

SHAPE, SPACE AND MEASURES

Pupils should be taught to:

Use units of measurement to measure, estimate, calculate and solve problems in a range of contexts; convert between metric units and know rough metric equivalents of common imperial measures

As outcomes, Year 7 pupils should, for example:

Use, read and write, spelling correctly, names and abbreviations of:

Standard metric units

- millimetre (mm), centimetre (cm), metre (m), kilometre (km)
- gram (g), kilogram (kg)
- millilitre (ml), centilitre (cl), litre (l)
- square millimetre (mm²), square centimetre (cm²), square metre (m²), square kilometre (km²)

Units of temperature, time, angle

- degree Celsius (°C)
- second (s), minute (min), hour (h), day, week, month, year, decade, century, millennium
- degree (°)

Know relationships between units of a particular measure, e.g.

- 1 kg = 1000g

See Y456 examples (pages 90–1).

Convert between one metric unit and another.

Know the relationship between metric units in common use and how they are derived from the decimal system. For example:

| 1000 | 100 | 10 | 1 | 0.1 | 0.01 | 0.001 |
|------|-----|----|----|-----|------|-------|
| km | m | dm | cm | mm | µm | nm |
| 8 | 0 | 0 | 0 | 4 | 3 | 7 |
| | | | | 2 | 3 | 0 |

8000 m = 8 km
 4 m = 400 cm = 4000 mm
 37 cm = 0.37 m
 230 mm = 0.23 m

Understand that for the same measurement in two different units:

- if the unit is smaller, the number of units will be greater;
- if the unit is bigger, the number of units will be smaller.

Change a larger unit to a smaller one. For example:

- Change 36 centilitres into millilitres.
- Change 0.89 km into metres.
- Change 0.56 litres into millilitres.

Change a smaller unit to a larger one. For example:

- Change 750 g into kilograms.
- Change 237ml into litres.
- Change 3cm into metres.
- Change 4mm into centimetres.

Begin to know and use rough metric equivalents of imperial measures in daily use.

For example, know that:

- 1 gallon ≈ 4.5 litres
- 1 pint is just over half a litre.

For example:

- A litre of petrol costs 89.9p.
Approximately, how much would 1 gallon cost?

See Y456 examples (pages 90–1).

Link to mental recall of measurement facts (pages 90–1).