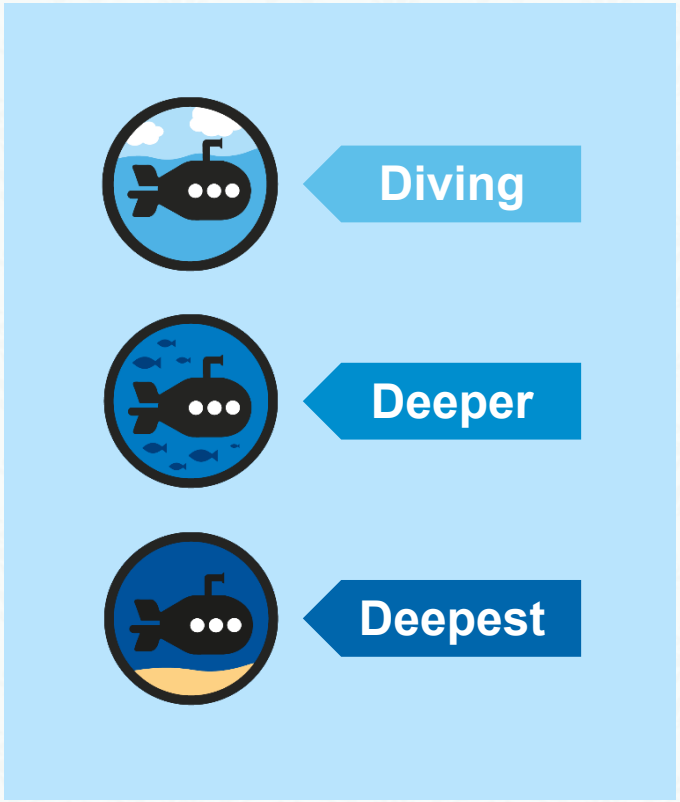
Diving into Mastery

Add and Subtract Capacities

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

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.

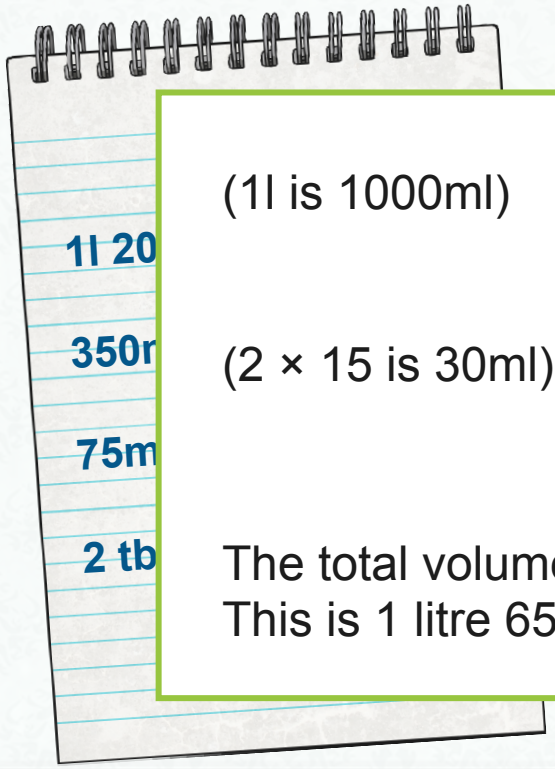
Aim

- Measure, compare, add and subtract capacity (ml/l).

What's the Total?

Jenna is mixing fruit juice.
What is the total volume of liquid?

1tbsp = 15ml



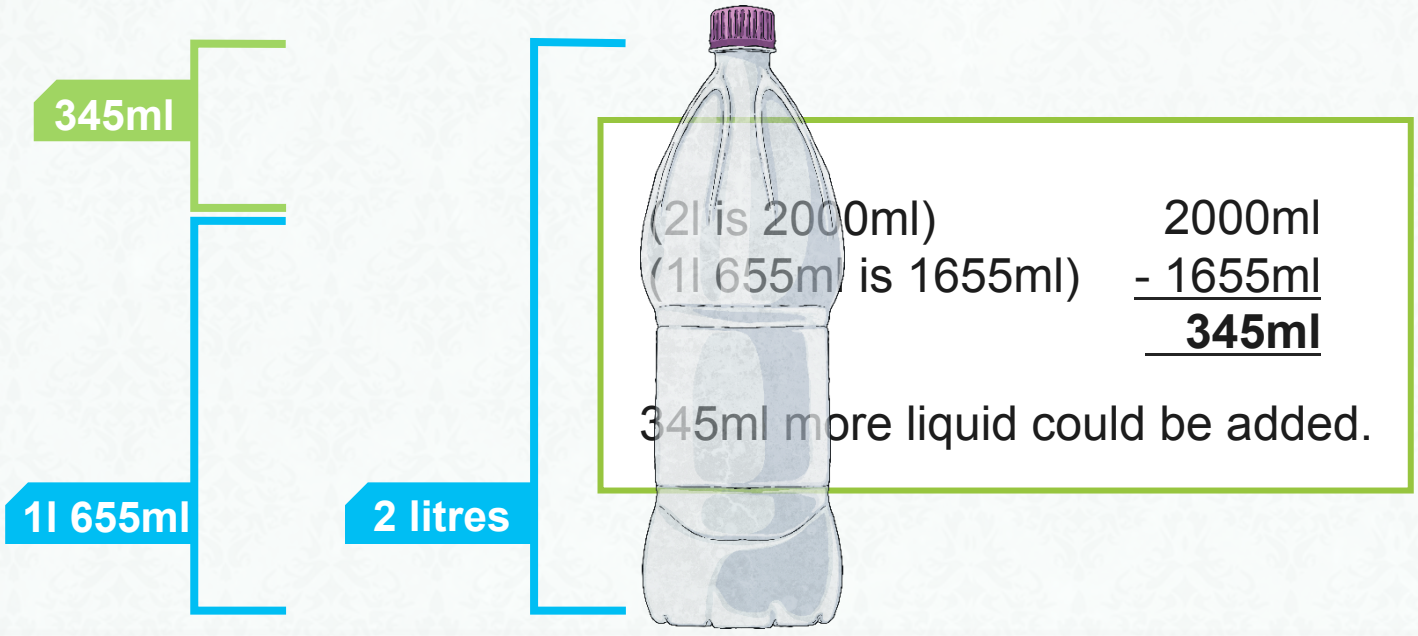
(1l is 1000ml) 1200ml
350ml
75ml
(2 × 15 is 30ml) + 30ml
1655ml

The total volume is 1655ml.
This is 1 litre 655ml.

What's Left?

Felix has a bottle with a capacity of 2 litres to store the juice Jenna has made.
Jenna made 1l 655ml of her fruit juice.

How much more liquid could be used to fill the bottle?



Is There Too Much?

A jug has a capacity of 1l 250ml. Carter says that all of the recipes can be made in a jug of this size. **Do you agree?**

Are there any recipes which total exactly 1l 250ml?

1tsp = 5ml
1tbsp = 15ml

800ml lemonade

½ litre apple juice

25ml peppermint oil

This is too much for the jug to hold.

½ litre = 500ml
3tbsp = 3 × 15 = 45ml
1tsp = 5ml
600ml + 500ml + 100ml
45ml + 5ml = 1250ml
1250ml = 1 litre 250 ml

¼ litre = 250ml
700ml + 250ml + 150ml
= 1100ml
1100ml = 1 litre 100ml

600ml fizzy water

1tsp strawberry syrup

exact capacity of the jug.

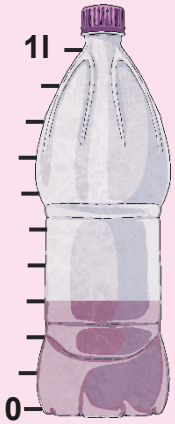
Work It Out!

Choose four different ingredients to make a juice.

What is the smallest volume you can make?

What is the largest volume?

water



pomegranate juice

orange juice

peppermint oil

c

To make the largest volume, choose the four ingredients with the largest volume.

water **(1250ml)** + pomegranate juice **(300ml)** orange juice **(1000ml)** + apple juice **(500ml)** = **3050ml**

The largest volume is 3 litres 50ml.

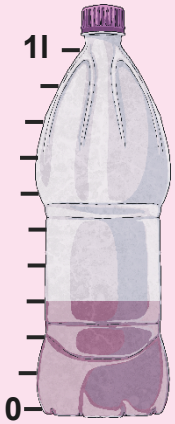
Work It Out!

If one of the four ingredients must be **cherry juice**:

What is the smallest volume that could be made?

What would be the largest volume?

water



pomegranate juice

orange juice

peppermint oil

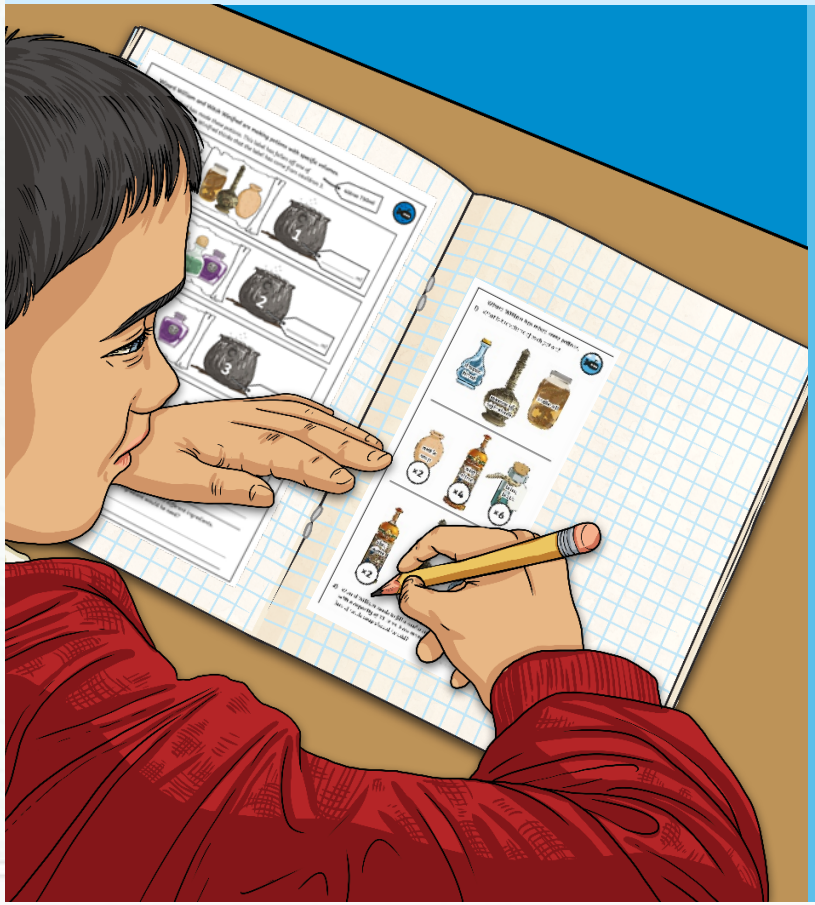
To make the largest volume, use the cherry juice and three ingredients with the largest volume.

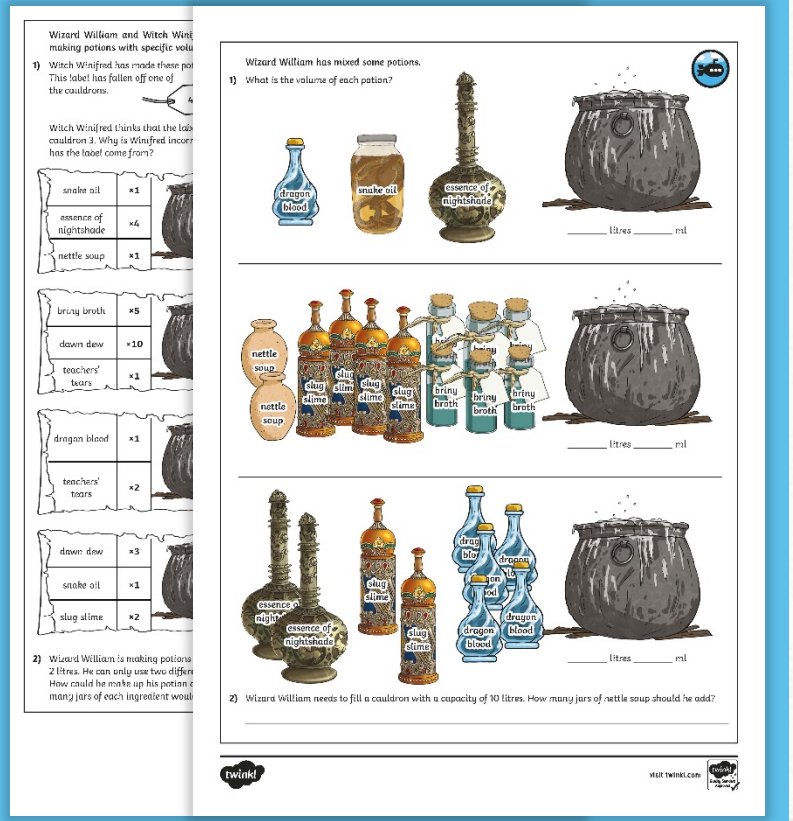
water **(1250ml)** + orange juice **(1000ml) +** cherry juice **(150ml)** + apple juice **(500ml) = 2900ml**

The largest volume is 2 litres 900ml.

Add and Subtract Capacities

Dive in by completing your own activity!



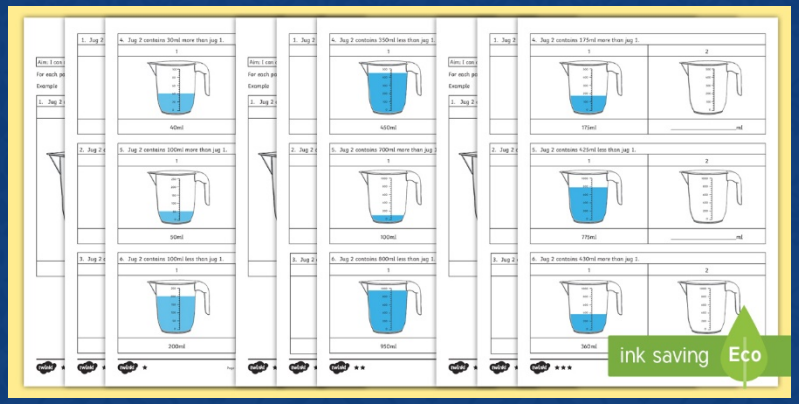


Need Planning to Complement this Resource?

National Curriculum Aim

Measure, compare, add and subtract capacity (ml/l).

For more planning resources to support this aim, click here.



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Dilute 1 part squash to 5 parts water