

Y3 M5e. Can measure mass using appropriate measuring equipment and record using the correct unit

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Teachers' Notes

- ❑ The PiXL therapies can be taught to a whole class or a target group. Year 3-5 therapies are designed to take approximately 30-40 minutes. However, this is flexible: it may be that only part of the therapy is taught or it could, of course, be adapted or extended.
- ❑ Each therapy begins with a LORIC activity to develop relevant learning behaviours.
- ❑ This is followed by a vocabulary task, which uses the PiXL 5-phase approach to teach key mathematical vocabulary. Further resources to develop vocabulary can be found in the Whole School area.
- ❑ Each therapy adopts the 'Teach, model and apply' process with opportunities for pupils to demonstrate the taught skill independently.
- ❑ Problem solving and reasoning activities are an integral part of each therapy.

Progress across amber – the 4-stage model

The three therapy tests which accompany this resource can be used to revisit the taught skill to check that the pupil is able to perform it independently and consistently.

A

A child has successfully completed a therapy test independently, following a set of therapy sessions.

A

A child has successfully completed a therapy test independently, a period after the relevant therapy sessions – we would advise about 2 weeks.

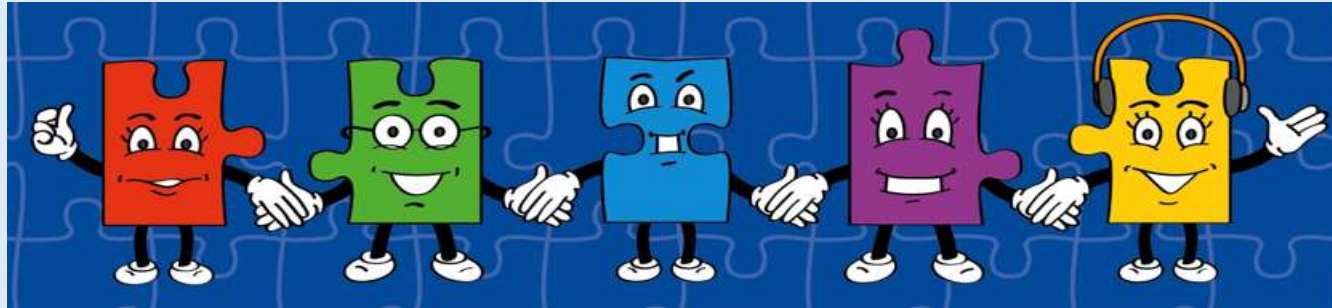
DA

A child has successfully applied their knowledge or skill in an unfamiliar context. This may be application across the curriculum or in a problem.

G

A pupil has successfully re-visited the skills at a later point, and applies these in an unfamiliar context or problem, or across the curriculum.

LORIC task



Our Primary Edge attributes help us to become better learners and today is no exception. Before you start this activity, here are some ideas for how you will need your Charlie Communication skills today:

- Speak clearly
- Listen carefully to others
- Explain your answer

LORIC task



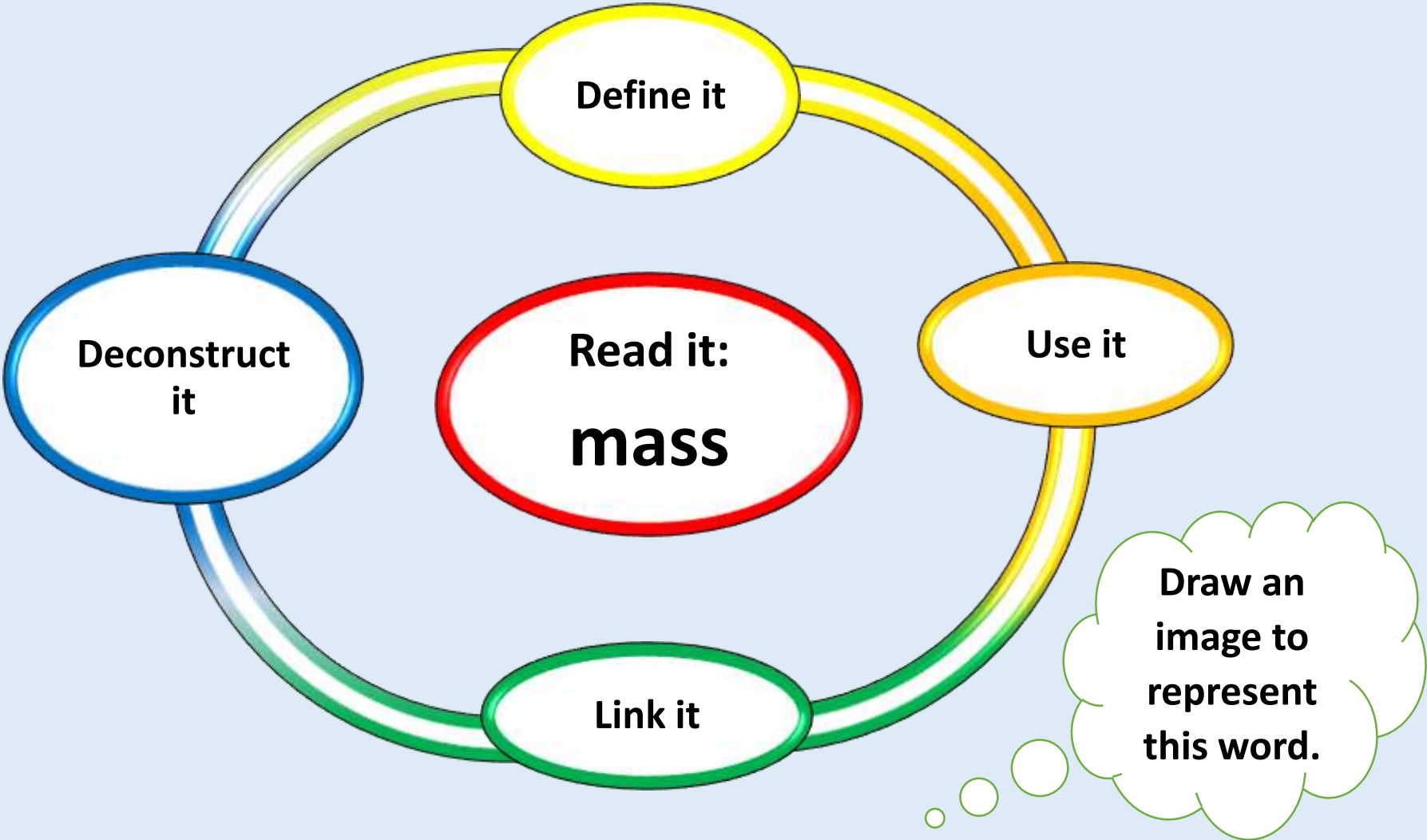
In your group you have a selection of items.

First, **without touching them**, estimate the weight of each item and place them in order from smallest to largest.

Then, lift the items up and **explain** whether you are still happy with your choice. If you would like to swap any items, you must **justify** why!

Vocabulary activity

measure
mass



Teach

Mass tells us how
heavy something is.

Teach



When might we
need to measure
mass in real life?



Teach



Look at the kitchen scales. There are **1,000 grams (g)** in **1 kilogram (kg)**.

Model

Grams (g) are used for measuring a small mass.

Kilograms (kg) are used for measuring a larger mass.

Model

To measure in **grams (g)** and **kilograms (kg)**, we use scales. There are different types of scales.



Balancing



Mechanical



Digital

Model

Digital scales will give you the mass of the item as a number.



Digital

Model

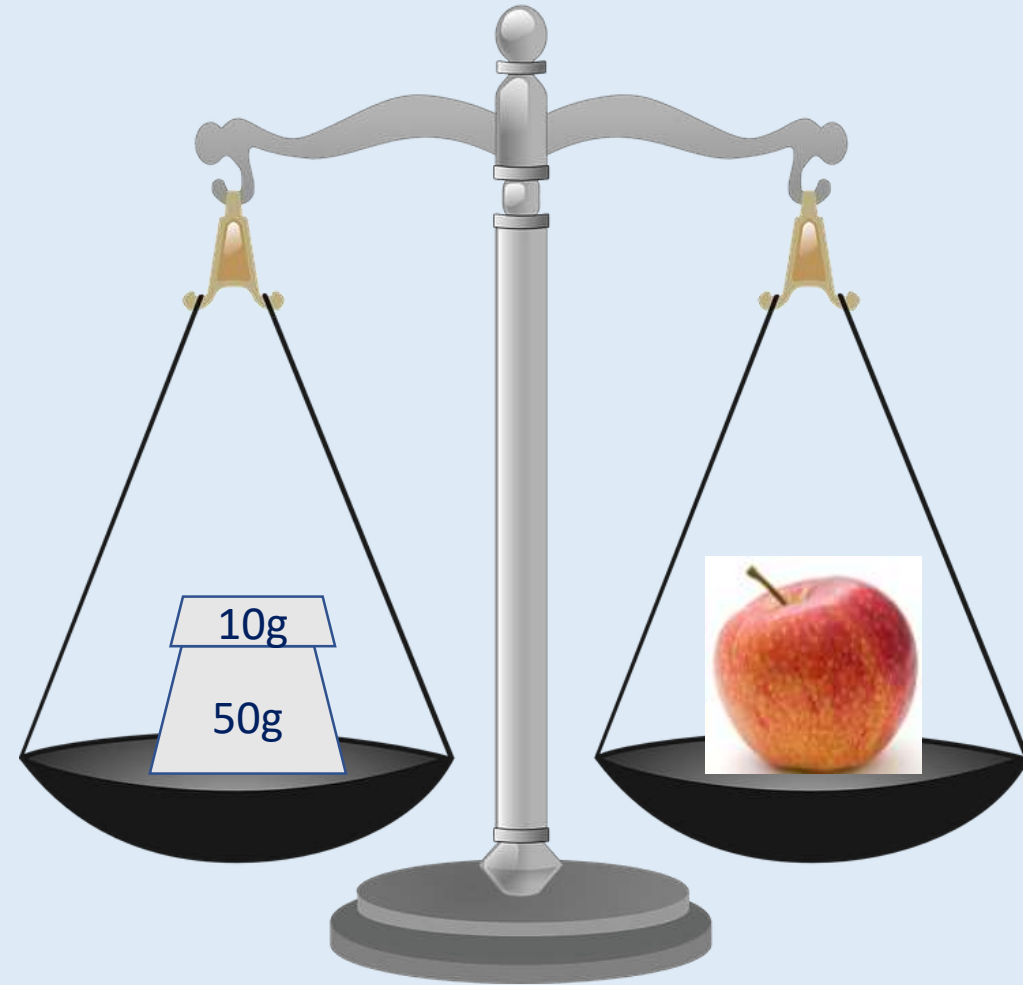
Balancing scales always weigh the same on each side if they are balanced.



Balancing

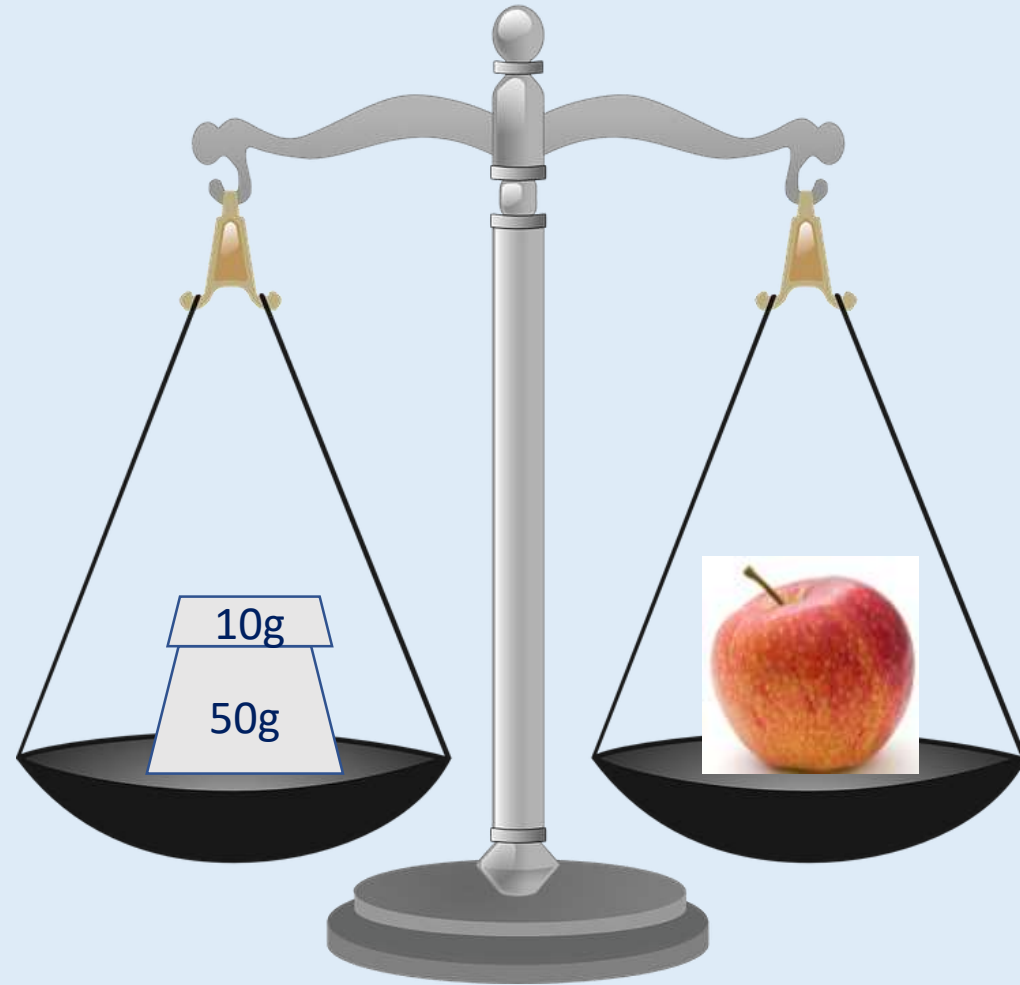
Model

What does
the apple
weigh?



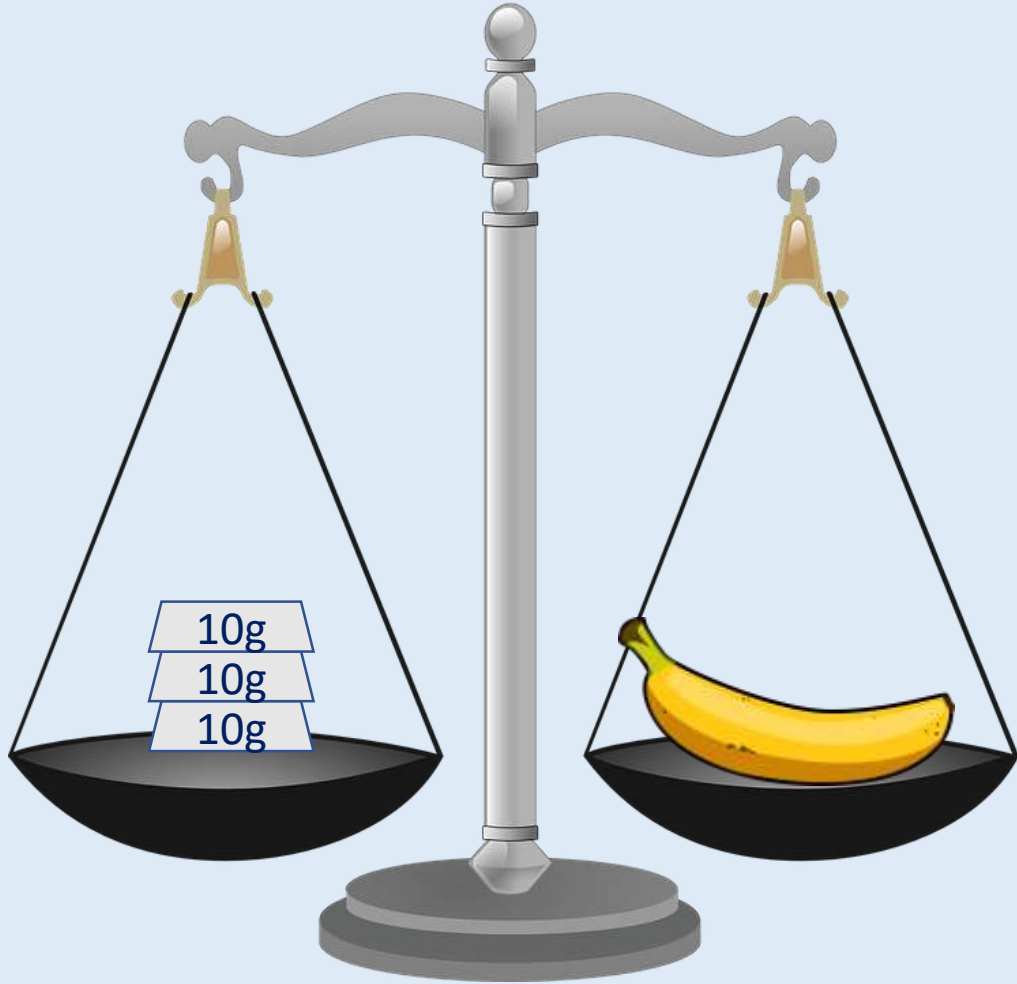
Model

We can see that the
apple weighs the
same as $10\text{g} + 50\text{g}$.
The apple weighs
 60g .



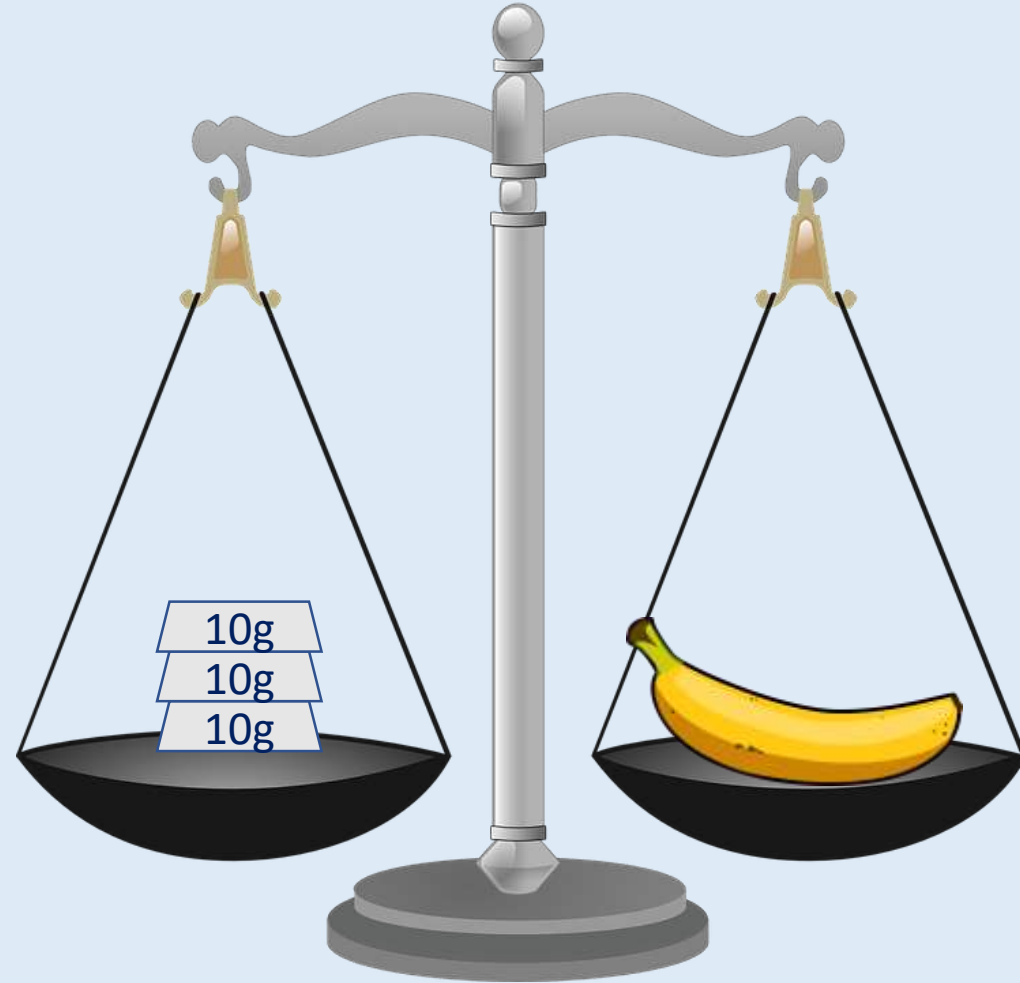
Apply

What does the banana weigh?



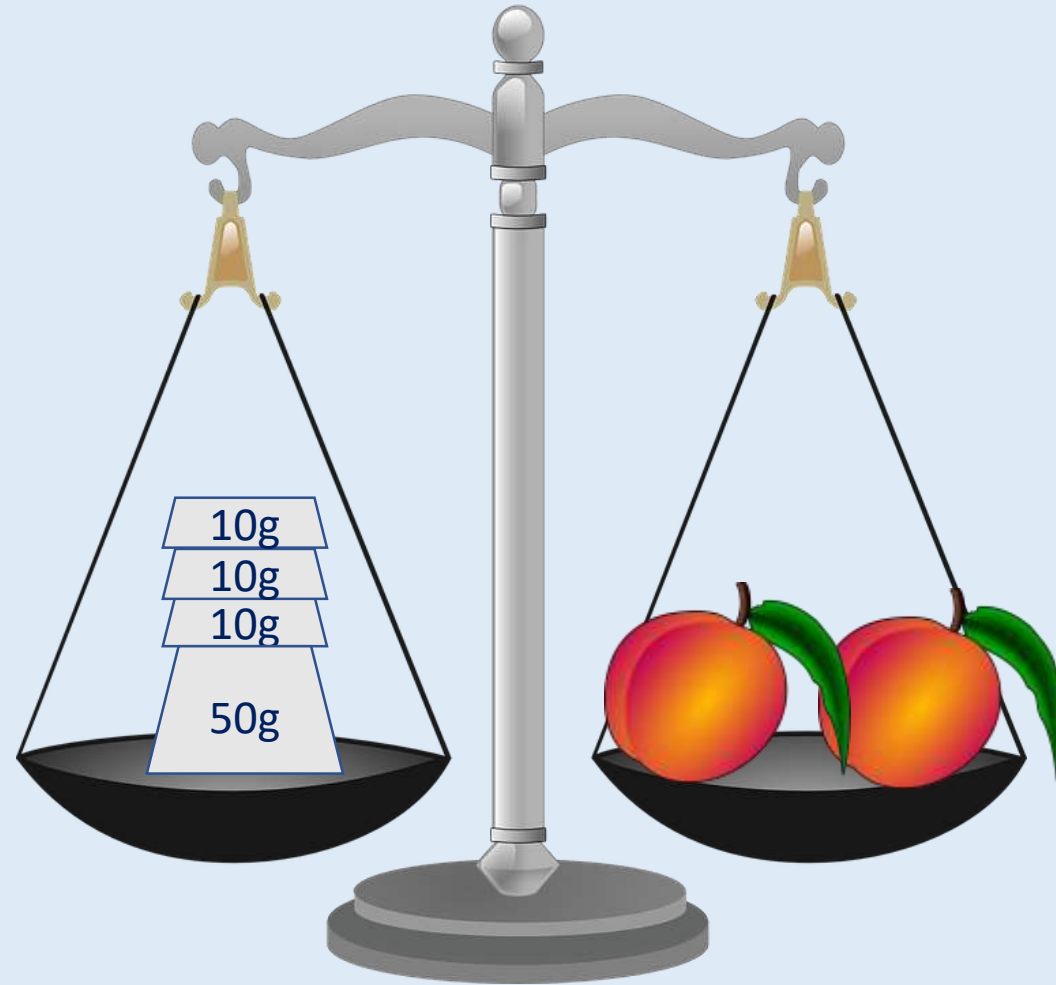
Apply: How did you do?

The banana
weighs 30g.



Model

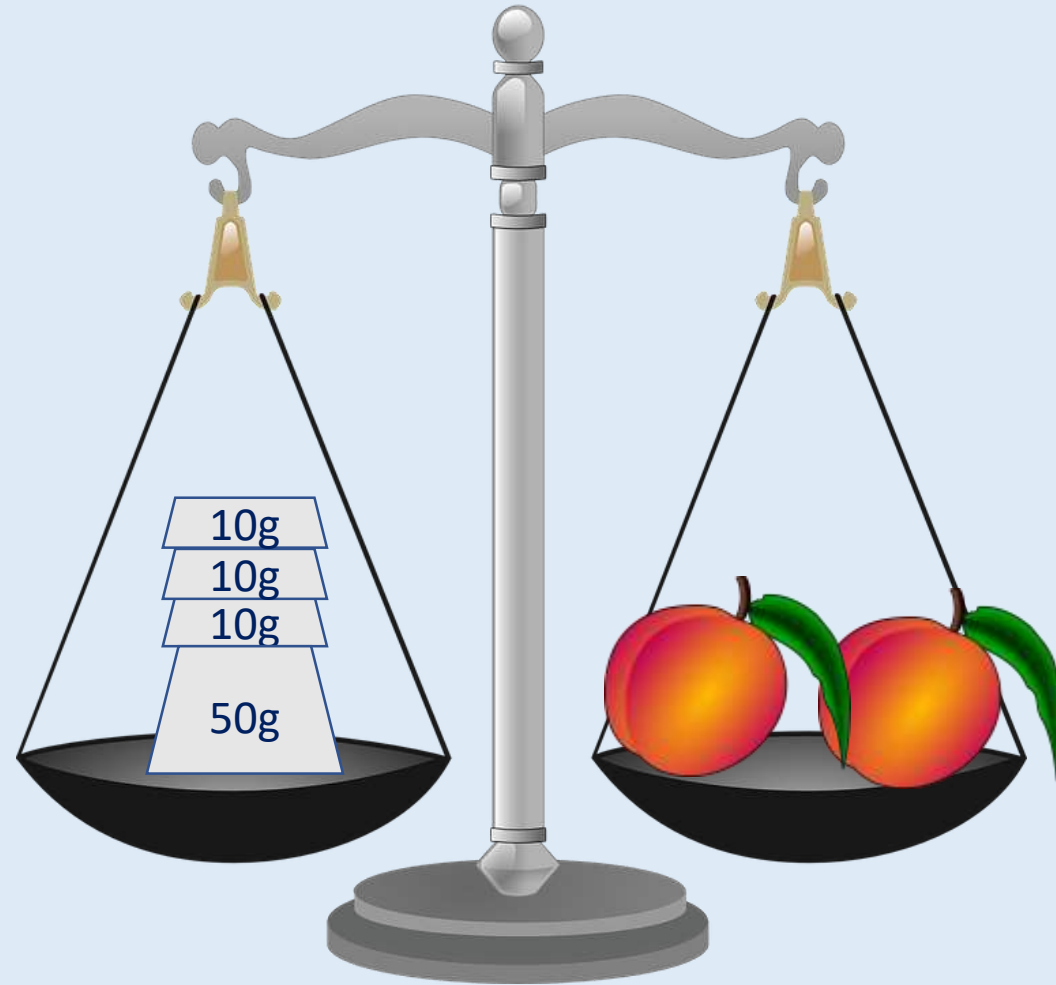
What does
one peach
weigh?



Model

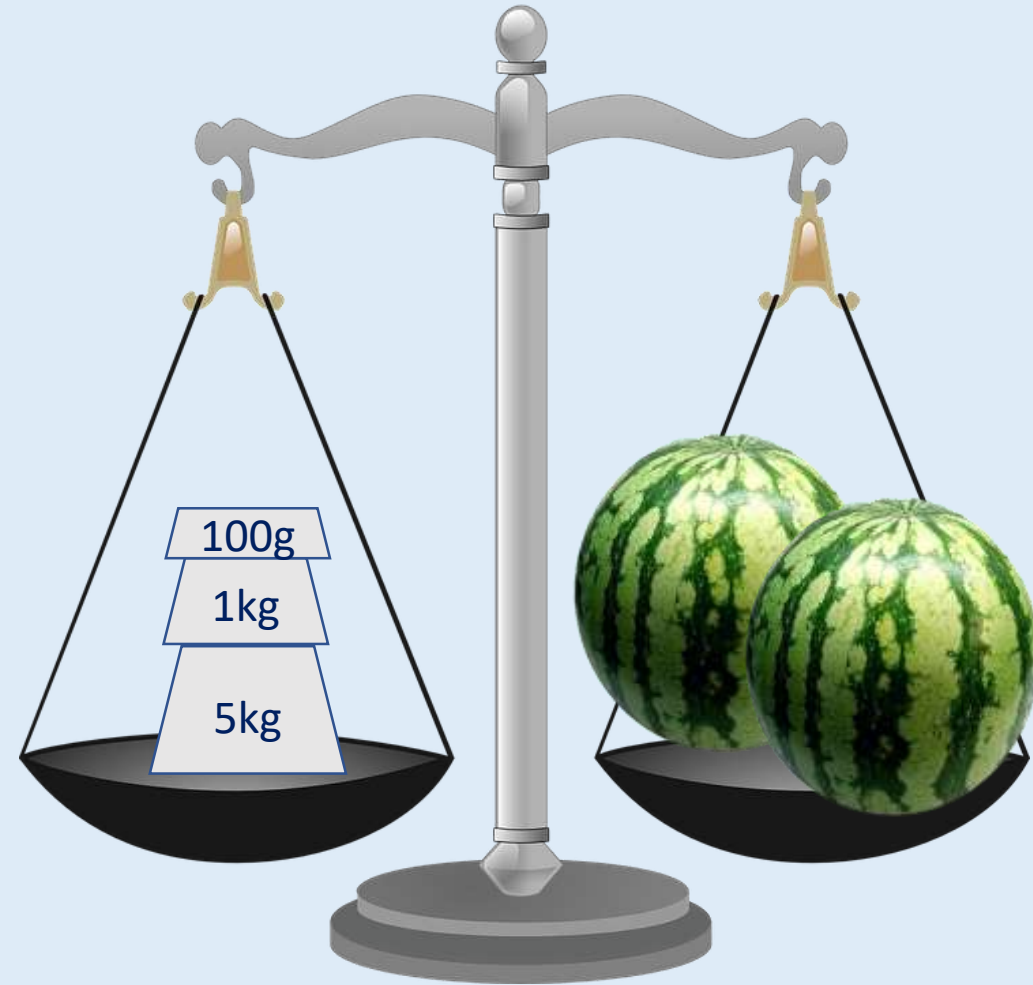
Both peaches weigh
80g altogether.

So, one peach must
weigh half of this
mass. The calculation I
need to perform is:
 $80\text{g} \div 2 = 40\text{g}.$



Apply

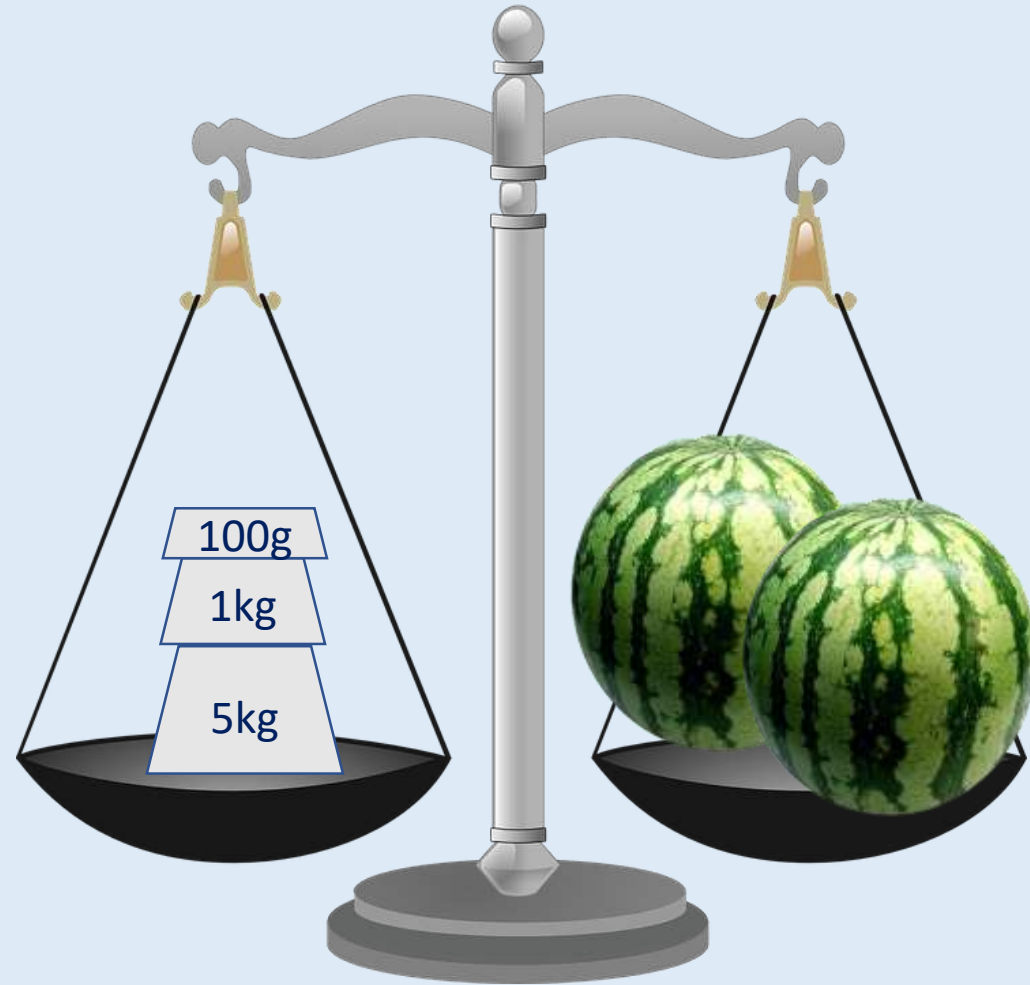
What does one
watermelon
weigh?



Apply: How did you do?

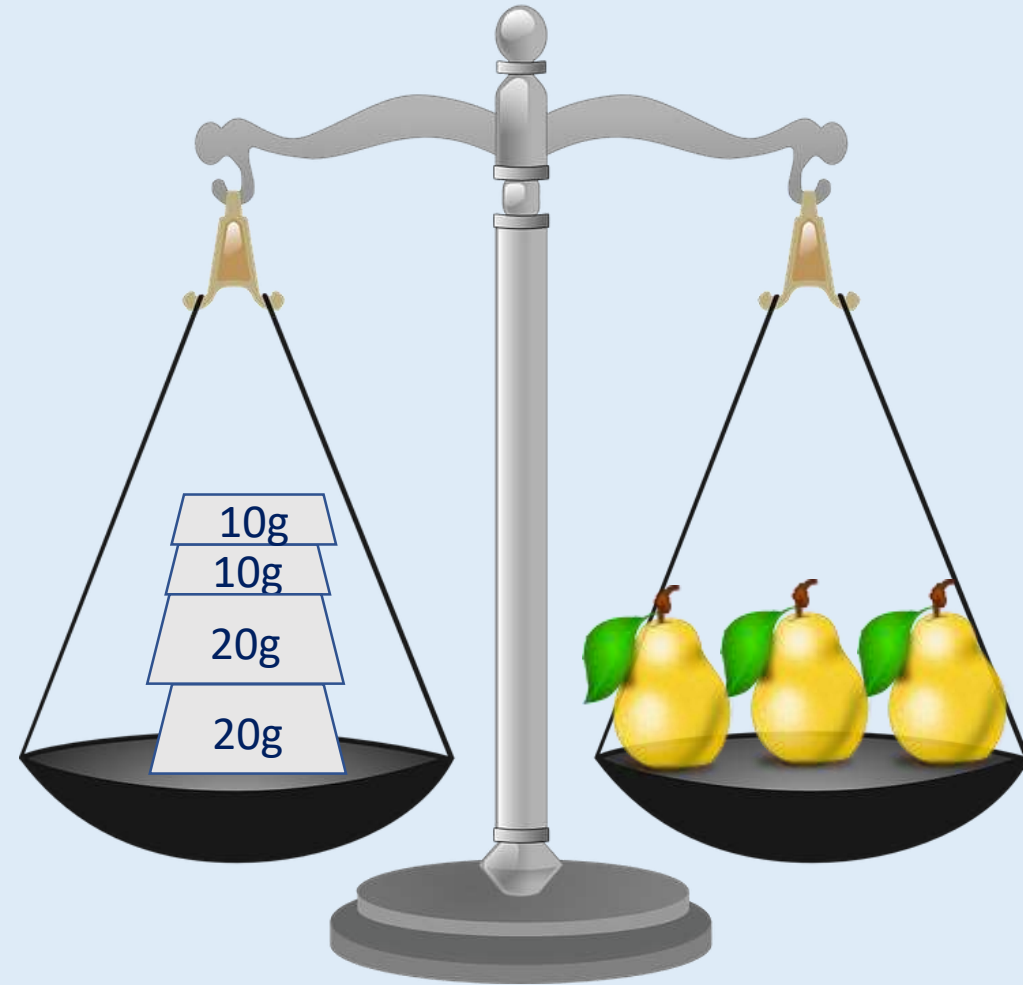
Both watermelons weigh 6kg and 100g altogether.

We halve both of these values to find that one watermelon weighs 3kg and 50g.



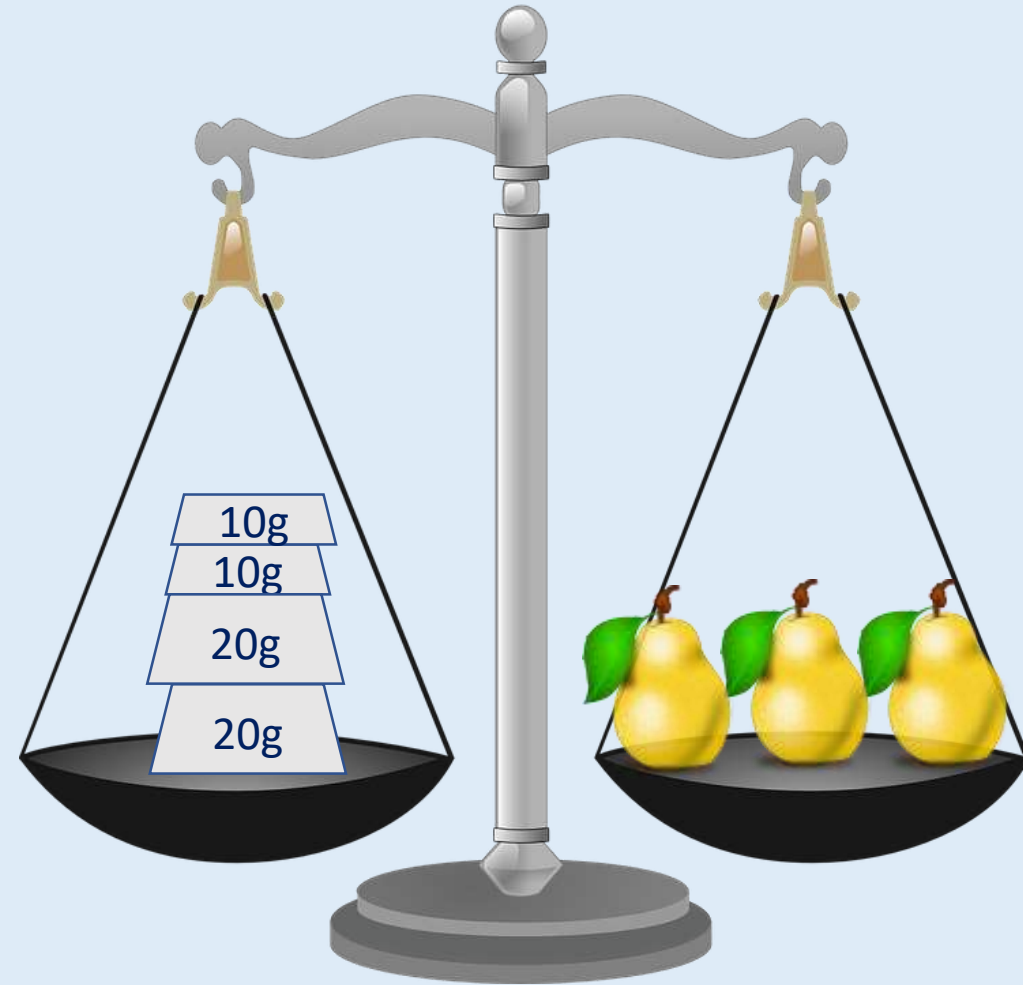
Apply

Jai says one pear weighs 60g. Is he correct? Explain your answer.



Apply: How did you do?

He is not correct,
because 3 pears
weigh 60g, so one
pear weighs
 $60\text{g} \div 3 = 20\text{g}$



Model

Mechanical scales will give you the mass of the item as a number on a dial.



Model

Before measuring the mass of an object, look at what the scale of the dial is.



Model

These scales
have the
number
labelled for
every 100g.



Model

Between each
100g, there are 10
small lines.

$100\text{g} \div 10 = 10\text{g}$, so
each small line is
worth 10g.



Model

To read the mass of an item, I need to read the hundreds and then count on in tens until I get to where the arrow is pointing.



Model

This measurement
is 300g exactly.



Model

This measurement is 340g. I can see it is just past 300g and then I count in 10s until I reach the arrow.



Apply

Read the measurement on the scale.



Apply: How did you do?

The answer is
600g.



Apply

Read the measurement on the scale.



Apply: How did you do?

The answer is
220g.



Apply

Read the measurement on the scale.



Apply: How did you do?

The answer is
760g.



Apply

Dillon says the bear weighs 60g. Is he correct? Explain your answer.



Apply: How did you do?

Dillon is not correct. The bear weighs 600g.



Reflect/Remember

What top tips would you give to someone who is measuring the mass of something using measuring equipment?