

Module assessment – design a class garden bed

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

DESIGNING A 6 M × 2 M RECTANGULAR GARDEN BED

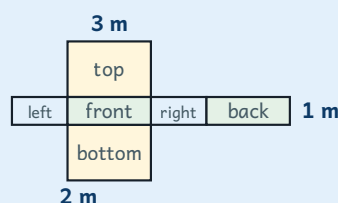
- Perimeter** (length of edging needed): $6 + 2 + 6 + 2 = 16$ m.
- Area** (surface to plant): $6 \times 2 = 12$ m².
- Soil volume** for a **30 cm** ($= 0.3$ m) deep bed: $12 \times 0.3 = 3.6$ m³.
- If a bag of soil holds **40 litres** (0.04 m³), the bed needs $3.6 \div 0.04 = 90$ bags.

HOW TO ANSWER TODAY

- Volume.** Volume = length $\times$ width $\times$ height. Answer in cubic units (cm³, m³).
 $5 \times 4 \times 3 = 60$ cm³
- Perimeter.** Perimeter is the distance ALL the way round. Rectangle: (length + width) $\times$ 2.
12 m by 8 m $\rightarrow (12 + 8) \times 2 = 40$ m
- Area.** Area = length $\times$ width. Write the answer in square units (cm², m²).
 $5 \text{ m} \times 3 \text{ m} \rightarrow 15 \text{ m}^2$

TRY IT ON THE LINE

Design a rectangular garden bed for the school yard. Use the diagram as a guide; write your dimensions and answer the questions.



- Your bed length: _____ m width: _____ m depth: _____ m
- Perimeter (around the edge for a fence): _____ m
- Surface area (top opening for compost): _____ m²
- Volume of soil needed (length $\times$ width $\times$ depth): _____ m³

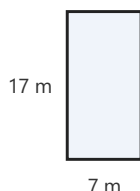
PRACTICE

1



The caretaker is putting new fencing around the school's rectangular vegetable garden. The garden measures **39 m** along the long side and **14 m** along the short side. How many metres of fencing are needed to go all the way around?

2



The caretaker is marking out a small soccer pitch on the school field for 5th class. The pitch measures **7 m** by **17 m**. What is the area of the pitch?