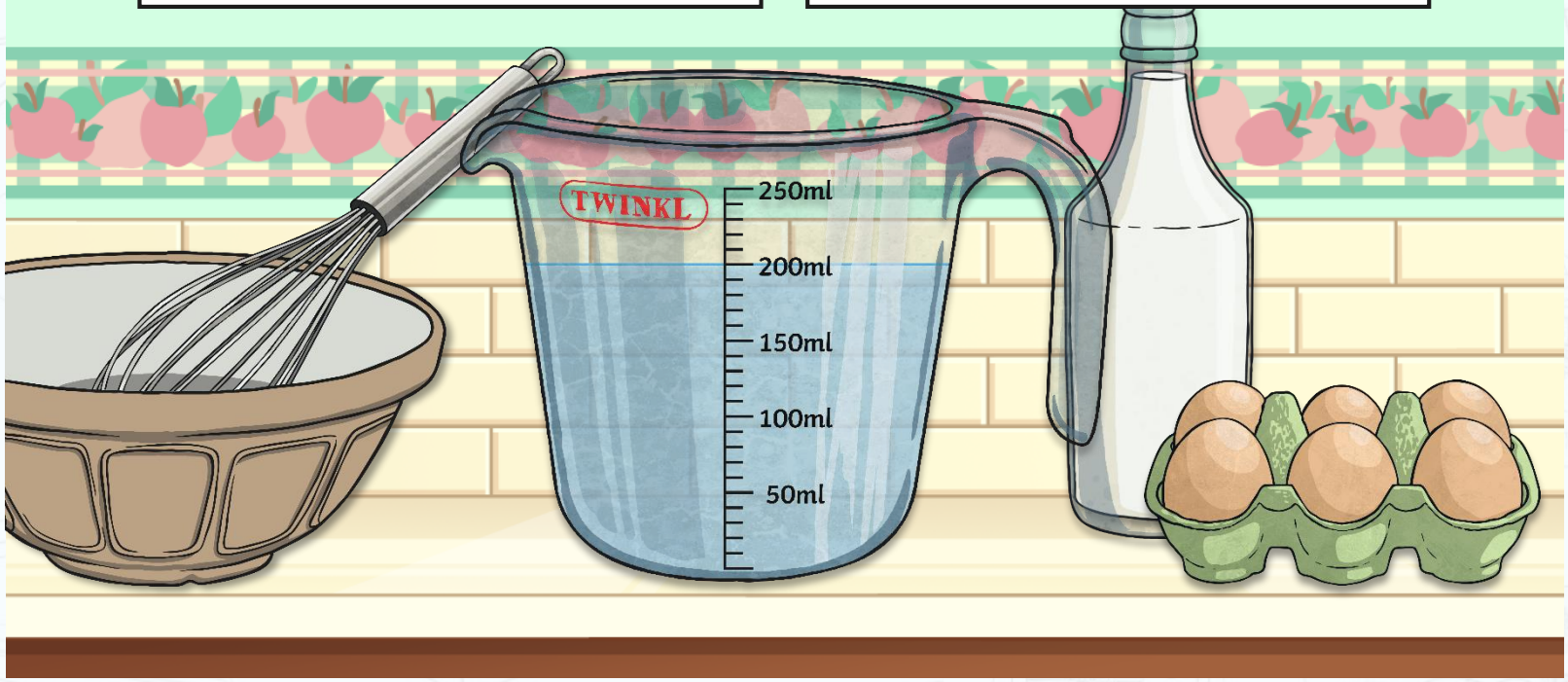
Volume or Capacity?

What is the capacity and what is the volume of this jug?

This measuring jug has a capacity of 250ml.

The volume of the liquid is 200ml.



Estimating Capacity

There are 1000ml in 1 litre.

Now choose a variety of containers in your house.
Can you estimate (have a good guess) their capacity in litres and millilitres and order them from smallest capacity to greatest capacity.

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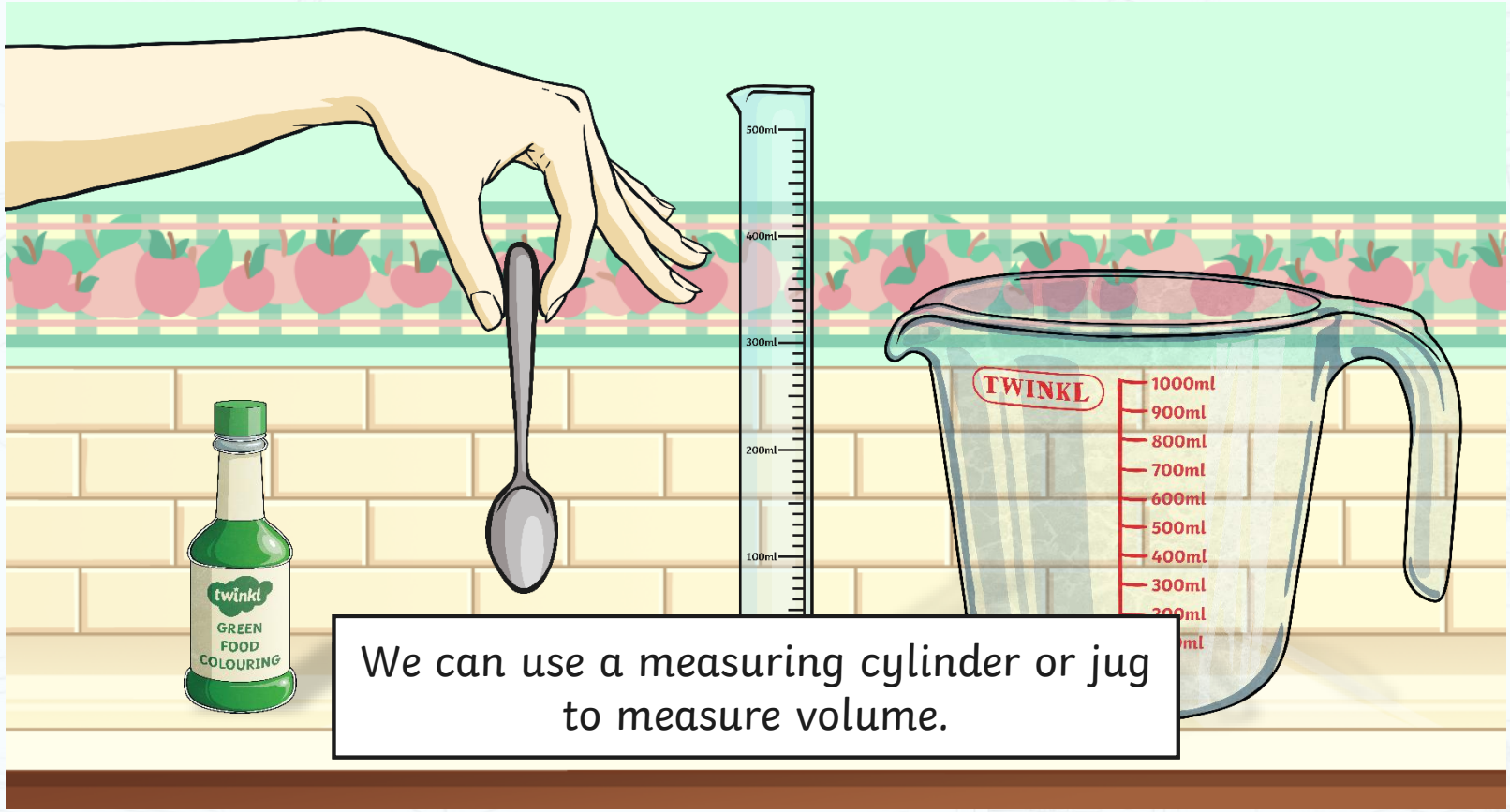
We put our containers in order.

Measuring Volume in Millilitres

A millilitre is a very small amount.



We can use a measuring cylinder or jug to measure volume.

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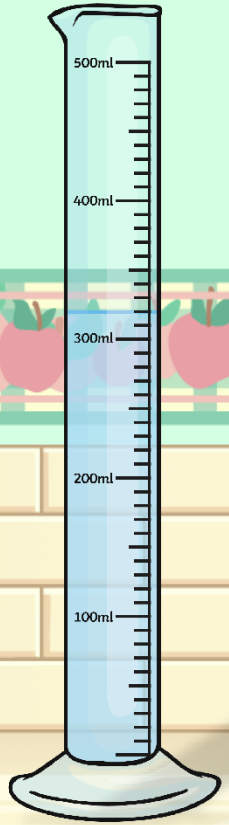
Measuring Cylinders

The first thing that you need to do is to work out what each interval of the scale on the measuring cylinder represents.



On this scale, there are **10** intervals between 0 and 100ml. To work out what each interval is worth we divide 100 by **10**.

100 ÷ 10 = 10, so each interval is worth **10ml.**

Look at the level of the liquid. It is at 300ml plus **2** intervals.

300ml + 20ml = **320ml**

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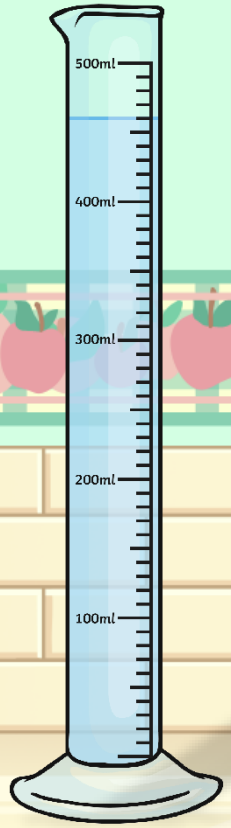
Measuring Cylinders

This is the same scale.
How much liquid is in the measuring cylinder now?



Look at the level of the liquid. It is at 400ml plus **6** intervals of 10ml.

400ml + 60ml = **460ml**

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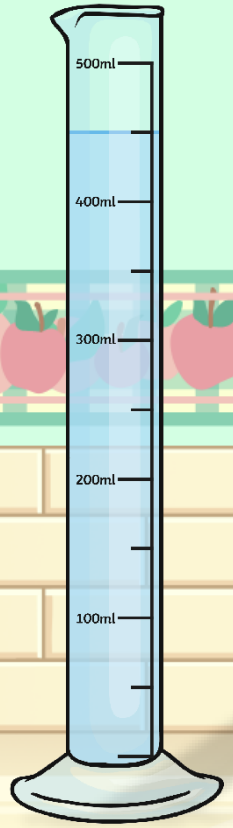
Measuring Cylinders

The first thing that you need to do is to work out what each interval of the scale on the measuring cylinder represents.



On this scale, there are **2** intervals between 0 and 100ml. To work out what each interval is worth, we divide 100 by **2**.

100 ÷ 2 = 50, so each interval is worth **50ml**.

Look at the level of the liquid. It is at 400ml plus **1** interval.

400ml + 50ml = **450ml**

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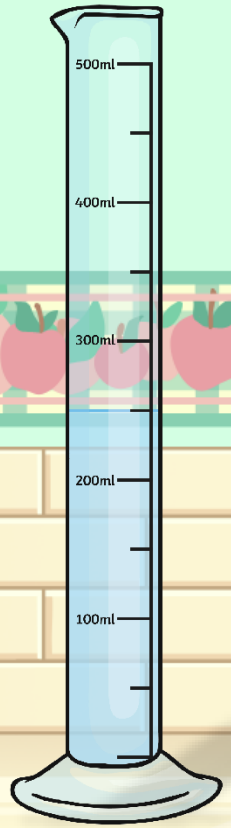
Measuring Cylinders

This is the same scale.
How much liquid is in the measuring cylinder now?



Look at the level of the liquid. It is at is 200ml plus **1** interval.

200ml + 50ml = **250ml**

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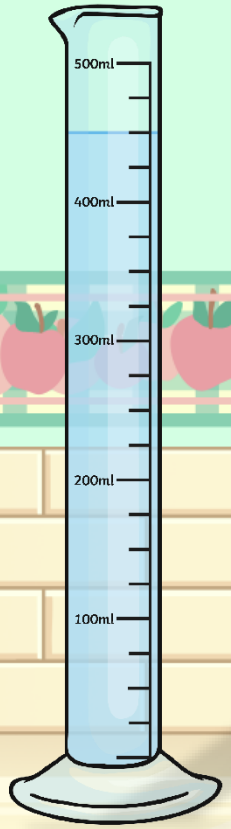
Measuring Cylinders

The first thing that you need to do is to work out what each interval of the scale on the measuring cylinder represents.



On this scale, there are **4** intervals between 0 and 100ml. To work out what each interval is worth, we divide 100 by **4.**

100 ÷ 4 = 25, so each interval is worth **25ml.**

Look at the level of the liquid. It is at 400ml plus **2** intervals.

400ml + 50ml = **450ml**

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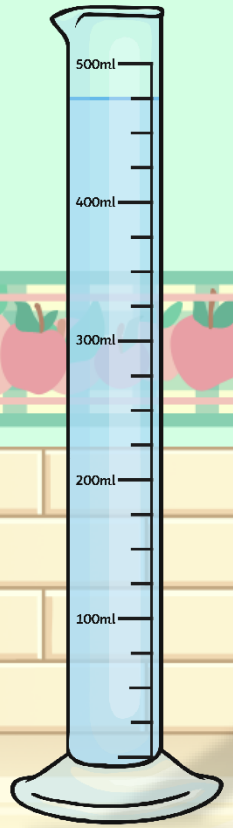
Measuring Cylinders

This is the same scale.
How much liquid is in the measuring cylinder now?



Look at the level of the liquid. It is at 300ml plus **3** intervals.

300ml + 75ml = **375ml**

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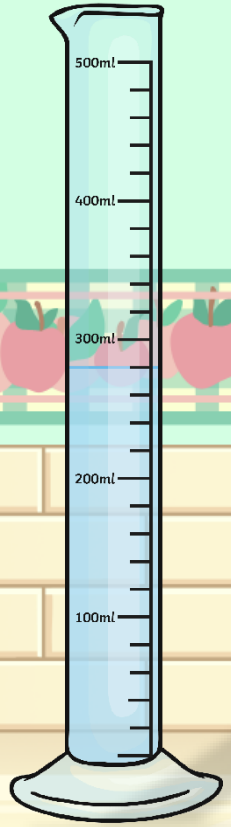
Measuring Cylinders

The first thing that you need to do is to work out what each interval of the scale on the measuring cylinder represents.



On this scale, there are **5** intervals between 0 and 100ml. To work out what each interval is worth, we divide 100 by **5.**

100 ÷ 5 = 20, so each interval is worth **20ml.**

Look at the level of the liquid. It is at 200ml plus **4** intervals.

200ml + 80ml = **280ml**

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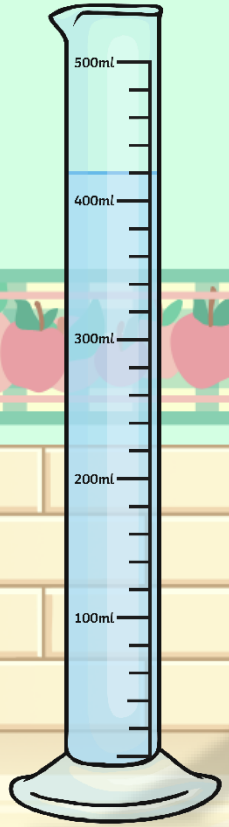
Measuring Cylinders

This is the same scale.
How much liquid is in the measuring cylinder now?



Look at the level of the liquid. It is at 400ml plus **1** interval.

400ml + 20ml = **420ml**

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Task

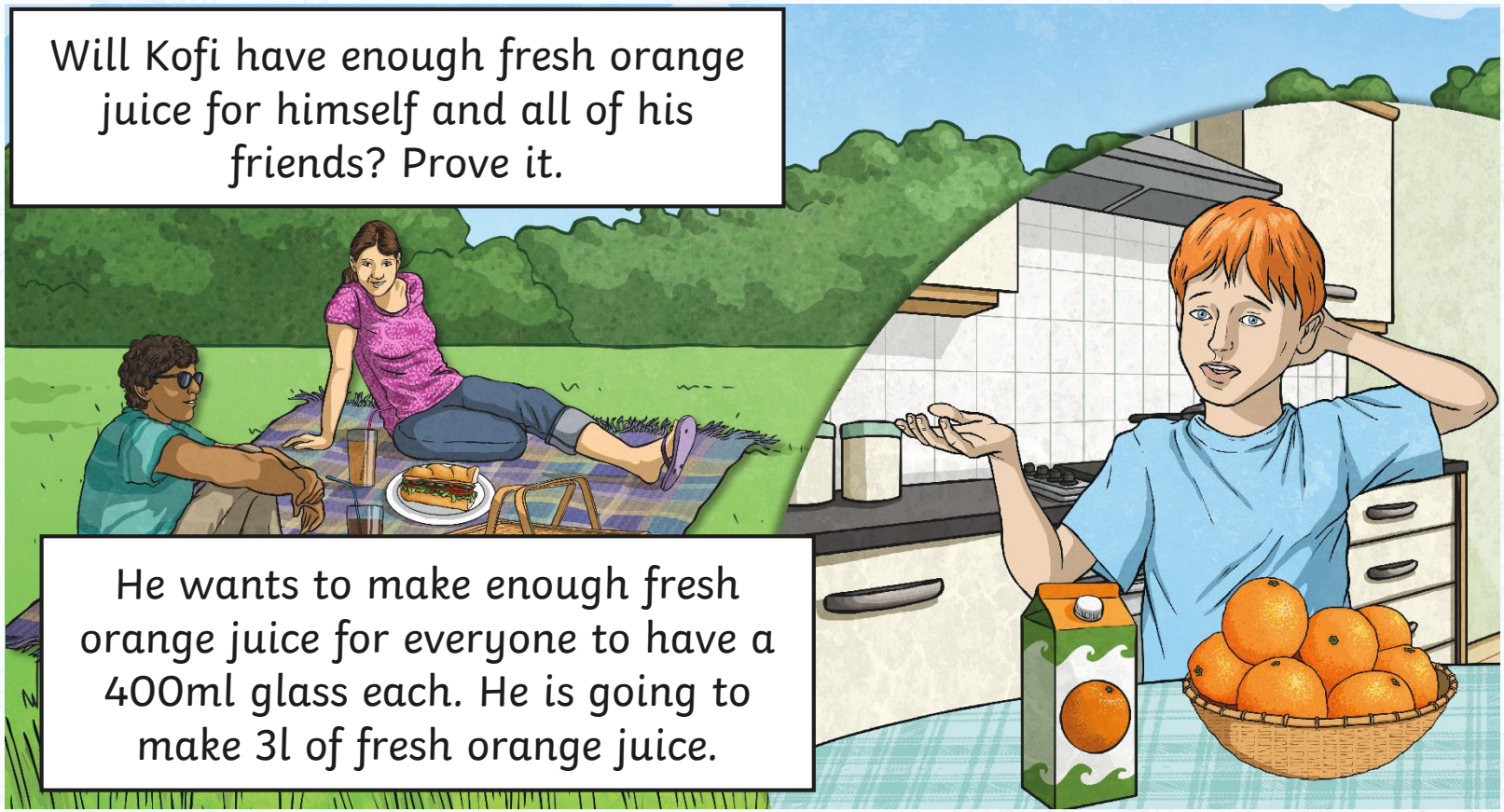
Now check if you were correct with your ordering and estimating. Measure the capacity of all your pots by filling them up and then pouring them into a measuring jug.
Were your estimates correct?

Use the table to fill in your results. (copy in maths folder)

Object	Estimate (ml)	Measure (ml)

Capacity Challenge

Kofi is going on a picnic with 8 friends.



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Challenge answer

First we have to convert our liquid to ml. so we have 3000ml.
Then we have to find out how much 8 people would need. So this would be 8 x 400ml which equals 3,200ml.
So the answer is no, he wouldn't have enough.

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Extension

Why don't you create a magic potion. Choose some ingredients and decide how much of each ingredient you will need and then maybe you could write a short set of instructions to make the perfect potion. Here are some ideas of names and instructions to get you started.

Maybe you could even put it in a fancy bottle!

MAGIC POTIONS

WIZARD POTION

You will need:

- Frog's Breath
- Dragon Blood
- Troll Bogies
- Mountain Haze
- Teardrops of a Fairy
- Inky Slime
- Measuring jugs

What to do:

1. First pour 50ml of the Mountain Haze into the jug.
2. Next add 100ml of Frog's Breath.
3. Now slowly pour in 100ml of Dragon Blood and stir.
4. Add 50ml of Inky Slime
5. Then carefully add a splash of Troll Bodies.
6. Finally add 50ml of Teardrops of a Fairy to add the magic
7. You have made the *Wizard Potion*!

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