Reasoning and Problem Solving Step 2: Measure Mass in Grams

National Curriculum Objectives:

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

Mathematics Year 2: (2M2) <u>Choose and use appropriate standard units to estimate and</u> measure length/height in any direction (m/cm); mass (kg/g); temperature (° C); capacity (litres/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)

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Developing Explain whether a statement about the weight of an object is correct. Balance scales use 10g weights only. One-step problem.

Expected Explain whether a statement about the weight of an object is correct. Balance scales use 2g, 5g and 10g weights. One-step problem.

Greater Depth Explain whether a statement about the weight of an object is correct. Balance scales use 2g, 5g and 10g weights. Two-step problem.

More Year 2 Mass, Capacity and Temperature resources.

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Reasoning and Problem Solving – Measure Mass in Grams – Year 2 Developing



Reasoning and Problem Solving – Measure Mass in Grams – Year 2 Expected



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<u>Reasoning and Problem Solving</u> <u>Measure Mass in Grams</u>

Developing

1a. <mark>25g</mark>

2a Any 3 weights in the range: 81g – 89g. 3a. Amy is not correct. The balance scale shows the strawberry weighs less than 20g so cannot weigh 25g.

Expected

4a. 22g

5a. Any 3 weights in the range: 51g – 149g.

6a. Scott is correct. The balance scale shows the pencil weighs less than 27g so could weigh 25g.

Greater Depth

7a. <mark>76g</mark>

8a. Any 3 weights in the range: 66g – 74g.
9a. Imran is not correct. The balance scale shows that two marbles weigh less than 26g so each marble must be less than 13g.

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Developing

1b. 77g

2b. Any 3 weights in the range: 41g – 49g.
3b. Joe is correct. The balance scale shows the chilli weighs more than 30g so could weigh 42g.

Expected

4b. <mark>45g</mark>

5b. Any 3 weights in the range: 31g – 119g.

6b. Jenna is correct. The balance scale shows the calculator weighs more than 37g so could weigh 65g.

Greater Depth

7b. 45g

8b. Any 3 weights in the range: 10g – 24g.
9b. Solomon is correct. The balance scale shows that the two yoyos weigh more than 42g so each yoyo must weigh more than 21g.



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