

As outcomes, Year 8 pupils should, for example:

Continue to use familiar units of measurement from previous year and extend to:

Standard metric units

- tonne (not usually abbreviated)
- hectare (ha)
- cubic millimetre (mm³), cubic centimetre (cm³), cubic metre (m³)

Commonly used imperial units

- ounce (oz), pound (lb), foot (ft), mile, pint, gallon

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

- 1 hectare = 10 000m²
 - 1 tonne = 1000kg
- and extend to:
- 1 litre = 1000 cm³
 - 1 millilitre = 1cm³
 - 1000 litres = 1m³

Convert between one unit and another.

Convert between area measures in simple cases. For example:

- A rectangular field measures 250 m by 200m. What is its area in hectares (ha)?
- Each side of a square tablecloth measures 120cm. Write its area in square metres (m²).

Convert between units of time. For example:

- At what time of what day of what year will it be:
 - a. 2000 minutes
 - b. 2000 weeks
 after the start of the year 2000?
- How many seconds will pass before your next birthday?

Consolidate changing a smaller unit to a larger one. For example:

- Change 760 g into kilograms.
- Change 400ml into litres.

Know rough metric equivalents of imperial measures in daily use (feet, miles, pounds, pints, gallons) and convert one to the other. For example, know that:

- 1 m ≈ 3ft
- 8 km ≈ 5 miles
- 1kg ≈ 2.2lb and 1 ounce ≈ 30g
- 1 litre is just less than 2 pints.

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

As outcomes, Year 9 pupils should, for example:

Continue to use familiar units of measurement from previous years and extend to:

Compound measures

- average speed (distance/time)
- density (mass/volume)
- pressure (force/area)

Convert between metric units, including area, volume and capacity measures.

For example:

- Change 45 000 square centimetres (cm²) into square metres (m²).
- Change 150000 square metres (m²) into hectares;
- Change 5.5 cubic centimetres (cm³) into cubic millimetres (mm³);
- Change 3.5 litres into cubic centimetres (cm³).

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

Convert between currencies. For example:

- Use £1 = 10.6 rands to work out how much 45p is in rands.
- Use 565 drachmae = £1 to work out how much 1000 drachmae is in pounds.

Convert one rate to another. For example:

- Convert 30 mph to metres per second.

Link to direct proportion (pages 78–9) and conversion graphs (pages 172–3).