



# Strengthen Activities

## MISCONCEPTION

**When estimating items, children may think that physically bigger items always have a larger mass than smaller items.**

### STRENGTHENING UNDERSTANDING

1. Provide a range of small to medium-sized objects that will fit into balance scales. Ensure a mix of different masses, and include some physically larger objects with a low mass (for example, empty cereal box). Label each box with a letter and provide a set of cards with the same letters on them.
2. Ask children to order the items from heaviest to lightest without touching them, by arranging the letters on the cards. Prompt discussion around size and mass. Ask: *Is the bigger item always heavier?*
3. Invite them to test their chosen order by comparing the items using the balance scales. Draw attention to the physically smaller objects that are heavier than the physically larger objects.

### ASSESSMENT CHECKPOINT

Can children estimate the mass of a range of items, including physically large items with a low mass?

### RESOURCES

Balance scales, items to weigh, blank cards

## MISCONCEPTION

**Children may not appreciate how warm or cold temperatures are. For example, they may estimate that the temperature outside is 70°C.**

### STRENGTHENING UNDERSTANDING

1. Explain that we are going to investigate the temperature of different places and items. Invite children to put thermometers in a range of places, for example, fridge, classroom, bowl of cold water, bowl of warm water. Read the temperatures and ask children to record the place and the temperature on individual cards.
2. Use the internet to research the temperature of a range of other situations, for example, boiling water, the Sahara Desert, the temperature at which you cook chicken. Record the situations and temperatures on cards. Order all the temperatures, including those from the first activity.
3. Discuss the range of temperatures you have experienced. Ask children to estimate what temperature they think it is outside today. Compare the temperature outside to the other temperatures they found.

### ASSESSMENT CHECKPOINT

Can children correctly estimate the temperatures in Q4 on Practice Book p116?

### RESOURCES

Thermometers, internet access, blank cards, Practice Book p116

## MISCONCEPTION

**When calculating using measures, children may identify the incorrect operation.**

### STRENGTHENING UNDERSTANDING

1. Show one measuring jug containing 40 ml of water and one containing 30 ml. Invite children to read the scales and identify the volume of water in each. Ask: *If I pour both jugs into this bowl, how much water will be in the bowl?* Discuss what number sentence is needed to work this out.
2. Invite children to physically combine the two jugs into the bowl. Does this fit their number sentence? Link the combining of the two jugs to addition.
3. Repeat with a different scenario. Show a jug containing 90 ml of water. Ask: *If I pour 40 ml into a bowl, how much will be left in the jug?* Once children have discussed the number sentence and operations, carry out the problem, linking it to subtraction. Repeat with other examples as needed.

### ASSESSMENT CHECKPOINT

Can children accurately identify the calculation required in Q2 of the End of unit check on Textbook p160.

### RESOURCES

Measuring jugs, water, Textbook p16