Strengthen Activities

MISCONCEPTION

Children may have some place value misconceptions; for example, thinking 2,011 g = 2 kg 110 g because they do not understand what mass each digit represents.

STRENGTHENING UNDERSTANDING

1. Ask: *What does each digit represent in 1,024 g?* Ask children to represent the amount using place value counters.

2. Show children how to partition an amount such as 1,245 g into 1,000 g + 200 g + 40 g + 5 g. Use a part-whole model to represent the partitioning. Ask: *Can you partition 1,245 g in other ways?* For example, 1 kg + 200 g + 40 g + 5g. Ask: *How can you show 1,245 g in kilograms and grams?*

3. Give two amounts, for example 2,354 g and 2,045 g. Ask: *What is the difference between these amounts? How can they be partitioned or represented? How do you write them in kilograms and grams?*

ASSESSMENT CHECKPOINT

Can children describe the difference in mass between 2,405 g and 2,045 g?

RESOURCES

Place value counters

MISCONCEPTION

Children may assume that an amount in grams is larger than kilograms, for example 1,245 g > 2 kg 100 g.

STRENGTHENING UNDERSTANDING

1. Show two amounts; for example, 1,175 g and 3 kg 850 g. Ask: *Which is bigger? How do you know? What can you do to help you decide?* Agree you can convert the grams to kilograms to help you decide.

2. Ask children to represent the amounts using place value counters and to explain how they know which mass is the heavier.

3. Show children the statement 3 kg < 150 g. Ask them to explain if it is correct and how they know.

ASSESSMENT CHECKPOINT

Can children correctly decide which is heavier, 2,035 g or 4 kg 45 g?

RESOURCES

Place value counters

MISCONCEPTION

Children may misinterpret the question when working out mass and carry out an incorrect calculation.

STRENGTHENING UNDERSTANDING

1. Ask a problem that requires addition or subtraction of masses; for example: *An empty glass container weighs 1 kg 320 g. It is filled with 2 kg 470 g of fruit. How heavy is the container when it is full?*

2. Encourage children to solve the problem. Ask: *What calculations do you need to do? How can you check your answer?* Demonstrate how the problem can be set out using a bar model approach. Identify the numbers for the calculation and the answer. Discuss using the inverse operation to check.

3. Consider further examples where children need to ascertain the calculation and the numbers to use. Ask children to use a bar model to represent the addition and subtraction of other mass calculations.

ASSESSMENT CHECKPOINT

Can children solve: *A full container weighs 3 kg 500 g. What does it weigh if 1 kg 40 g is removed?*