Mass and Capacity. Year 3

Key Vocabulary	Definition
mass	The amount of matter in an object (often called 'weight')
gram (g)	Unit for measuring mass
kilogram (kg)	Unit for measuring mass
capacity	The amount a container can hold
volume	The amount of space an object takes up
millilitre (ml)	Unit for measuring capacity or fluid
litre (l)	Unit for measuring capacity or fluid
lighter	Weighing less than something
heavier	Weighing more than something

Measure and Compare Mass

Scales can be used to measure grams.

A gram is a unit of measurement that is used to measure the mass of something.

Grams can be written as **g**.

Scales can be used to measure kilograms.

A kilogram is a unit of measurement that is greater than a gram. It is also used to measure the mass of something.

Kilograms can be written as **kg**.

1000g = 1kg

To compare mass, we can use the words 'heavier' and 'lighter'.

Measure and Compare Capacity

Capacity is the amount of liquid a container can hold.

Volume is how much liquid is in the container.

Measuring cylinders can be used to measure smaller volumes.

Smaller volumes are measured in millilitres.

Millilitres can be written as ml.

Measuring jugs can be used to measure larger volumes.

Greater volumes are measured in litres.

Litres can be written as l.

1000ml = 1l

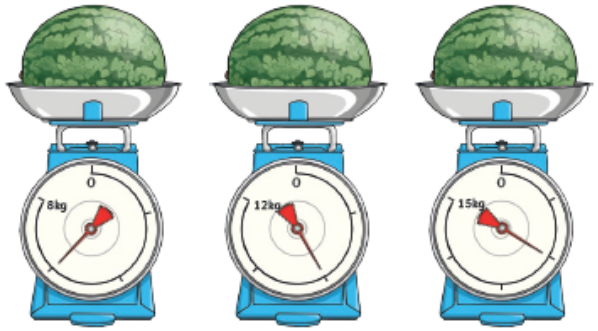
To compare capacities, we can use the word 'full'.

Real Life

- **Cooking** – weighing your ingredients
- **Making squash** – how much squash and water do you need to add?
- **How much has gone?** – Working out how much of a 1L bottle of lemonade has been drunk
- **What other examples can you think of?**

Mass

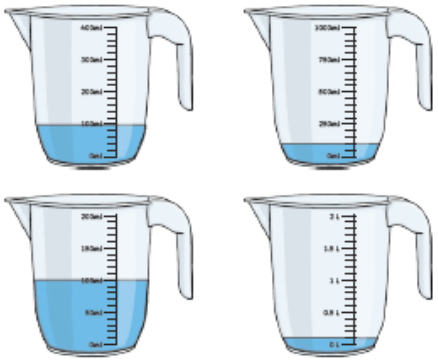
Each of the melons has a mass of 6kg but the arrows are all pointing at different points on the scales. This is because each of the measuring scales have different increments marked on them.



Always look carefully at how the numbers on the scales increase when reading a measurement.

Capacity

Measuring containers all have different capacities.

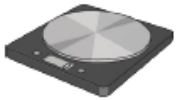


Each of these containers contain the same volume of 100 millilitres but have different capacities and scales. Always look carefully at how the numbers on the scales increase when reading a measurement.

Add and Subtract Mass

600g + 500g = 1100g = **1kg 100g**

1kg - 300g = 1000g - 300g = **700g**



Add and Subtract Capacities

800ml + 400ml = 1200ml = **1l 200ml**

1l 300ml – 200ml = **1l 100ml**

Capacity

Capacity is the amount of liquid a container can hold.

Volume is how much liquid is in the container.

Millilitres

We can use a measuring cylinder to measure very small volumes.

We measure these in millilitres. We write this as ml.

1000ml = 1l

Litres

We can use a jug to measure larger volumes.

We measure these in litres. We write this as l.

1000ml = 1l

quarter full | half full | full

25ml < 250ml **10l > 2l**

Zooming out...

- **Mass** – Early Babylonian and Egyptian records and the Bible indicate that the means for weighing standards were seeds and stones.
- **As societies evolved,** measurement units became more complex.
- The **imperial measurement** system was introduced to make sure everything used the same weight of measurement
- The **metric system** was introduced after this, and this was a change in measurements (which is what we use today)