

Discussion Problems

Step 2: Measure Mass in Grams

National Curriculum Objectives:

Mathematics Year 2: (2M1) [Compare and order lengths, mass, volume/capacity and record the results using >, < and =](#)

Mathematics Year 2: (2M2) [Choose and use appropriate standard units to estimate and measure length/height in any direction \(m/cm\); mass \(kg/g\); temperature \(\$^{\circ}\$ C\); capacity \(litres/ml\) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels](#)

About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 2 Mass, Capacity and Temperature](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Measure Mass in Grams

1. A bag of crisps weighs 50g. What combination of 2g, 5g and 10g weights might be on the balances below?



A



B



C

DP

2. The children below have weighed some objects.

My object is lighter than 20g and weighs an odd number of grams.



Alfie

My object is lighter than Alfie's and weighs an even number of grams.



Grace

My object is heavier than Grace's but lighter than Alfie's.



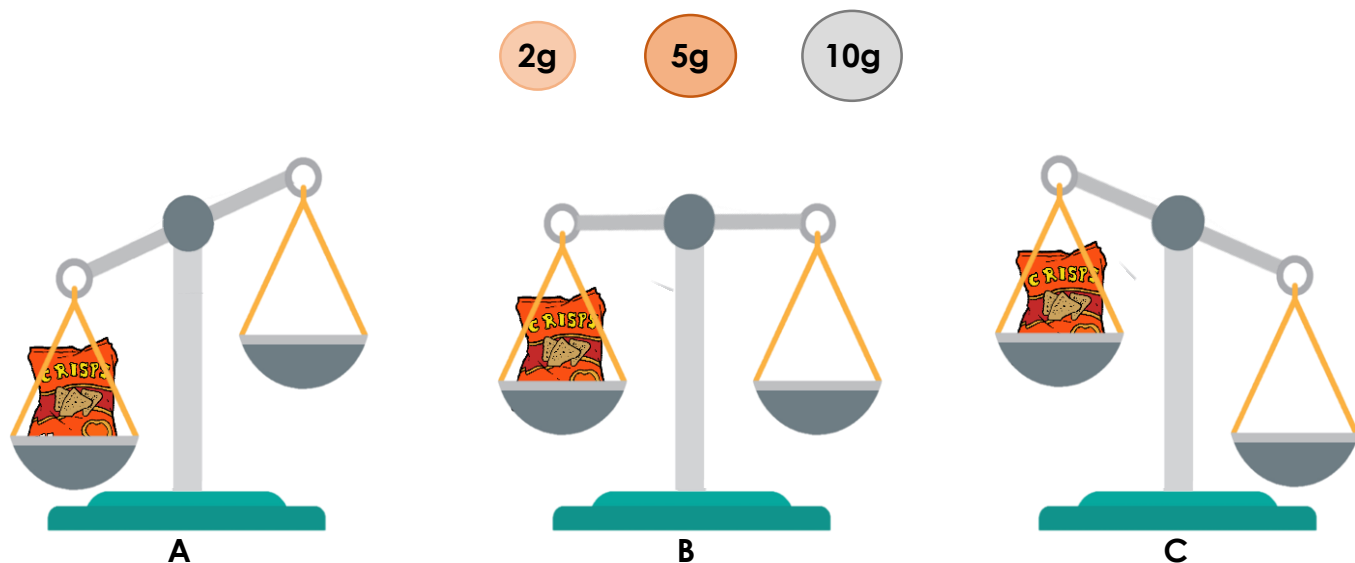
Oliver

What might the weights of their objects be?

DP

Measure Mass in Grams

1. A bag of crisps weighs 50g. What combination of 2g, 5g and 10g weights might be on the balances below?



Various possible answers, for example:

A: $5\text{g} + 5\text{g} + 2\text{g}$

B: $10\text{g} + 10\text{g} + 10\text{g} + 10\text{g} + 5\text{g} + 5\text{g}$

C: $10\text{g} + 10\text{g} + 10\text{g} + 10\text{g} + 5\text{g} + 5\text{g} + 2\text{g}$

DP

2. The children below have weighed some objects.

My object is lighter than 20g and weighs an odd number of grams.



Alfie

My object is lighter than Alfie's and weighs an even number of grams.



Grace

My object is heavier than Grace's but lighter than Alfie's.



Oliver

What might the weights of their objects be?

Various possible answers, for example:

Alfie: 15g

Grace: 12g

Oliver: 13g

DP