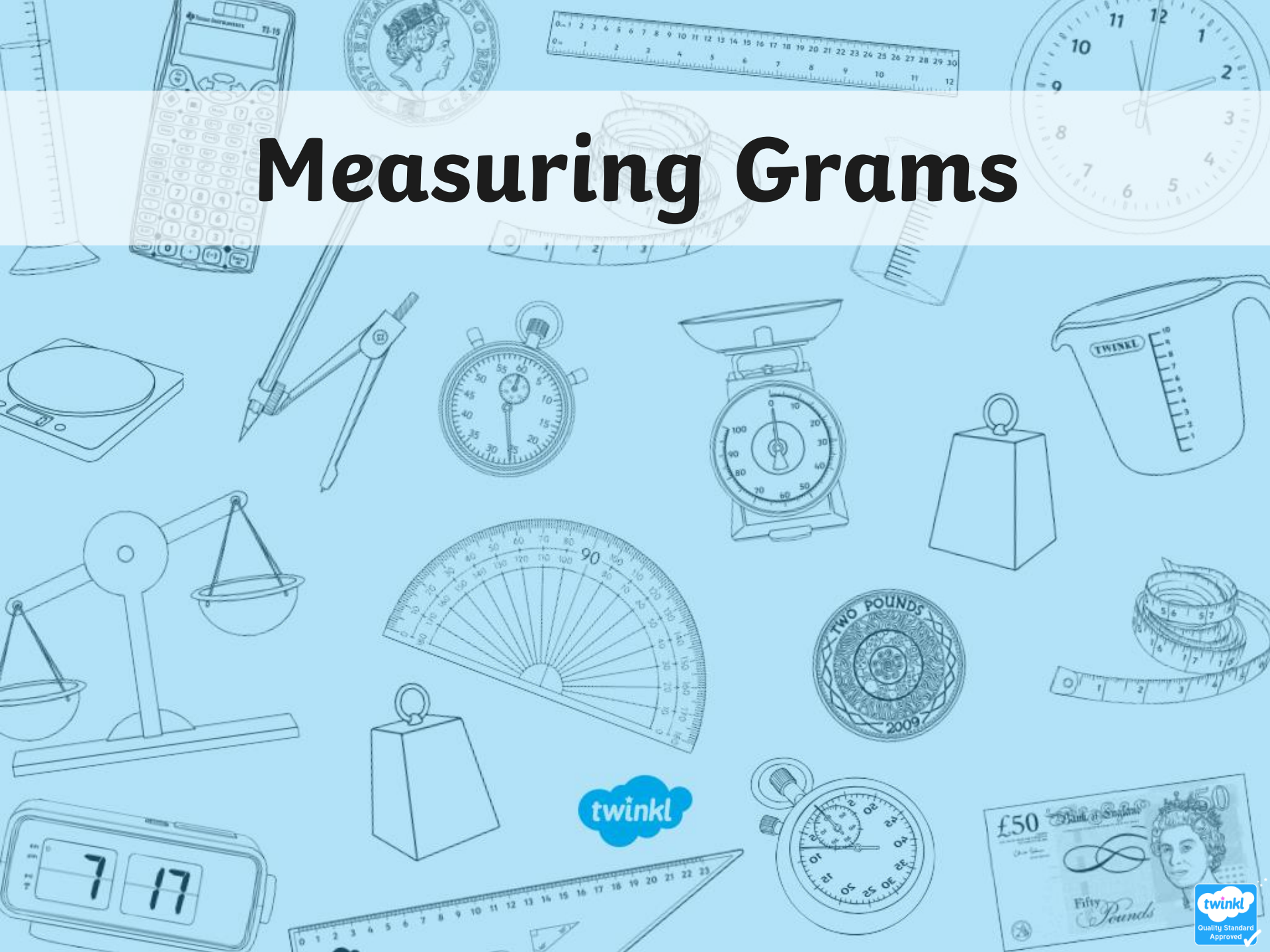




# Maths

## Measurement





# Measuring Grams





# Aim

- I can measure mass in grams.

## Success Criteria

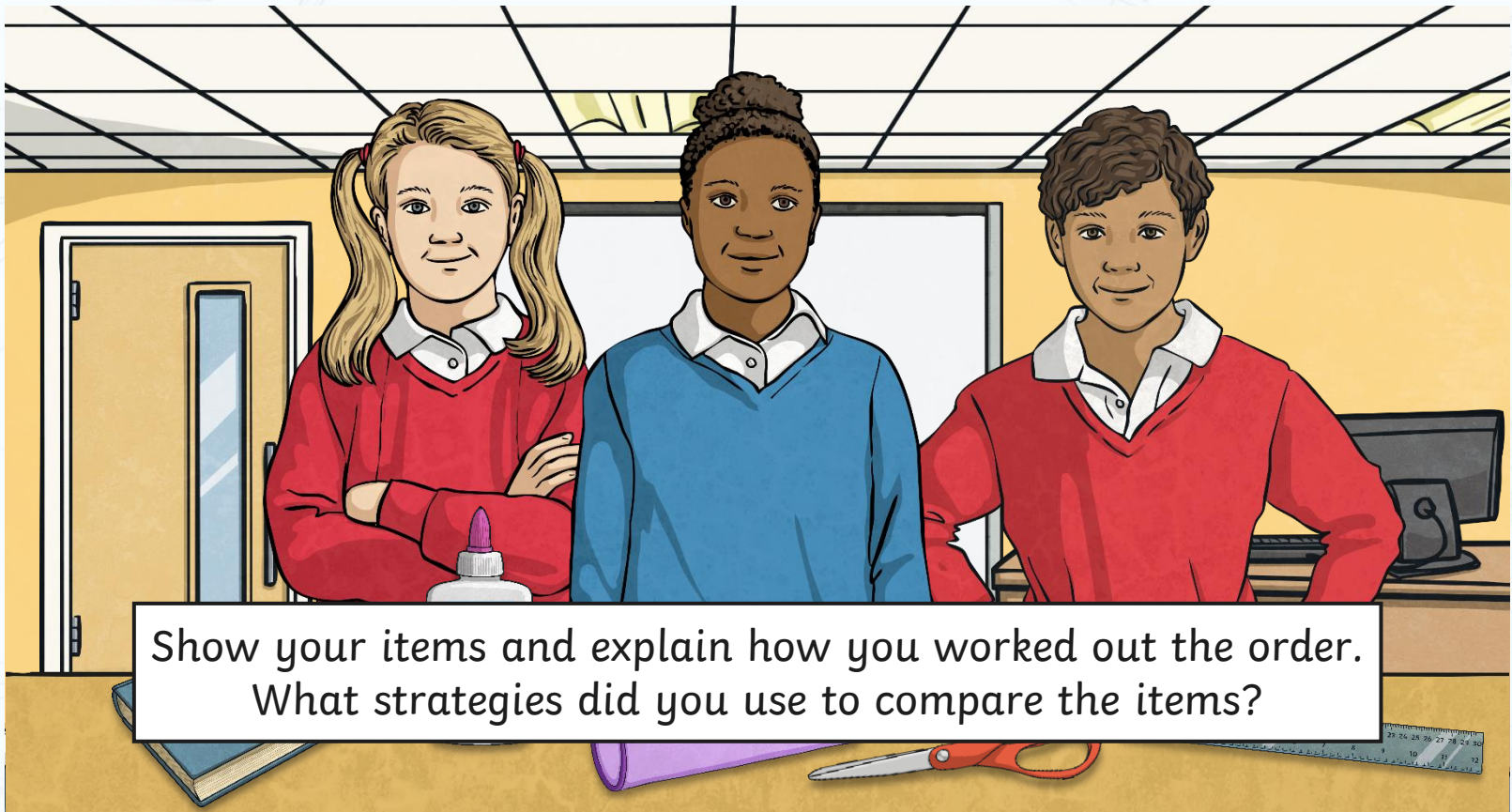
- I can calculate the intervals on a scale.
- I can read scales to measure in grams.



# Order It - Mass



Work with your group to collect five objects.  
Order them from heaviest to lightest.



Show your items and explain how you worked out the order.  
What strategies did you use to compare the items?

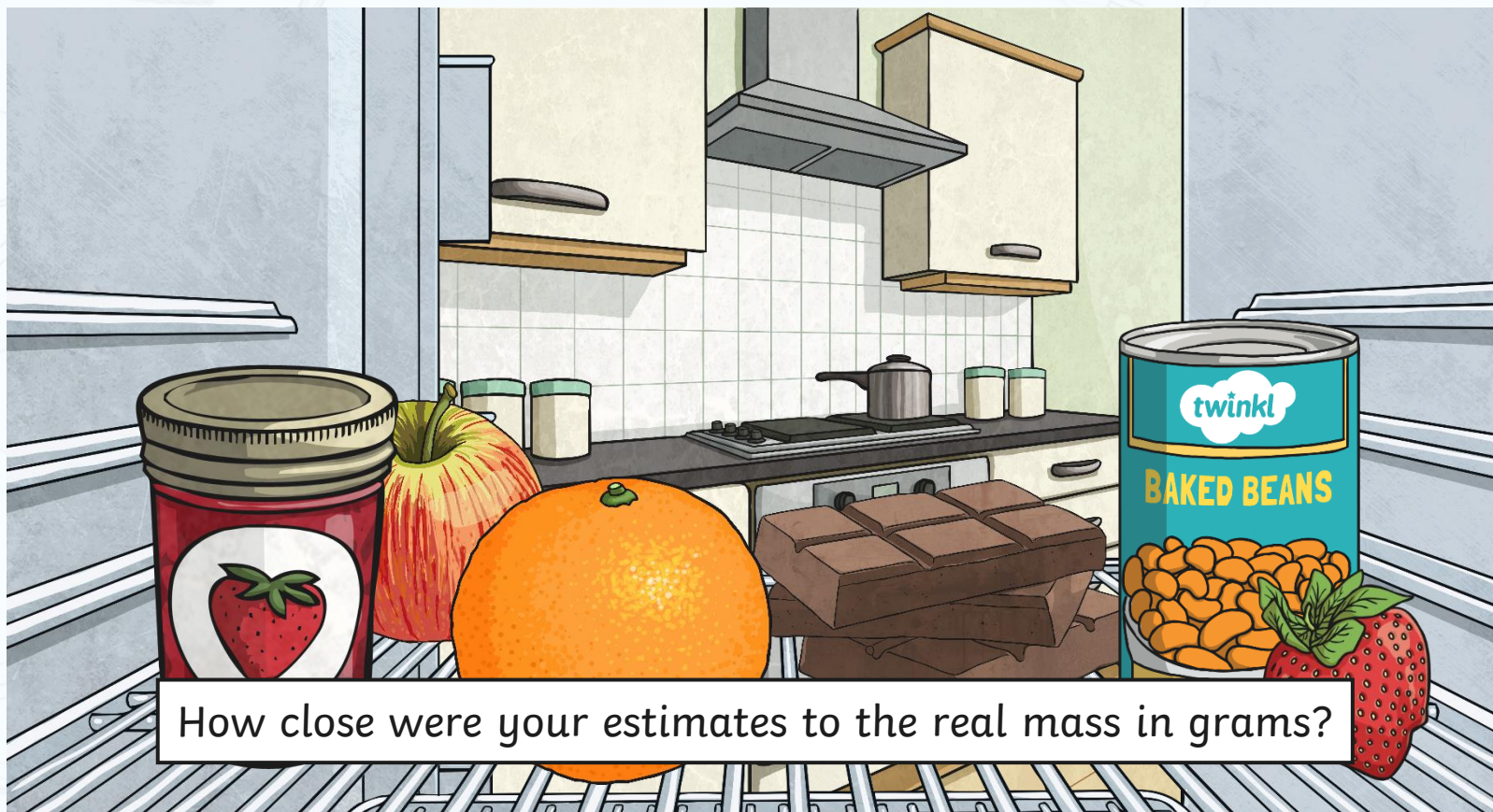




# Estimate the Mass

Look at the food items.

Estimate their mass in grams and order them from heaviest to lightest.

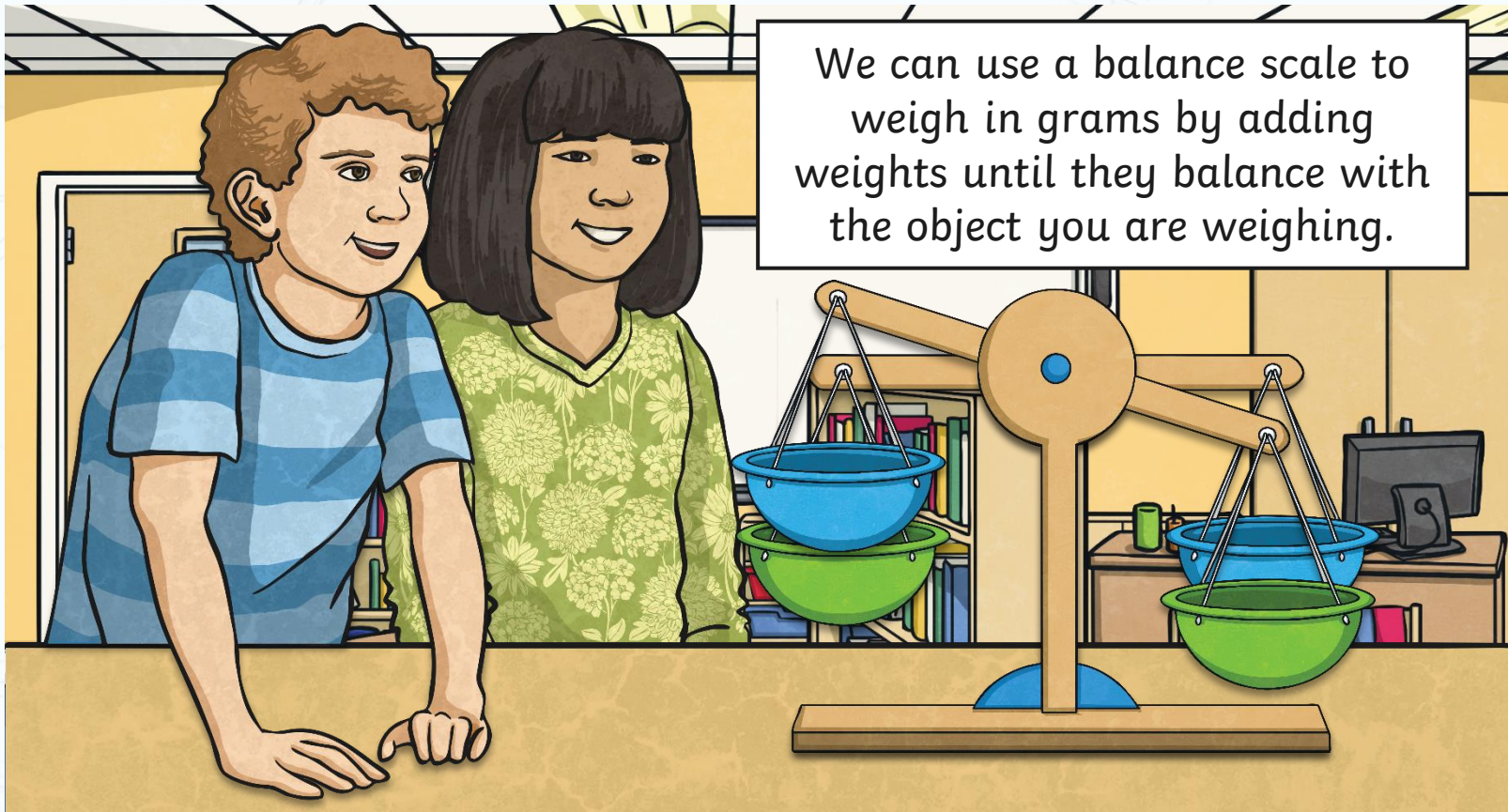






# Weighing in Grams

A gram is a very small unit for measuring mass.  
A paperclip and a raisin both weigh about 1 gram.

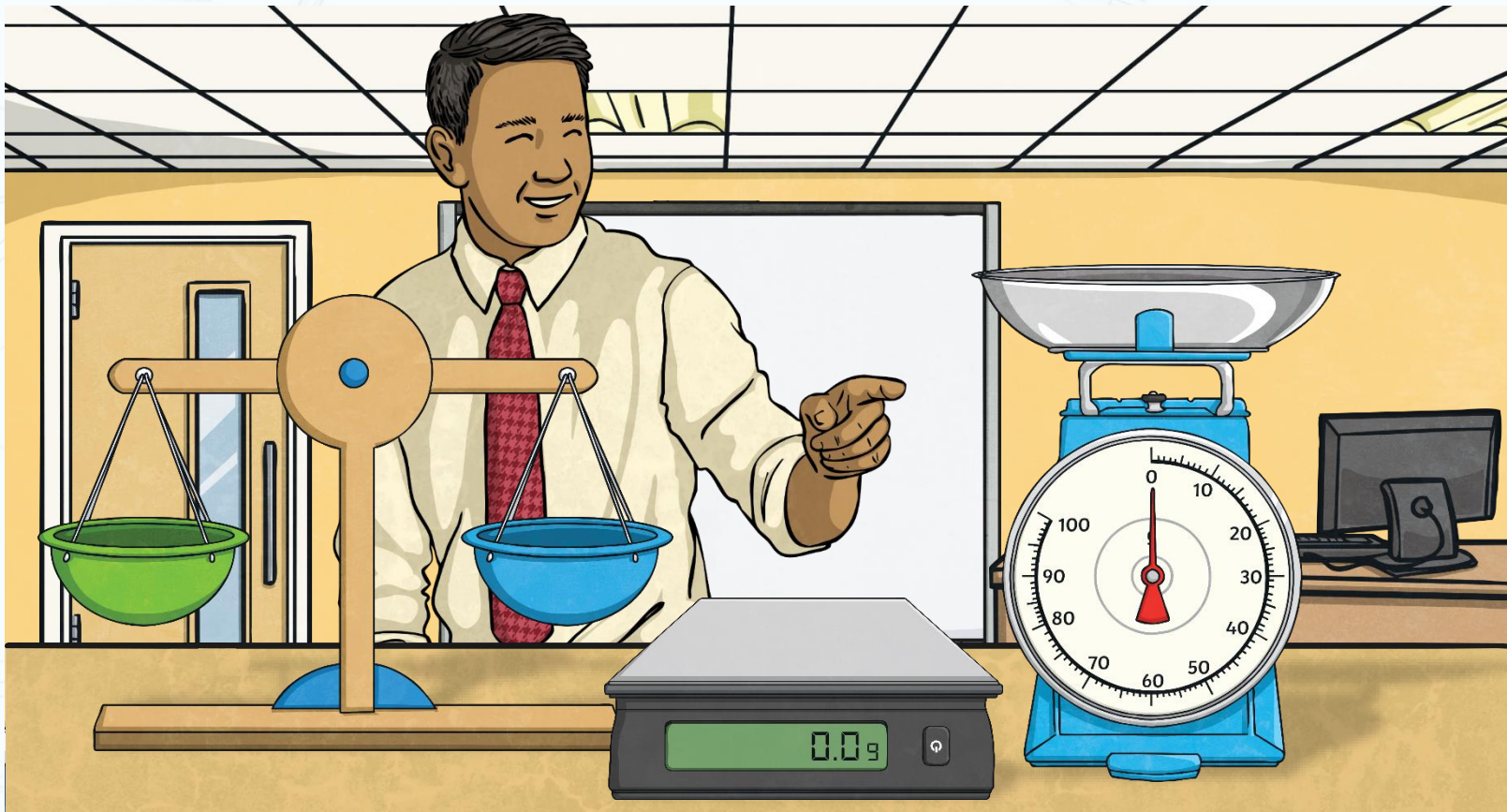




# Weighing in Grams



It is more accurate to use weighing scales to measure in grams.  
There are many different sorts of weighing scales:

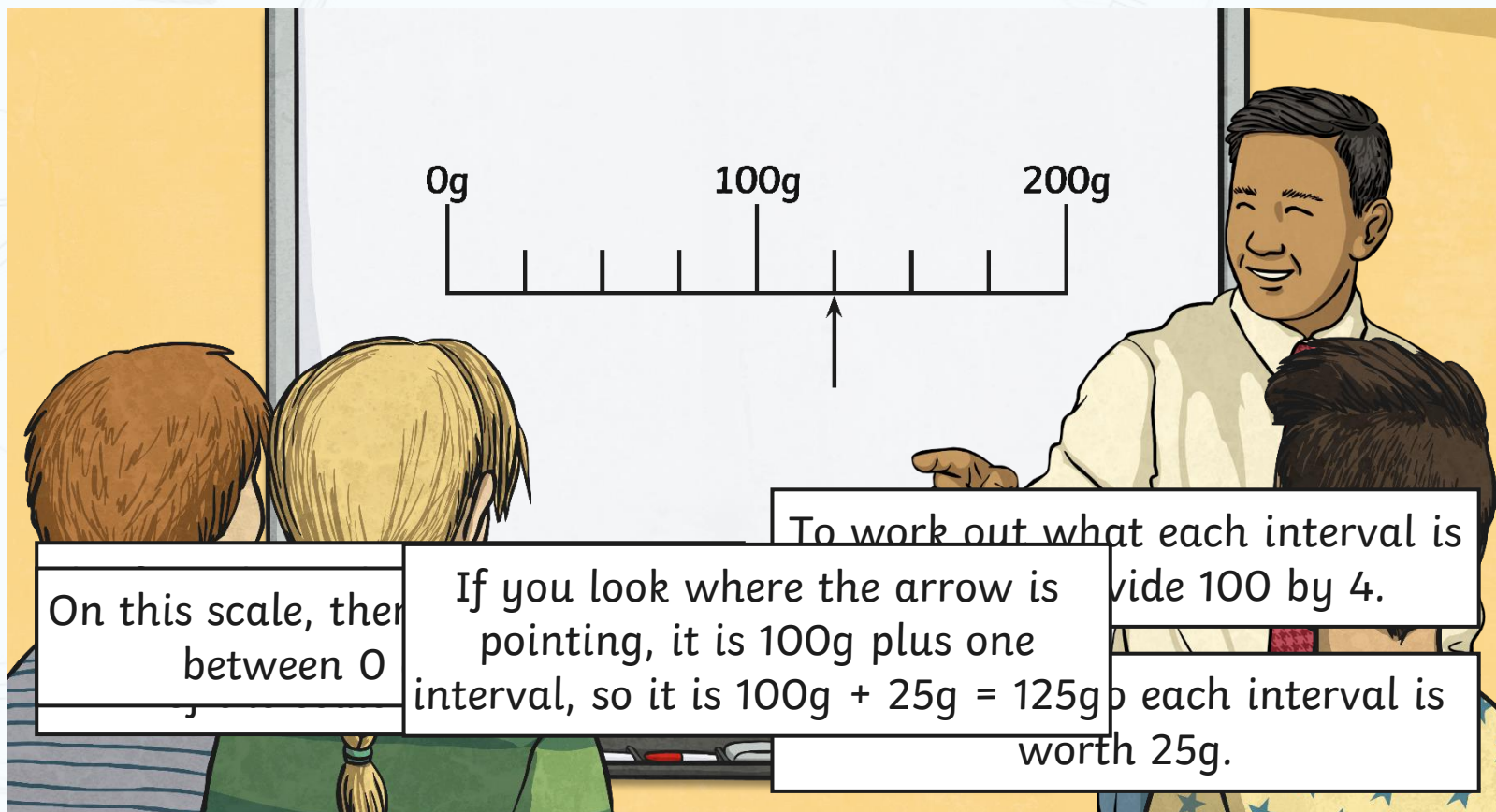






# Reading Scales

We are going to learn how to use **analogue scales**.

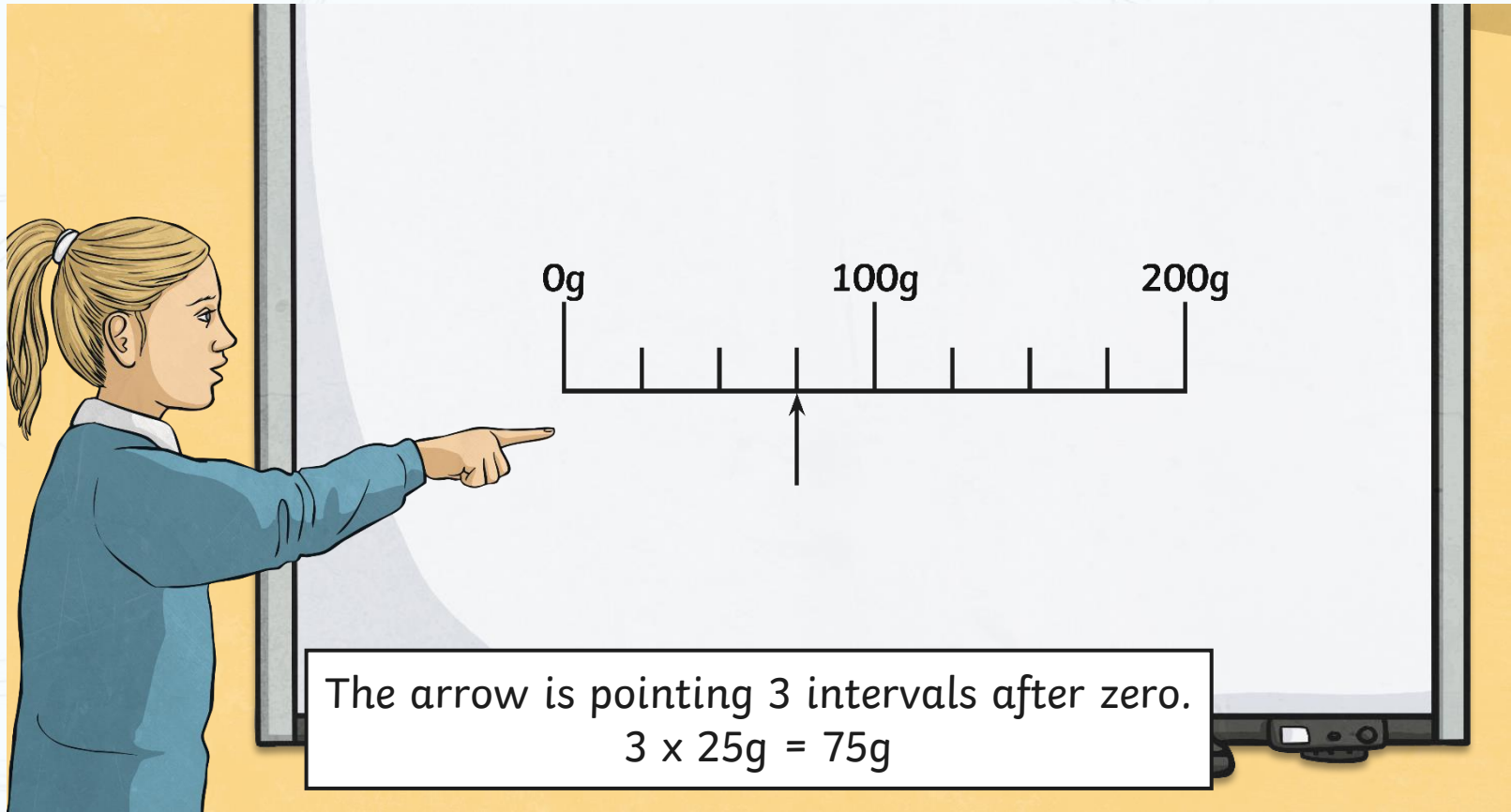




# Reading Scales



This is the same scale. What is the arrow pointing to now?

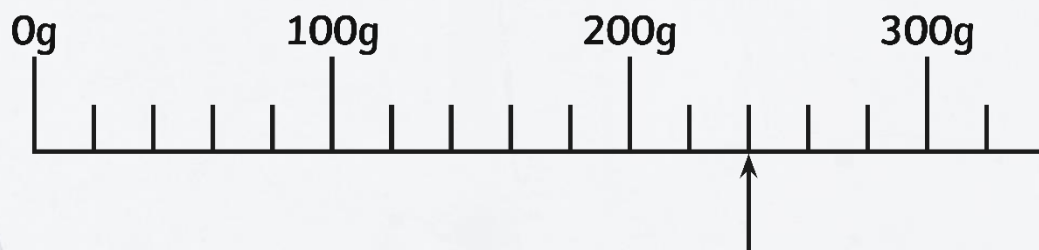






# Reading Scales

On this scale, there are 5 intervals between 0 and 100g.



To work out what each interval is worth we divide 100 by 5.

$100 \div 5 = 20$ , so each interval is worth 20g.

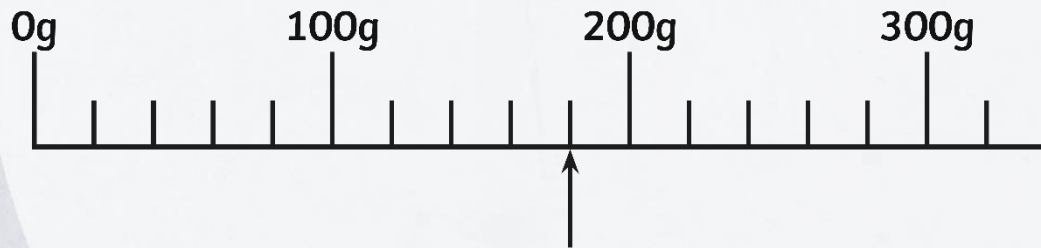
If you look where the arrow is pointing, it is 200g plus two intervals, so it is  $200\text{g} + 40\text{g} = 240\text{g}$



# Reading Scales



This is the same scale. What is the arrow pointing to now?



The arrow is pointing 1 interval  
before 200g.  
 $200\text{g} - 20\text{g} = 180\text{g}$

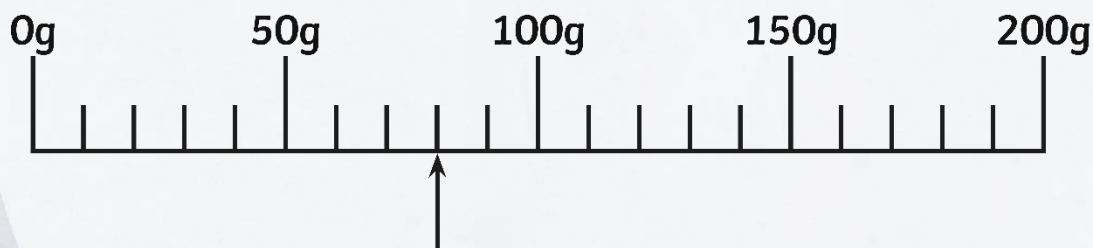
We could also say:  
The arrow is pointing 4 intervals  
after 100g.  
 $100\text{g} + 80\text{g} = 180\text{g}$





# Reading Scales

On this scale, there are 5 intervals between 0 and 50g.



To work out what each interval is worth we divide 50 by 5.

$50 \div 5 = 10$ , so each interval is worth 10g.

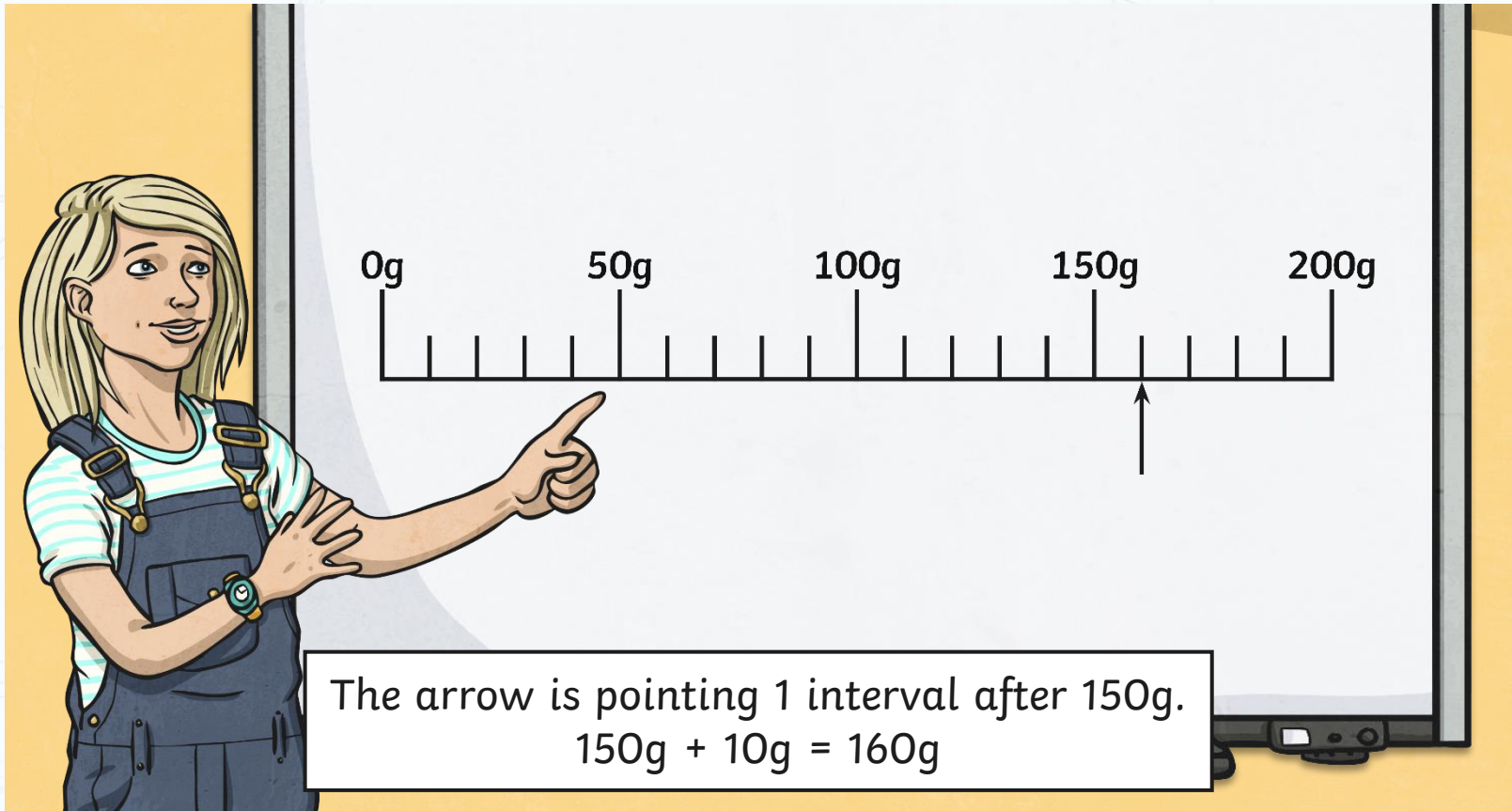
If you look where the arrow is pointing, it is 50g plus three intervals, so it is  $50g + 30g = 80g$



# Reading Scales



This is the same scale. What is the arrow pointing to now?







# Reading Scales

On this scale, there are 5 intervals between 0 and 25g.



To work out what each interval is worth we divide 25 by 5.

$25 \div 5 = 5$ , so each interval is worth 5g.

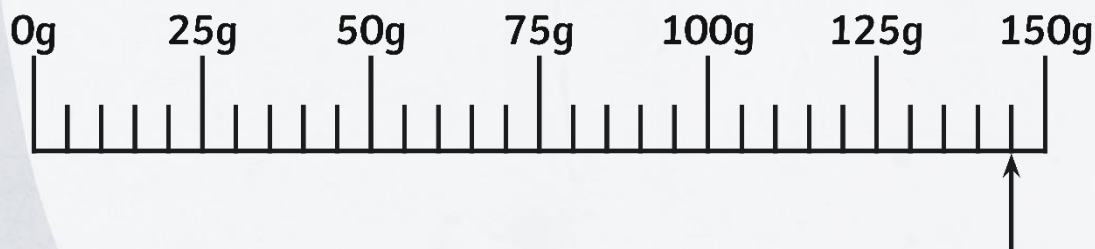
If you look where the arrow is pointing, it is 50g plus four intervals, so it is  $50\text{g} + 20\text{g} = 70\text{g}$





# Reading Scales

This is the same scale. What is the arrow pointing to now?



The arrow is pointing 1 interval  
before 150g.  
 $150\text{g} - 5\text{g} = 145\text{g}$

We could also say:  
The arrow is pointing 4 intervals  
after 125g.  
 $125\text{g} + 20\text{g} = 145\text{g}$





# Reading Scales

On this scale, there are 10 intervals between 0 and 100g.



To work out what each interval is worth we divide 100 by 10.

$100 \div 10 = 10$ , so each interval is worth 10g.

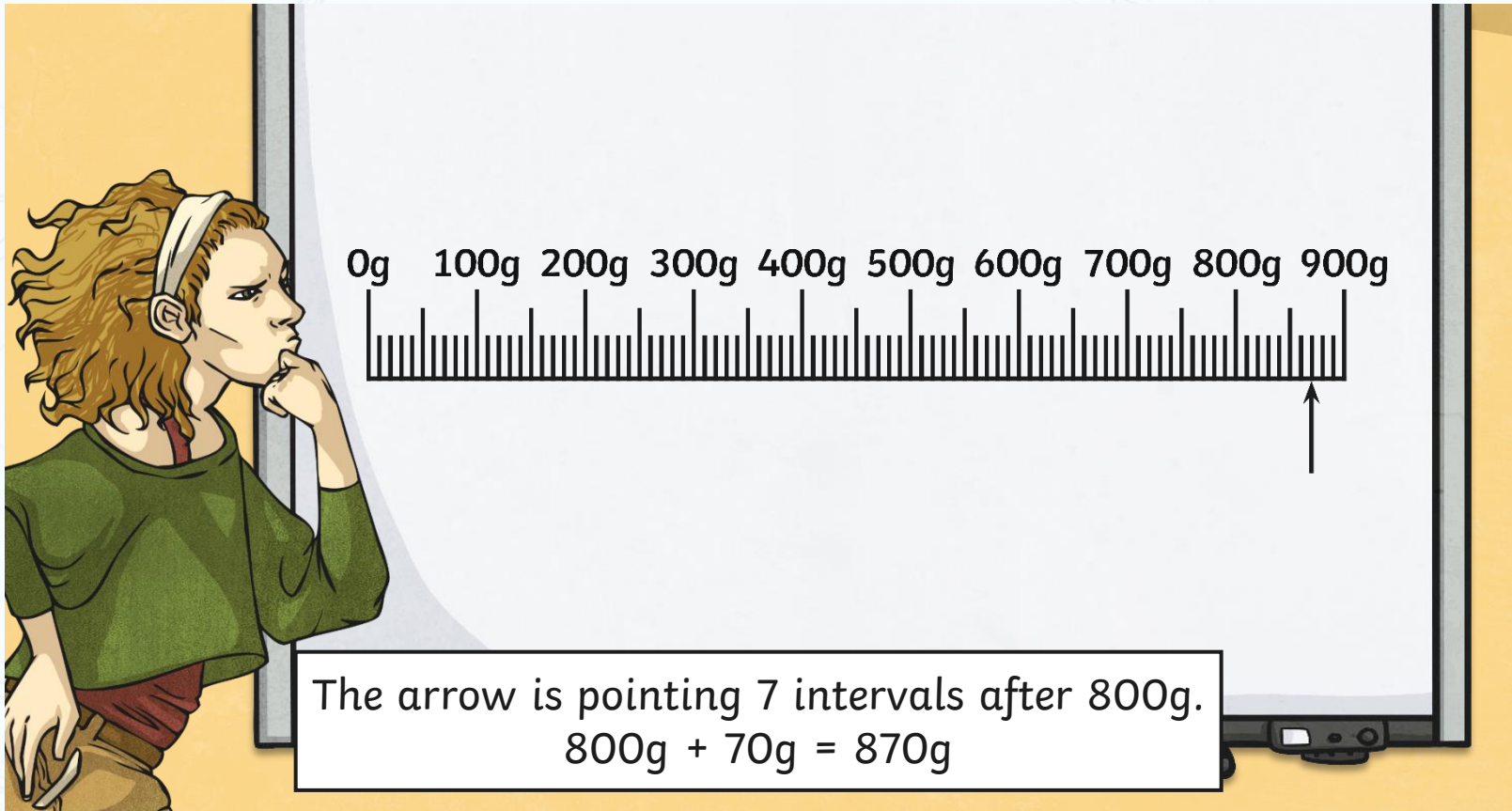
If you look where the arrow is pointing, it is 200g plus five intervals, so it is  $200\text{g} + 50\text{g} = 250\text{g}$



# Reading Scales

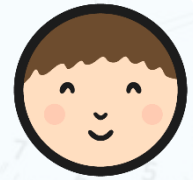


This is the same scale. What is the arrow pointing to now?





# Measure in Grams



Use your mass measuring mastery to complete these activity sheets.

Scale 3:

200g      300g

A

Write a sentence to explain how you worked out what each interval is worth and then say how many grams the arrow is pointing to.

Calculating the intervals:

There are   2   intervals between 200g and 300g.

Each interval is worth   50   g.

The arrow is pointing to   250   g.

Scale 4:

Use a ruler to draw your own scale from 0g to 100g. On the scale mark the following intervals.

Arrows are pointing to:

A   75   g  
B   150   g  
C   225   g  
D   375   g

Reading Scales to Measure in Grams

I can read scales to measure in grams.

For each scale, write a calculation to show how you worked out what each interval is worth and then say how many grams the arrows are pointing to. The first one has done for you.

Scale 1:

0g      100g      200g      300g      400g      500g

A

Calculating the intervals:

There are   2   intervals between 0 and 100.

$100 \div 2 = 50$

Each interval is worth   50   g.

The arrow is pointing to   250   g.

Scale 2:

0g      100g      200g      300g

A      B      C      D

There are   10   intervals between 0 and 100.

$100 \div 10 = 10$

Each interval is worth   10   g.

Arrows are pointing to:

A   50   g  
B   100   g  
C   150   g  
D   200   g

Scale 3:

0g      100g

A

Write a sentence to explain how you worked out what each interval is worth and then say how many grams the arrow is pointing to.

Calculating the intervals:

There are   2   intervals between 0 and 100.

$100 \div 2 = 50$

Each interval is worth   50   g.

The arrow is pointing to   250   g.

Scale 2:

0g      100g

A

Calculating the intervals:

There are   10   intervals between 0 and 100.

$100 \div 10 = 10$

Each interval is worth   10   g.

Arrows are pointing to:

A   50   g  
B   100   g  
C   150   g  
D   200   g

Reading Scales to Measure in Grams

I can read scales to measure in grams.

For each scale, write a calculation to show how you worked out what each interval is worth and then say how many grams the arrows are pointing to. The first one has done for you.

Scale 1:

0g      100g      200g      300g      400g      500g

A

Calculating the intervals:

There are   2   intervals between 0 and 100.

$100 \div 2 = 50$

Each interval is worth   50   g.

The arrow is pointing to   250   g.

Scale 2:

0g      100g      200g      300g

A      B      C      D

There are   10   intervals between 0 and 100.

$100 \div 10 = 10$

Each interval is worth   10   g.

Arrows are pointing to:

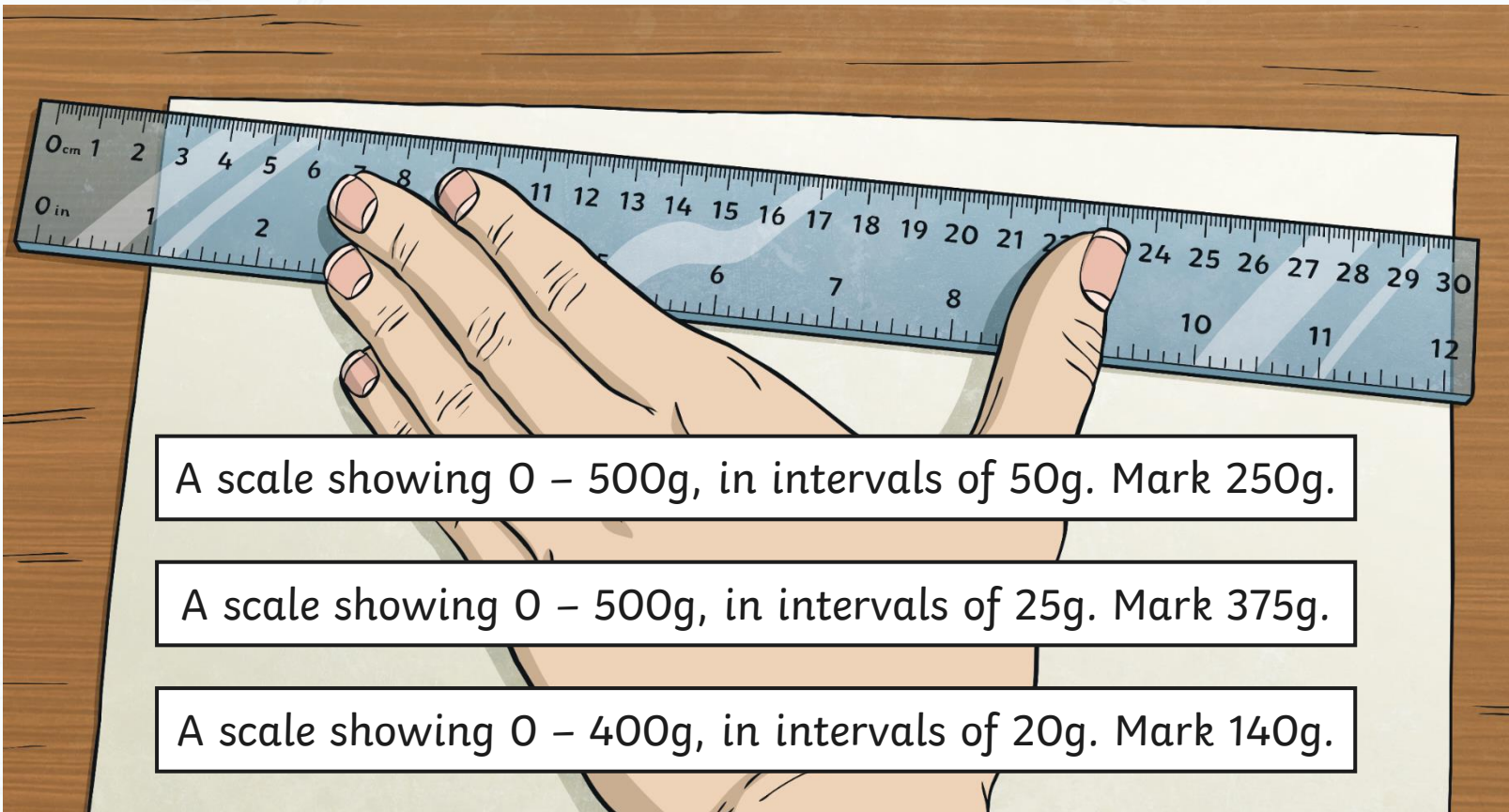
A   50   g  
B   100   g  
C   150   g  
D   200   g



# Draw Your Own

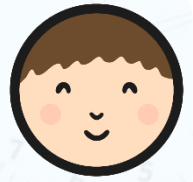


Using a pencil and ruler, draw your own scales and mark the mass shown.  
Label multiples of 100g on your scale.

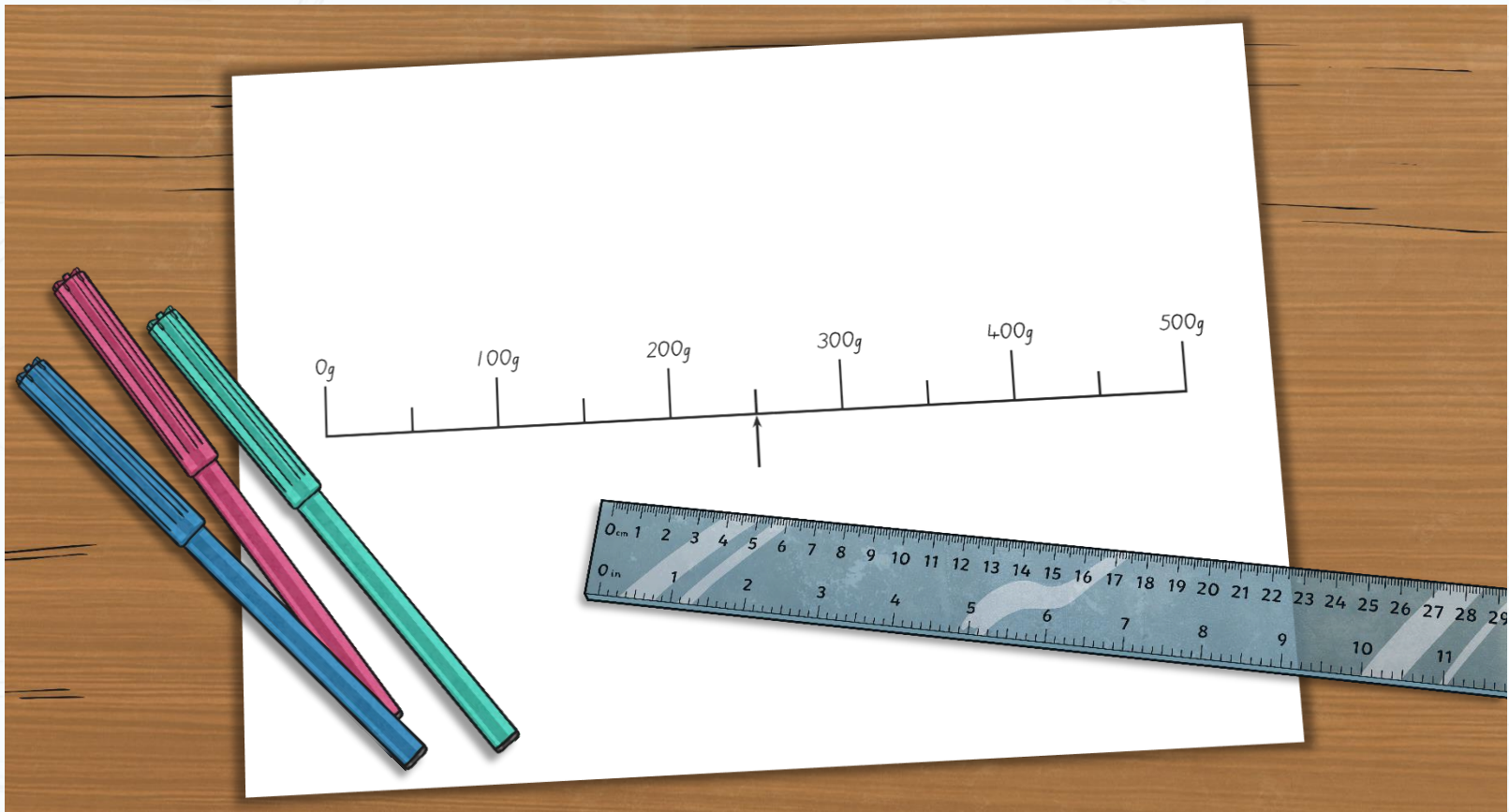




# Draw Your Own Answers

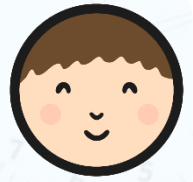


A scale showing 0 – 500g, in intervals of 50g. Mark 250g.

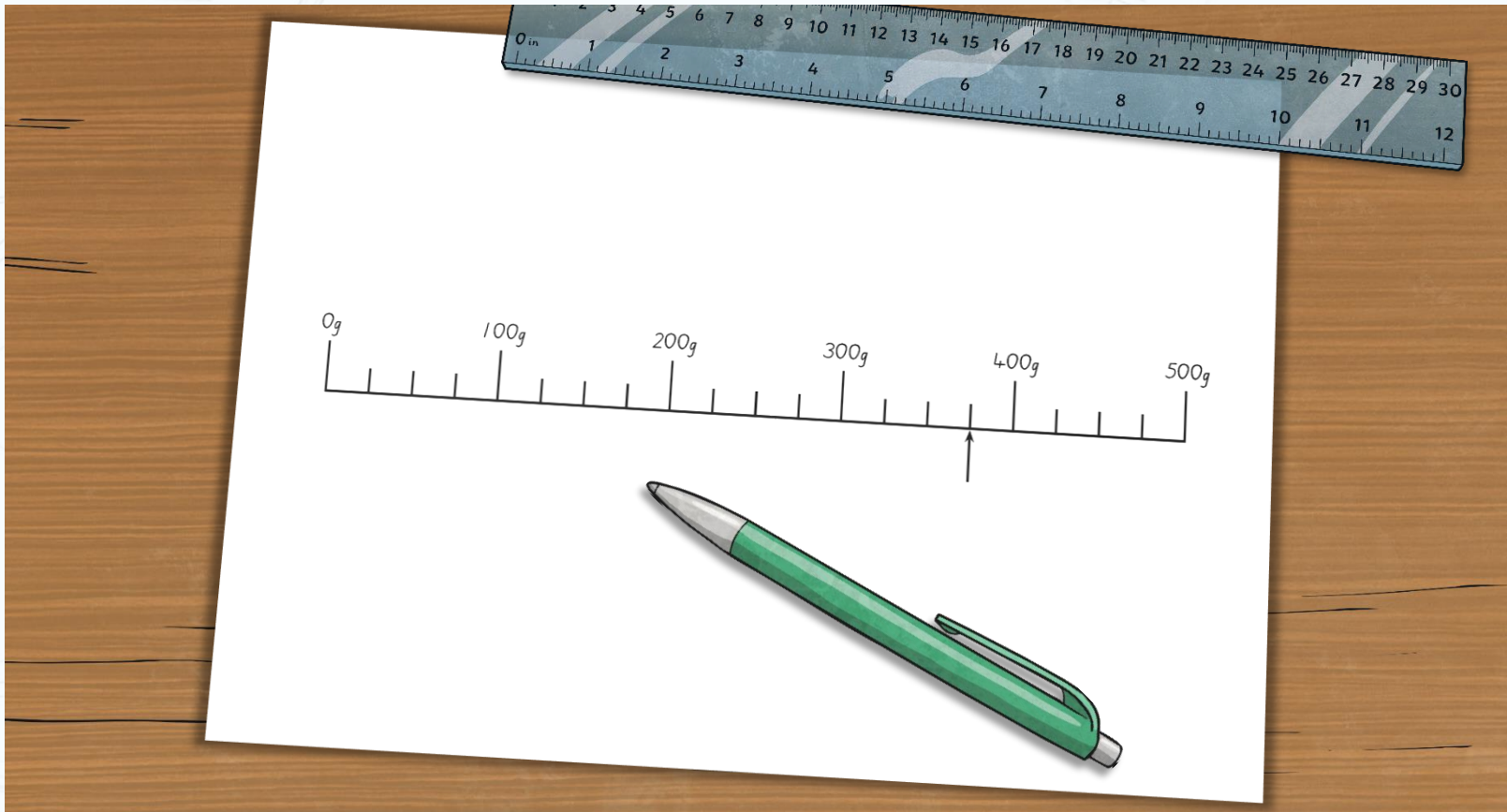




# Draw Your Own Answers

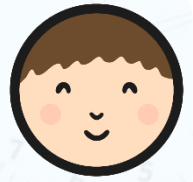


A scale showing 0 – 500g, in intervals of 25g. Mark 375g.

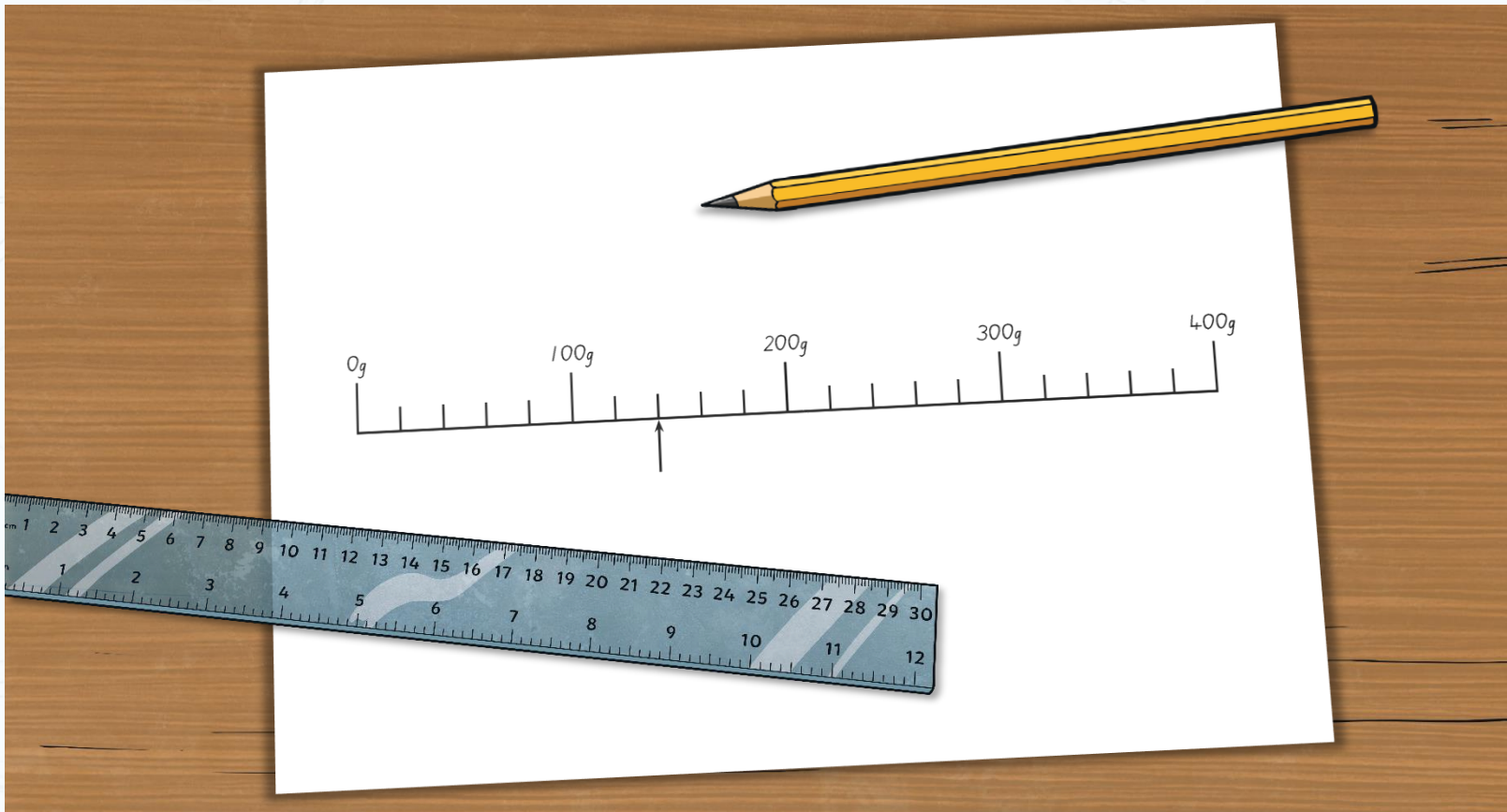




# Draw Your Own Answers



A scale showing 0 – 400g, in intervals of 20g. Mark 140g.





# Aim



- I can measure mass in grams.

# Success Criteria

- I can calculate the intervals on a scale.
- I can read scales to measure in grams.



