Reasoning and Problem Solving
Step 1: Measure Mass 1

National Curriculum Objectives:

Mathematics Year 3: (3M2b) Measure mass (kg/g)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing When given information about the weight of an object, determine the weight of another. Increments of 1, 2, 5 or 10 used. All increments labelled.
Expected When given information about the weight of an object, determine the weight of another. Increments of 4, 8, 50 or 100 used. Every other increment labelled.
Greater Depth When given information about the weight of an object, determine the weight of another. Increments of 4, 8, 50 or 100 used, but most increments are not labelled on the scales.

Questions 2, 5 and 8 (Problem Solving)
Developing Identify missing quantities of ingredients needed when measuring mass. Increments of 1, 2, 5 or 10 used. All increments labelled.
Expected Identify missing quantities of ingredients needed when measuring mass. Increments of 4, 8, 50 or 100 used. Every other increment labelled.
Greater Depth Identify missing quantities of ingredients needed when measuring mass. Increments of 4, 8, 50 or 100 used, but most increments are not labelled on the scales.

Questions 3, 6 and 9 (Reasoning)
Developing Decide whether a statement about weighing scales is correct and explain why. Increments of 1, 2, 5 or 10 used. All increments labelled.
Expected Decide whether a statement is correct or incorrect and explain why when measuring mass. Increments of 4, 8, 50 or 100 used. Every other increment labelled.
Greater Depth Decide whether a statement is correct or incorrect and explain why when measuring mass. Increments of 4, 8, 50 or 100 used, but most increments are not labelled on the scales.

More Year 3 Mass and Capacity resources.

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Measure Mass 1

1a. If two cupcakes weigh the same as one apple, draw an arrow on the scale to show the weight of the apple.

D

PS

Measure Mass 1

1b. If two bananas weigh the same as one pear, draw an arrow on the scale to show the weight of the pear.

D

PS

2a. Matt is making a pie. He needs 30g of butter and 150g of chicken.

How much more of each ingredient does he need?

D

PS

2b. Tegan is making a salad. She needs 20g of lettuce and 70g of cucumber.

How much more of each ingredient does she need?

D

PS

3a. Hafsa is weighing different items. She says the pear is heavier because the arrow on the scale is further around.

Is she correct? Explain how you know.

D

R

3a. Gabriel is weighing different items. He says the pumpkin is lighter because the arrow on the scale is closer to zero.

Is he correct? Explain how you know.

D

R

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Measure Mass 1

Measure Mass 1

4a. If two strawberries weigh the same as one plum, draw an arrow on the scale to show the weight of the plum.

PS

4b. If two raspberries weigh the same as one chilli, draw an arrow on the scale to show the weight of the chilli.

PS

5a. Reema is making a bread. She needs 650g of flour and 10g of salt.

How much more of each ingredient does she need?

PS

5b. Jackson is making biscuits. He needs 60g of sugar and 200g of butter.

How much more of each ingredient does he need?

PS

6a. Steph is weighing different items. She says the potatoes are heavier because the arrow on the scale is further away from zero.

Is she correct? Explain how you know.

R

6b. Sean is weighing different items. He says the melon is lighter because the arrow on the scale is closer to zero.

Is he correct? Explain how you know.

R

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Measure Mass 1

Measure Mass 1

7a. If two lemons weigh the same as one orange, draw an arrow on the scale to show the weight of the orange.

GD PS

7b. If two cupcakes weigh the same as one tomato, draw an arrow on the scale to show the weight of the tomato.

GD PS

8a. Ruth is making a sauce. She needs 280g of tomatoes and 60g of peppers.

How much more of each ingredient does she need?

GD PS

8b. Keenan is making a dessert. He needs 60g of sugar and 120g of custard.

How much more of each ingredient does he need?

GD PS

9a. Alice is weighing different items. She says the pears are heavier because the arrow on the scale is further away from zero.

Is she correct? Explain how you know.

GD R

9b. Josh is weighing different items. He says the bananas are lighter because the arrow on the scale is closer to zero.

Is he correct? Explain how you know.

GD R

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Reasoning and Problem Solving
Measure Mass 1

Developing

1a. 110g

2a. He needs 5g of butter and 20g of chicken.

3a. Hafsa is incorrect. The coconut is heavier because it weighs 70g. The pear only weighs 60g. The scales increase in different increments.

Expected

4a. 96g

5a. She needs 100g of flour and 2g of salt.

6a. Steph is incorrect. The aubergine is heavier because it weighs 550g. The potatoes only weigh 500g. The scales increase in different increments.

Greater Depth

7a. 192g (7th increment after 136g)

8a. She needs 24g of tomatoes and 16g of peppers.

9a. Alice is incorrect. They both weigh 128g so neither are heavier. The scales increase in different increments.

Reasoning and Problem Solving
Measure Mass 1

Developing

1b. 80g

2b. She needs 10g of lettuce and 5g of cucumber.

3b. Gabriel is incorrect. The melon is lighter because it weighs 3kg. The pumpkin weighs 4kg. The scales increase in different increments.

Expected

4b. 104g

5b. He needs 8g of sugar and 100g of butter.

6b. Sean is incorrect. The pineapple is lighter because it weighs 600g. The melon weighs 1kg. The scales increase in different increments.

Greater Depth

7b. 72g (half way between 64g and the next increment)

8b. He needs 12g of sugar and 12g of custard.

9b. Josh is incorrect. The oranges are lighter because they weigh 136g. The bananas weighs 150g. The scales increase in different increments.

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