



Maths

An Introduction to Imperial Measures Weeks 11 and 12



Aim

- I can understand and use common imperial units of length, weight and capacity.

Success Criteria

- I can identify common imperial units of length.
- I can convert between metric and imperial measures.
- I can solve problems involving measurements given in imperial and metric units.

Introducing Imperial Measurements

There are two main systems of measurement in use
– the metric system and the imperial system.

Most countries in the world use the newer metric system of measurement. However, a few countries – such as the USA – still use the imperial system.



Metric and Imperial measures

Here are some mixed metric and imperial units of measurement for weight, length and capacity.

Can you sort them into groups?

?

Have you
heard of all of
these?

kilometre	ounce	litre	millimetre
gram	foot	pound	inch
mile	gallon	centimetre	kilogram
pint	stone	yard	metre

Metric and Imperial measures

Metric measurements for length

kilometre

metre

centimetre

millimetre

Metric measurements for weight

kilogram

gram

Metric measurements for capacity

litre

millilitre

Metric and Imperial measures

Imperial measurements for length

mile

foot

yard

inch

Imperial measurements for weight

stone

ounce

pound

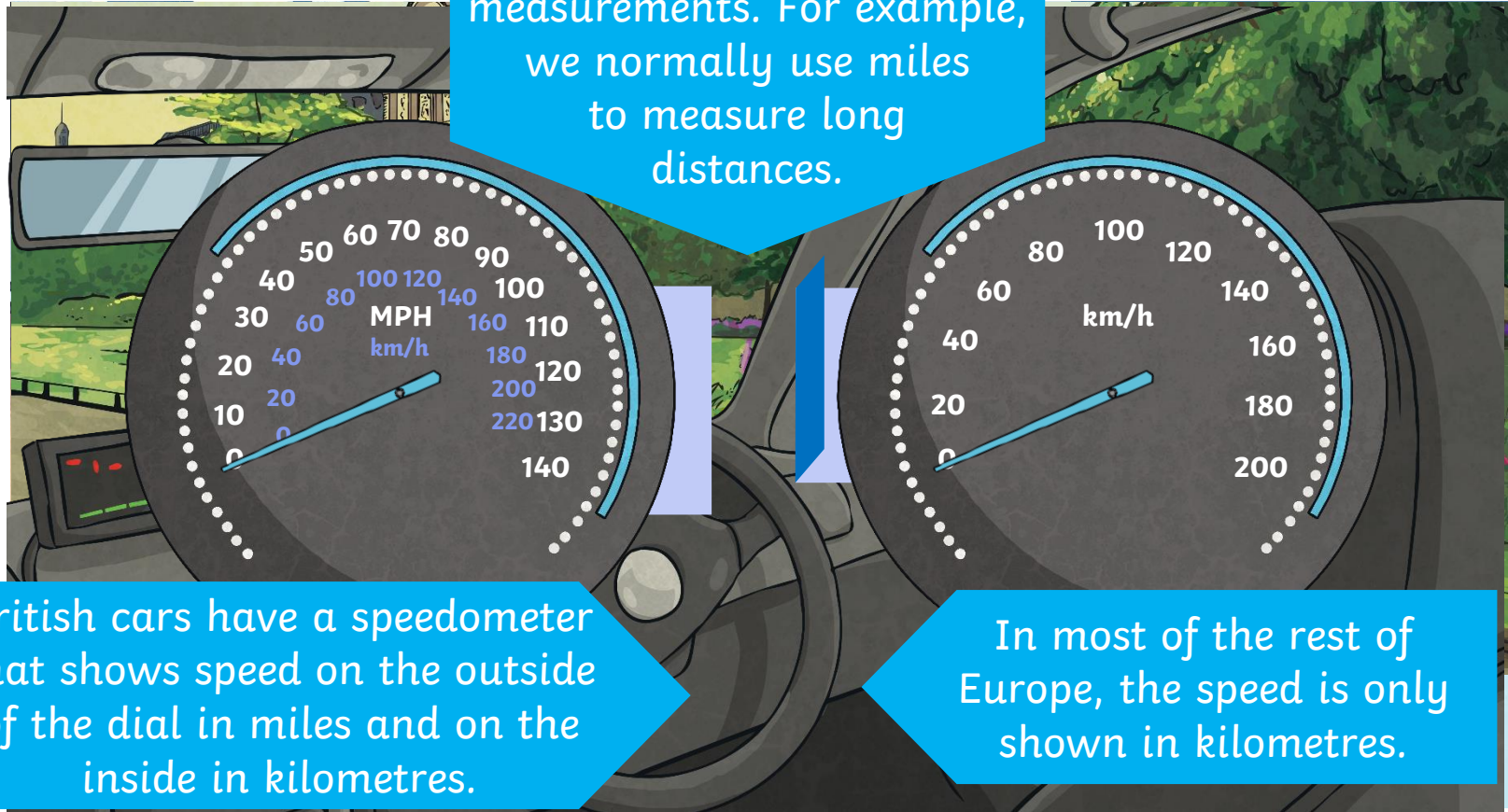
Imperial measurements for capacity

gallon

pint

Introducing Imperial Measurements for Length

The UK uses a mixture of imperial and metric measurements. For example, we normally use miles to measure long distances.

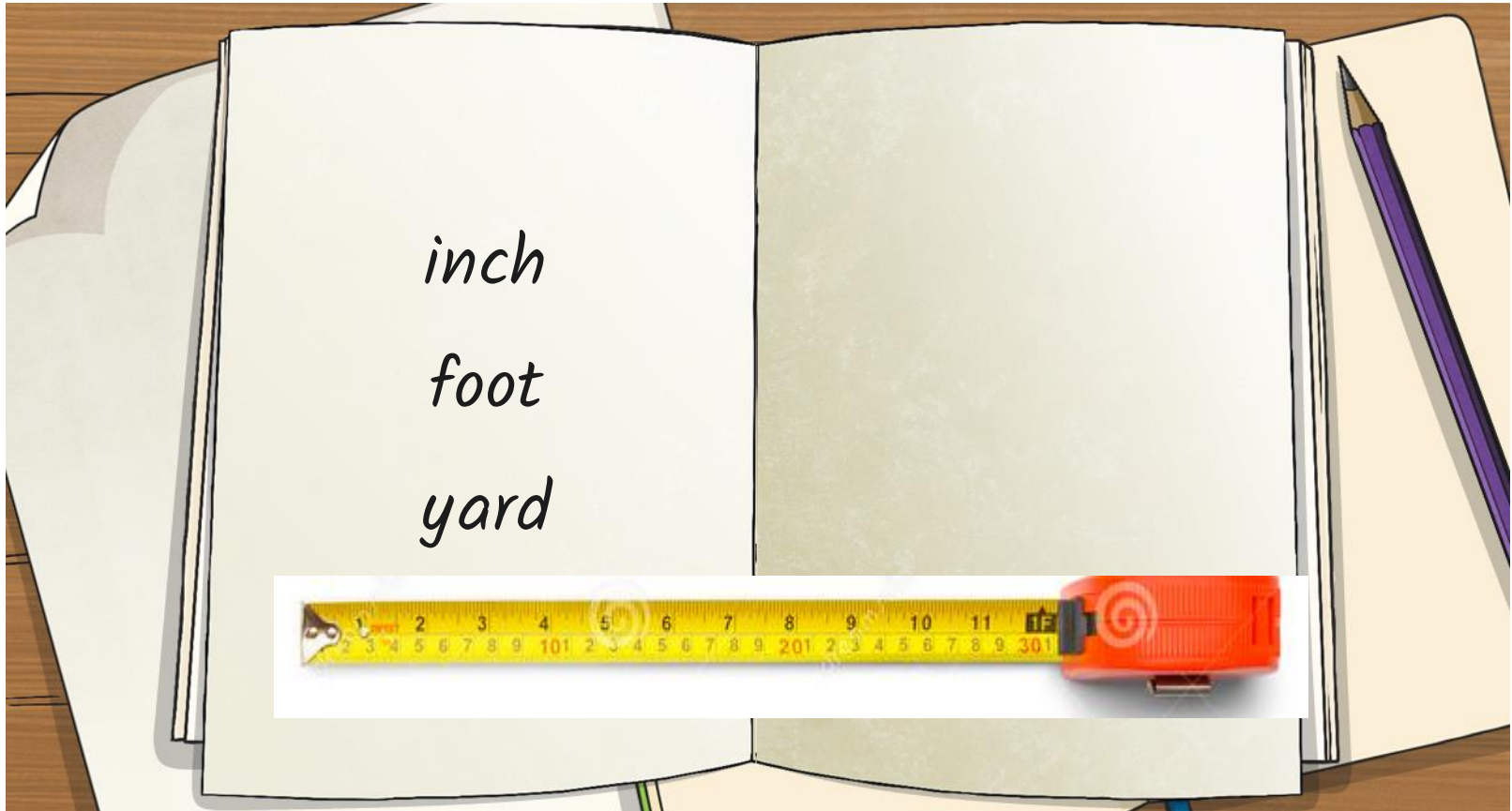


British cars have a speedometer that shows speed on the outside of the dial in miles and on the inside in kilometres.

In most of the rest of Europe, the speed is only shown in kilometres.

Introducing Imperial Measurements for Length

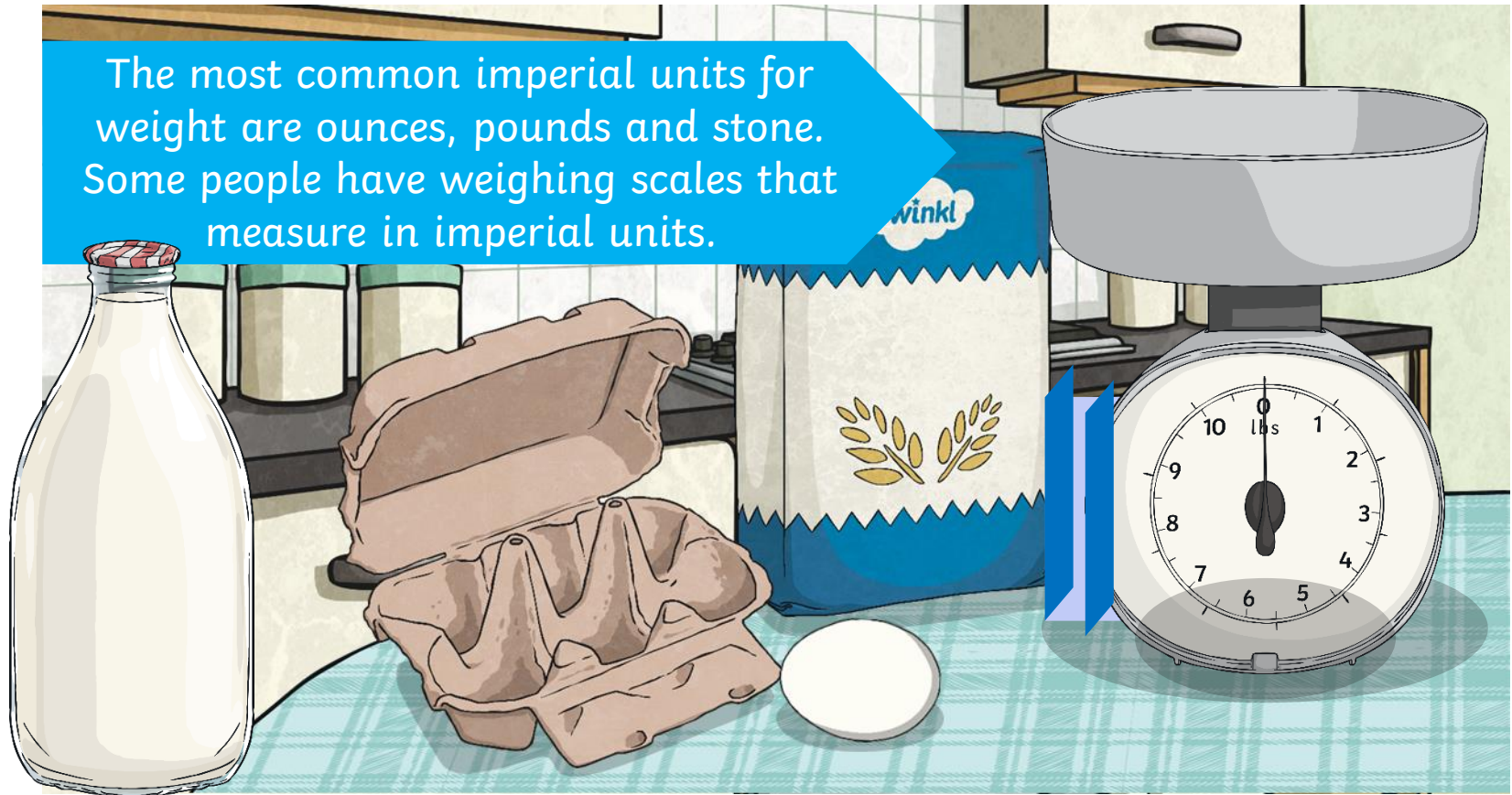
Have you heard of any of these other imperial units of length before?



Introducing Imperial Measurements for Weight

The most common **metric** units of mass are grams and kilograms.

The most common imperial units for weight are ounces, pounds and stone. Some people have weighing scales that measure in imperial units.



Introducing Imperial Measurements for Weight

Sometimes we still use pounds, ounces and stones, which are imperial measurements, for weight.



Often the weight of a new born baby is recorded in pounds and ounces.

The word 'pounds' (in weight) is shortened to ***lb.***

The word 'ounces' is shortened to ***oz.***

Pounds and Kilograms

A new born baby weighed 8.5lb. How much was this in kg to the nearest whole number?



$$1 \text{ lb} = 0.45 \text{ kg}$$

$$1 \text{ kg} = 2.2 \text{ lb}$$

Pounds and Kilograms

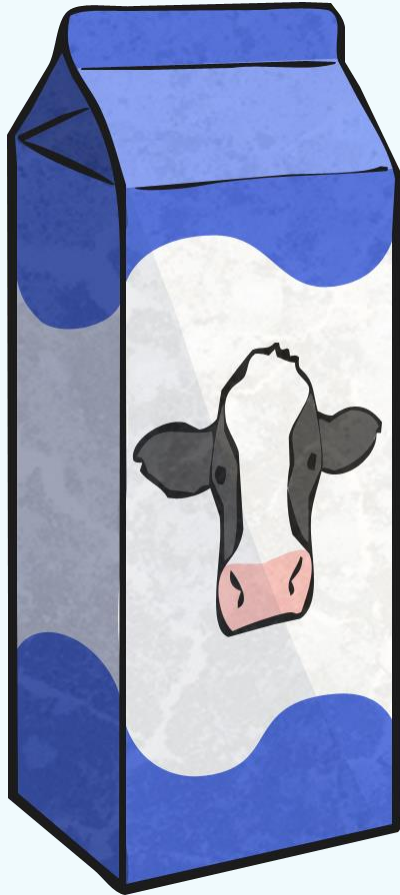
A new born baby weighed 8.5lb. How much was this in kg to the nearest whole number?



4kg

Introducing Imperial Measurements for Capacity

Metric measurements for capacity include litres and millilitres.



Imperial measurements for capacity include pints and gallons. In the past, milk would be delivered to your door in pint sized bottles by the milkman. Beer is also often served in pint glasses! Maybe you have a pint glass at home you can look at to see how much water it holds?

1 pint = 0.57 litres

1 litre = 1.75 pints



Converting Miles to Kilometres

Sometimes we need to convert between imperial and metric units.

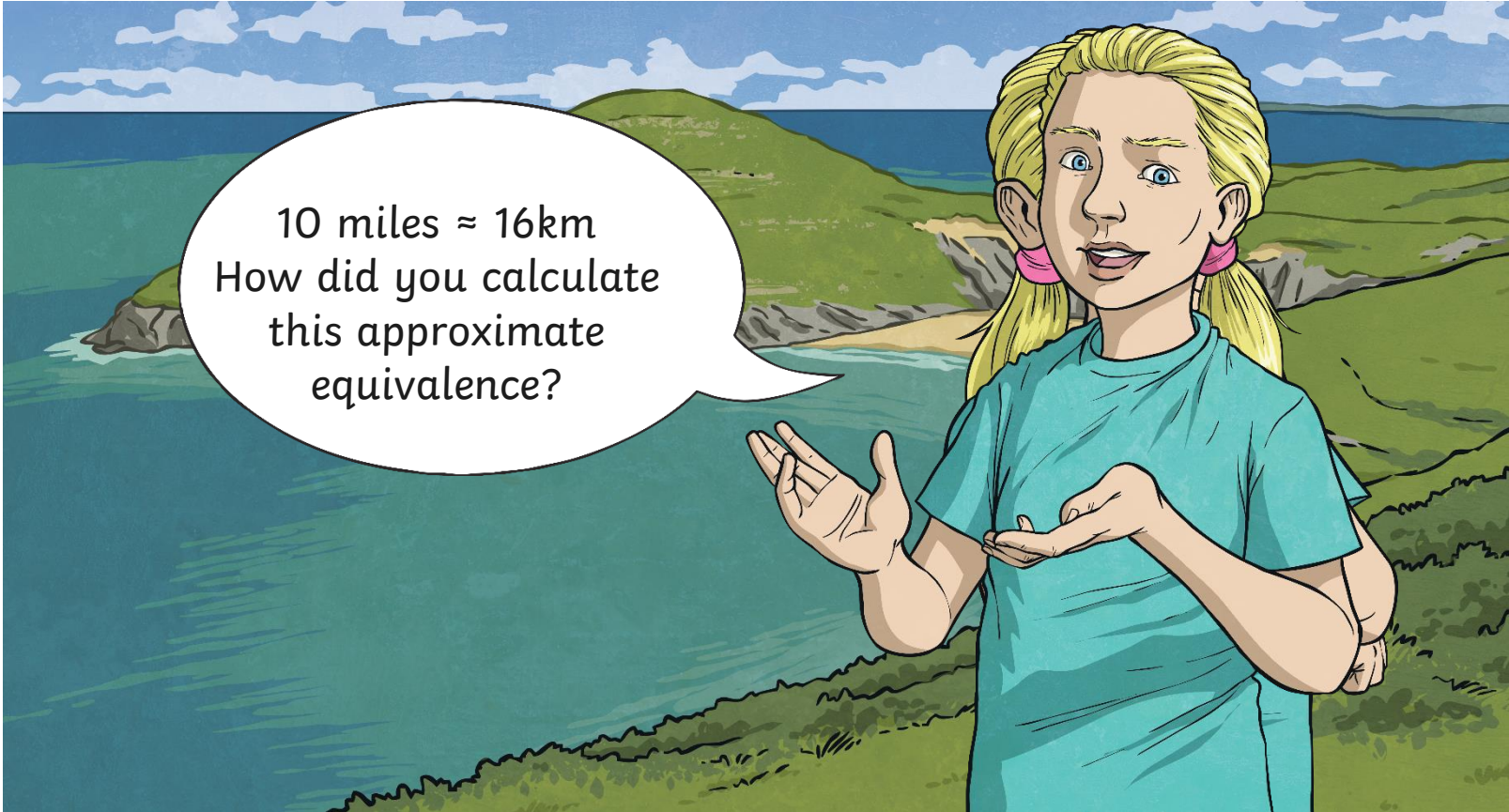
For example, we might want to use a map from another country.

5 miles \approx 8km

How many kilometres are approximately equal to 10 miles?

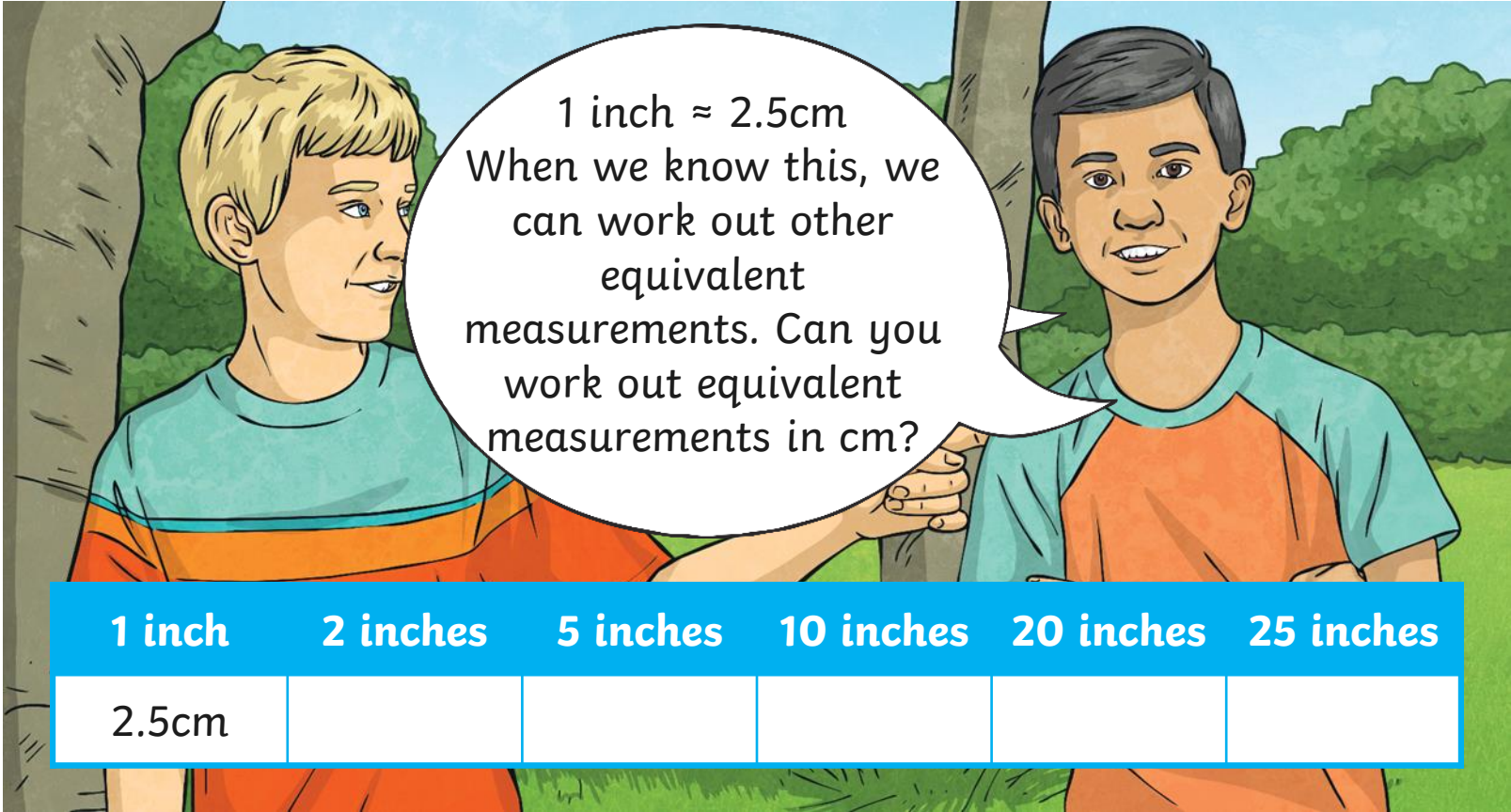
\approx This sign means 'approximately equal to'.

Miles and Kilometres



10 miles \approx 16km
How did you calculate
this approximate
equivalence?

Converting between Inches and Centimetres



1 inch \approx 2.5cm
When we know this, we can work out other equivalent measurements. Can you work out equivalent measurements in cm?

1 inch

2 inches

5 inches

10 inches

20 inches

25 inches

2.5cm

Converting between Inches and Centimetres



How did you get on?

1 inch

2 inches

5 inches

10 inches

20 inches

25 inches

2.5cm

5cm

12.5cm

25cm

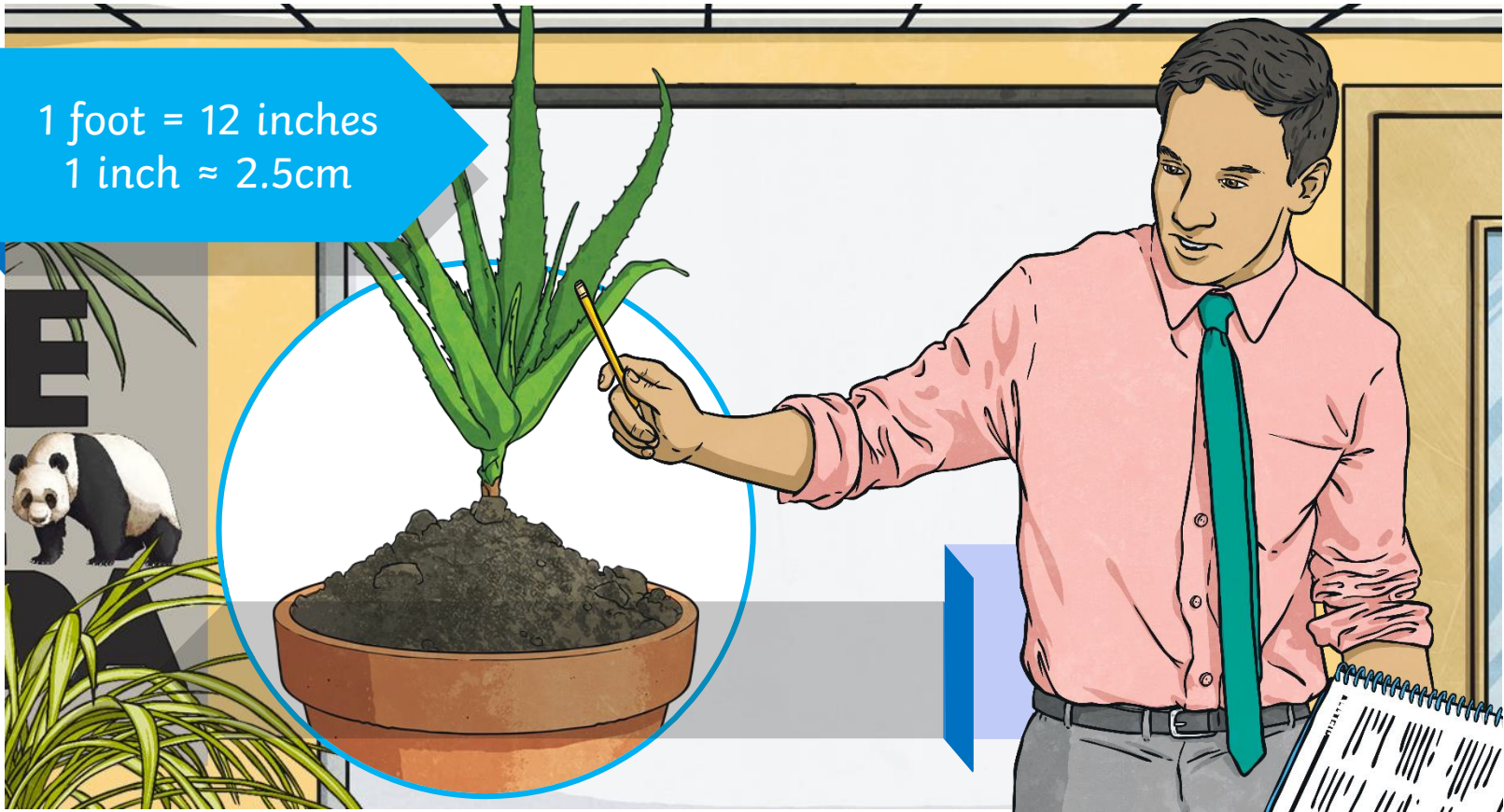
50cm

62.5cm

Converting between Centimetres, Feet and Inches

Mr Kitcatt plants a seedling that grows to be 1 foot tall.
How tall is this in cm?

1 foot = 12 inches
1 inch \approx 2.5cm



Converting between Centimetres, Feet and Inches

Answer- Mr Kitcatt's seedling is 30cm tall.

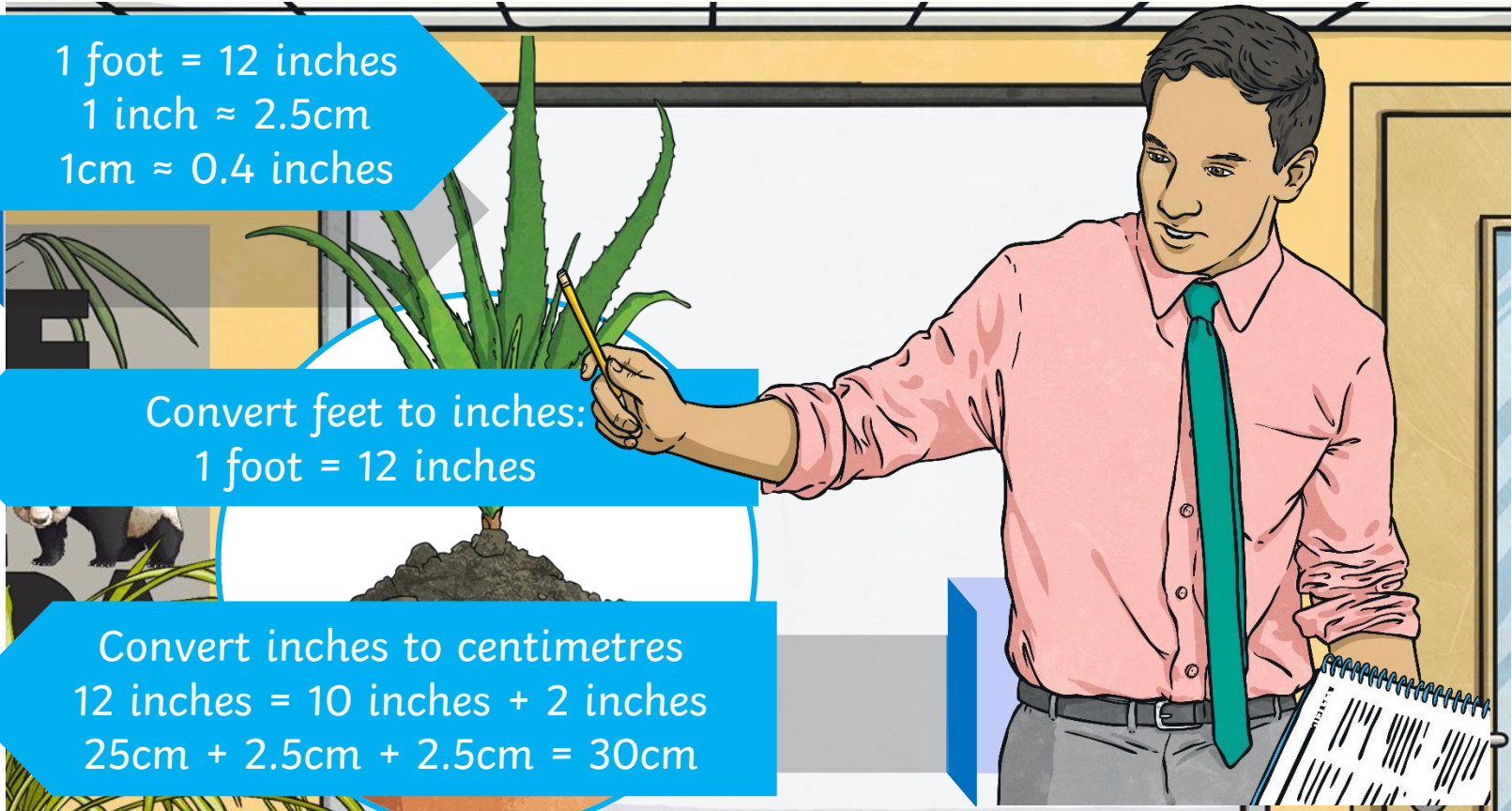
1 foot = 12 inches

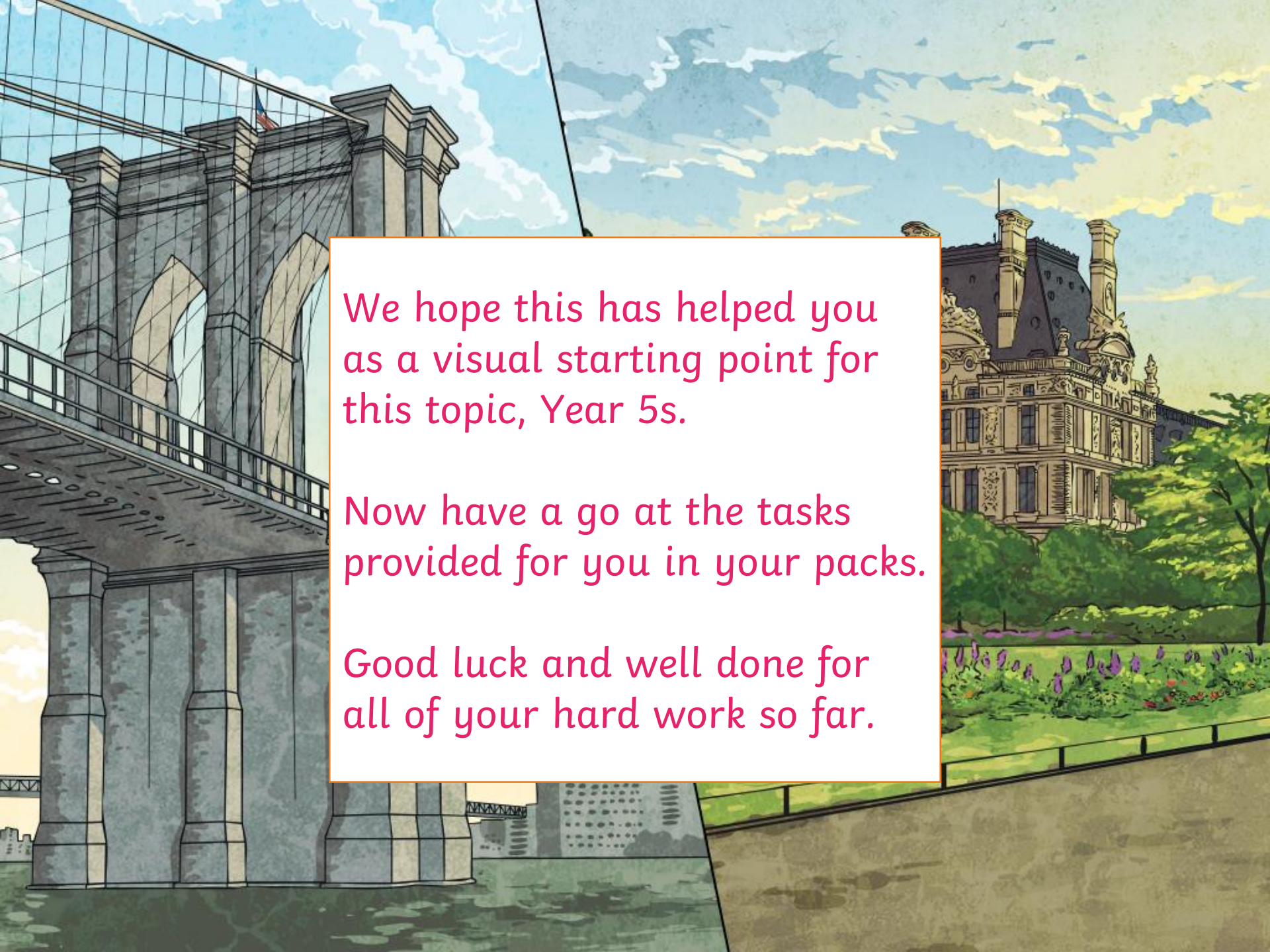
1 inch \approx 2.5cm

1cm \approx 0.4 inches

Convert feet to inches:
1 foot = 12 inches

Convert inches to centimetres
12 inches = 10 inches + 2 inches
25cm + 2.5cm + 2.5cm = 30cm





We hope this has helped you as a visual starting point for this topic, Year 5s.

Now have a go at the tasks provided for you in your packs.

Good luck and well done for all of your hard work so far.