Estimation across attributes

MODULE 4 · MEASURES — LENGTH, MASS, CAPACITY, AREA, VOLUME NUMBER

HOW TO ANSWER TODAY

- **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
- **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

STRETCH PROBLEMS

1. 5th class at St Brigid's measured the total length of ribbon left on the spools in the classroom craft store and got **7628 cm** in total. The teacher wants the answer written in kilometres for the stocktake sheet. How many kilometres is **7628 cm**?

   Convert 7628 cm to km.

2. On the school tour to Glendalough, Oisín finds a smooth stone by the lake and guesses it is **65.7 cm** long. When he measures it with his ruler back at the coach, it is actually **59.8 cm**. By how much is his estimate off?

   A pupil estimates a length as 65.7 cm, then measures it as 59.8 cm. By how much is the estimate off?

3. 5th class are taping out a giant Snakes and Ladders track in the school yard, with the full snaking path measuring **5969 cm** from start to finish. For their maths display, they need to record the path length in kilometres. How many kilometres long is the track?

   Convert 5969 cm to km.

4. Saoirse cycles from granny's farmhouse to the far field to check on the calves. The lane runs **3290 m** from the gate to the field. How many kilometres is that?

   Convert 3290 m to km.

5. Cian is building a den with branches in the school orchard. He estimates one long branch to be **187 cm**, then measures it with the metre stick and gets **198 cm**. By how much is his estimate off?

   A pupil estimates a length as 187 cm, then measures it as 198 cm. By how much is the estimate off?