Measure mass in kilograms and grams

Notes and guidance

In Year 2, children measured objects with masses that are whole numbers of kilograms. In this small step, they measure the mass of objects in both kilograms and grams, as well as fractions of kilograms. For example, an object may have a mass of 2 kg and 500 g and children should recognise that this is equivalent to two and a half kilograms. In this block, they always read the measurement as _____ kg and _____ g, not in decimal form, as decimals are not introduced until Year 4

Children use their learning from the previous step alongside the fact that 1,000 g is equivalent to 1 kg to work out amounts of grams on a kilogram scale that is divided into sections.

Things to look out for

- Children may confuse relationships with other units of measure, for example cm and m, and think that there are 100 g in 1 kg.

- Children may assume that the scales always go up in the same intervals, whereas different questions may have different scales.

- Children may mix up the two units, for example writing 2 kg and 300 g as 2 g and 300 kg.

Key questions

- What is mass?

- What are kilograms and grams? What is the same and what is different about them?

- How many grams are there in 1 kg?

- How many grams is half/a quarter of a kilogram?

- If a mass is between two whole kilograms, how can you work out the exact mass?

Possible sentence stems

- The mass is between _____ kg and _____ kg.

  There are _____ intervals.

  Each interval is worth _____ g.

  The mass is _____ kg and _____ g.

- The arrow on the scale is pointing to _____ kg and _____ g.

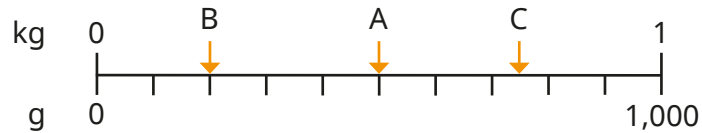- The object has a mass of _____ kg and _____ g.

National Curriculum links

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Measure mass in kilograms and grams

Key learning
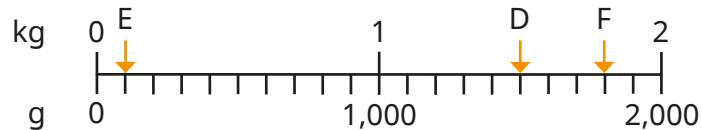
- Complete the sentence for each arrow.

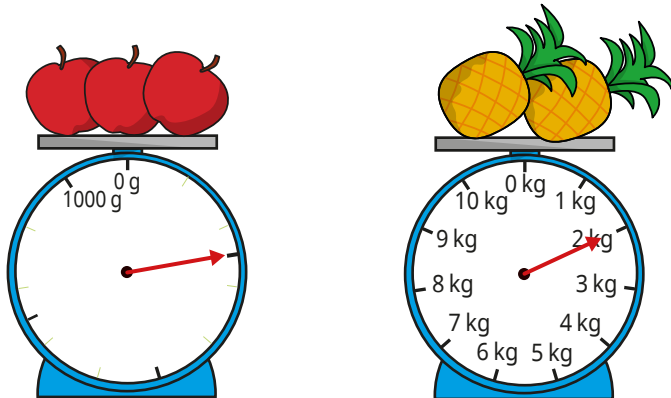Arrow _____ is pointing to _____ g.

What fraction of a kilogram is each arrow pointing to?

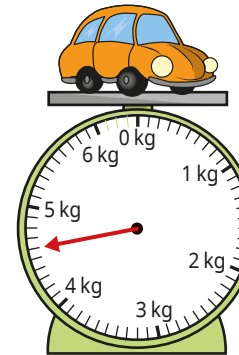- What mass is each arrow pointing to?
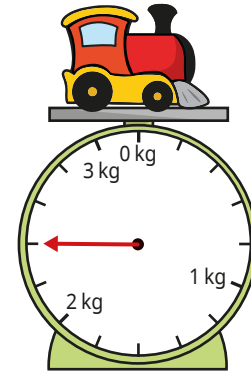
Give your answers in kilograms and grams.

- What is the total mass of the apples and the pineapples?
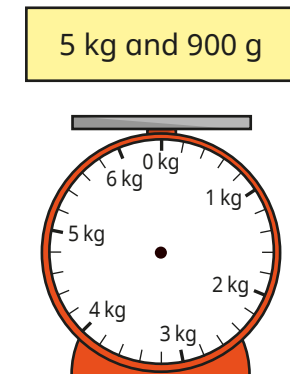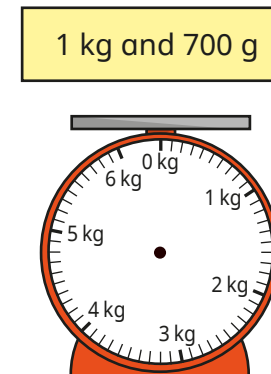

- Complete the sentences.
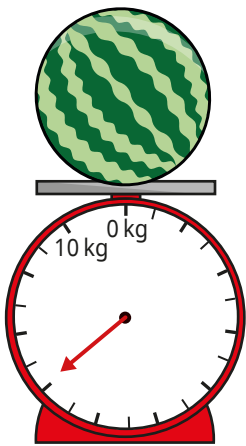

The toy car has a mass of

4 kg and _____ g.

The toy train has a mass of

_____ kg and _____ g.

- Draw arrows on the scales to show the mass.

| 1 kg and 700 g | 5 kg and 900 g |

Measure mass in kilograms and grams

Reasoning and problem solving

The watermelon has a mass of 13 kg.

Amir

The watermelon has a mass of 14 kg.

Rosie

The mass of the watermelon is greater than half of 10 kg.
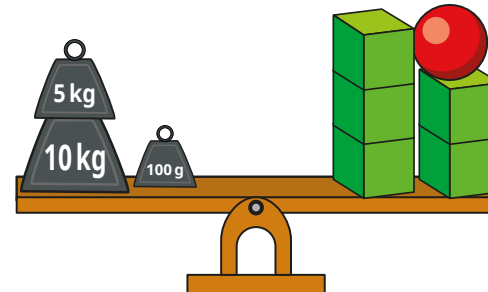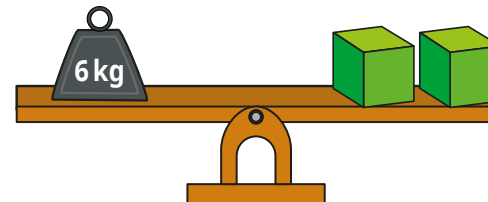
Jack

Who do you agree with?

Explain your answer.

Work out the mass of the watermelon.

Show your workings.

Jack   7 kg

Here are some balance scales.

6 kg

5 kg
10 kg   100 g

100 g

Work out the mass of the sphere.