# Measures investigation — estimate then measure around the room

MODULE 4 · MEASURES — LENGTH, WEIGHT AND CAPACITY MEASURES

## HOW TO ANSWER TODAY

- **Estimate gap.** Subtract the smaller from the bigger to find how far off the estimate was.
  Estimated 15 cm, real 12.5 cm → 2.5 cm off
- **Read a ruler.** Each big mark = 1 cm = 10 mm. Each little mark = 1 mm.
  3 cm + 7 mm = 37 mm = 3.7 cm
- **Convert units.** To a SMALLER unit → multiply. To a BIGGER unit → divide. Common factors: cm↔mm ×10, m↔cm ×100, km↔m ×1,000, kg↔g ×1,000, l↔ml ×1,000.
  250 cm → m: ÷ 100 = 2.5 m · 3.5 kg → g: × 1,000 = 3,500 g

## STRETCH PROBLEMS

1. Oisín is drawing a homemade Snakes and Ladders board for art class. He estimates the side of the board to be **28 cm**, then measures it with a ruler and finds it is really **35 cm**. By how many centimetres is his estimate off?

   > A pupil estimates a length as 28 cm, then measures it as 35 cm. By how much is the estimate off?

2. Oisín is building a kite at the after-school crafts club. He measures the tail of his kite along a ruler and the end of the tail sits **14 cm** and **6 mm** from the start. What is the length of the tail in cm?

3. Cian's family drove **60 km** from Cork to visit his cousins in Waterford. He wants to write the distance in centimetres for his maths copy. How many cm is **60 km**?

   > Convert 60 km to cm.

4. Before going out to the yard, Oisín estimates that his schoolbag is **82 cm** long. When he measures it with a metre stick back in the classroom, it is actually **67 cm** long. By how many centimetres is his estimate off?

   > A pupil estimates a length as 82 cm, then measures it as 67 cm. By how much is the estimate off?

5. Aoife is cutting a strip of green paper for the class door display for Seachtain na Gaeilge. She lines the strip up against her ruler and it reaches **10 cm** and **4 mm** from the start. What is the length of the strip in cm?

   > A ruler reading sits 10 cm and 4 mm from the start of the ruler. What is the reading in cm?