

Can I solve problems involving the conversion of units?

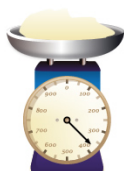
Teaching guidance

Key vocabulary

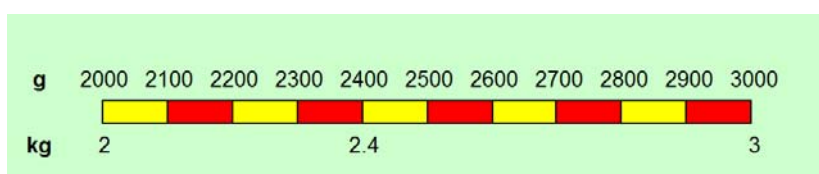
units of measure and abbreviations, equivalent, length, mass, capacity, pound, ounce, centilitre, yard, foot, inch

Models and images, resources

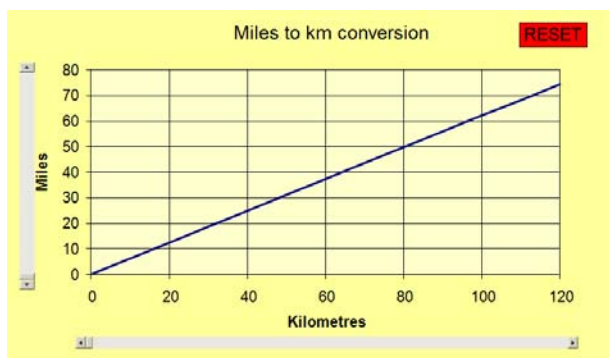
Range of measuring equipment using different scales



Counting stick or Converting measures spreadsheet



Conversion graphs including miles to kilometres conversion spreadsheet



Give children experience of creating and interpreting line graphs that demonstrate the relationships between metric and imperial measures.

Teaching tips

- Ensure that children have regular opportunities to solve practical problems that involve measurement. This will involve choosing and using suitable equipment, considering appropriate units and converting between them as appropriate. Draw on opportunities provided in other curriculum areas such as science and food and design technology.
- Make sure that children have 'benchmarks' to help them relate to key units of measure. For example, children could find the distance in kilometres between their home and school.
- Give children experience of choosing suitable units for measurement activities, for example, considering whether to measure the amount of water in a bath in centimetres (depth) or litres (capacity). They should be able to list all known units for an aspect of measure such as capacity and then select the most appropriate unit depending on the circumstance.
- Look at measuring equipment that uses two scales alongside each other to compare units; for example use a measuring jug that has scales for litres and pints to find equivalents.
- Use a variety of activities, such as 'loop cards' and 'fact of the week' to help children to learn the key conversion facts. Stress links with prefixes in spelling, establishing for example that 'kilo' means 'thousand', so that 1 kg is the same as 1000 g. Children should know approximate conversions between common imperial and metric units.
- Use mental and oral activities to rehearse strategies for converting units of measure. Children need plenty of experience of finding equivalents to decimal and fractional measures such as 2.3 kg or 2 $\frac{1}{4}$ litres.
- Make sure that children understand how, why and when to use multiplication or division by ten, 100 and 1000 to convert between metric units. Encourage children to check that their answer is reasonable to ensure that they have used the correct operation.



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- Establish links with work on ratio and proportion. Starting from a known fact such as $1 \text{ m} = 1000 \text{ mm}$, ask children to use scaling to generate other facts. The Converting units of measure spreadsheet can help children to find equivalent pairs using scaling.

First choose units for conversion

kg → g g → mg l → ml km → m m → cm m → mm cm → mm

m	mm
1	1000
0.1	100
0.2	200
0.3	300

Type a number into one column, then click on the highlighted cell to reveal the conversion.

RESET

FRACTIONS
To enter a fraction into a cell or to see a decimal number in a cell as a fraction, select the cell then click this button.

Primary