## Reasoning and Problem Solving 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 ( $\mathrm{m} / \mathrm{cm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ); temperature ( ${ }^{\circ} \mathrm{C}$ ); capacity (litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels

## Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Read a scale and calculate how much another item weighs. Scale in increments of 10 only. Calculations involve adding a multiple of 10 to a single digit number.
Expected Read a scale and calculate how much another item weighs. Scale in increments of 2,5 and 10 . Calculations involve adding a multiple of 10 to a two digit number. Greater Depth Read a scale and calculate how much another item weighs. Scale in increments of 2,5 and 10 , with some measurements falling between increments on the scale. Calculations involve adding a two-digit number to a two-digit number.

Questions 2, 5 and 8 (Problem Solving)
Developing Compare two weights on a scale to determine what a third weight could be. Scales in increments of 10 only.
Expected Compare two weights on a scale to determine what a third weight could be. Scales in increments of 2,5 and 10.
Greater Depth Compare two weights on a scale to determine what a third weight could be. Scales in increments of 2,5 and 10 , with some measurements falling between increments on the scale.

Questions 3, 6 and 9 (Reasoning)
Developing Explain whether a statement about the weight of an object is correct. Balance scales use 10 g weights only. One-step problem.
Expected Explain whether a statement about the weight of an object is correct. Balance scales use $2 \mathrm{~g}, 5 \mathrm{~g}$ and 10 g weights. One-step problem.
Greater Depth Explain whether a statement about the weight of an object is correct. Balance scales use $2 \mathrm{~g}, 5 \mathrm{~g}$ and 10 g weights. Two-step problem.

## More Year 2 Mass, Capacity and Temperature resources.

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

1a. A strawberry weighs 5 g more than the raspberry below.


How much does the strawberry weigh?

2a. The pear weighs more than the apple but less than the peach.


How much could the pear weigh?
Give 3 possible answers.
3a. Amy thinks the strawberry could weigh $\mathbf{2 5 g}$. Is she correct?


1b. A banana weighs 7 g more than the pear below.


How much does the banana weigh?呺

2b. The lime weighs more than the carrot but less than the lemon.

How much could the lime weigh?
Give 3 possible answers.
3b. Joe thinks the chilli could weigh 42 g . Is he correct?

Explain your answer.


4a. A pencil 10 g more than the paperclip below.


How much does the pencil weigh? $\stackrel{\rightharpoonup}{B}$

5a. The paintbrush weighs more than the pencil but less than the scissors.


How much could the paintbrush weigh? Give 3 possible answers.

6a. Scott thinks the pencil could weigh $\mathbf{2 5 g}$. Is he correct?


Explain your answer.

4b. A rubber weighs $\mathbf{2 0 g}$ more than the pencil sharpener below.


How much does the rubber weigh?

5b. The pen weighs more than the marker but less than the tape.


How much could the pen weigh?
$\widehat{K}$ Give 3 possible answers.
6b. Jenna thinks the calculator could weigh 65 g . Is she correct?


Explain your answer.
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7a. A ball weighs 11 g more than the yoyo below.


How much does the ball weigh?

8a. The rattle weighs more than the paints but less than the bricks.


How much could the rattle weigh? Give 3 possible answers.

9a. Imran thinks each marble could weigh 15 g . Is he correct?


Explain your answer.

7 b . A marble weighs 15 g less than the jigsaw below.


How much does the marble weigh?

8b. The ball weighs more than the windmill but less than the duck.


How much could the ball weigh? Give 3 possible answers.

9b. Solomon thinks each yoyo could weigh 42g. Is he correct?


Explain your answer.

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## Developing

1a. 25 g
2a Any 3 weights in the range: $81 \mathrm{~g}-89 \mathrm{~g}$. 3a. Amy is not correct. The balance scale shows the strawberry weighs less than 20 g so cannot weigh $\mathbf{2 5 g}$.

## Expected

4a. 22g
5a. Any 3 weights in the range: 51 g 149 g .
6a. Scott is correct. The balance scale shows the pencil weighs less than 27 g so could weigh 25 g .

## Greater Depth

7a. 76g
8a. Any 3 weights in the range: $66 \mathrm{~g}-74 \mathrm{~g}$.
9a. Imran is not correct. The balance scale shows that two marbles weigh less than 26 g so each marble must be less than 13 g .

## Developing

1b. 77 g
2b. Any 3 weights in the range: $41 \mathrm{~g}-49 \mathrm{~g}$.
3b. Joe is correct. The balance scale shows the chilli weighs more than 30 g so could weigh 42 g .

## Expected

4b. 45 g
5b. Any 3 weights in the range: 31 g 119 g .
6b. Jenna is correct. The balance scale shows the calculator weighs more than 37 g so could weigh 65 g .

## Greater Depth

7b. 45 g
8b. Any 3 weights in the range: $10 \mathrm{~g}-24 \mathrm{~g}$.
9 b . Solomon is correct. The balance scale shows that the two yoyos weigh more than 42 g so each yoyo must weigh more than 21 g .

