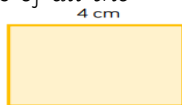| Castlefield School- Maths		
Topic: Length, mass and capacity	Year: Three	Theme: Measurement

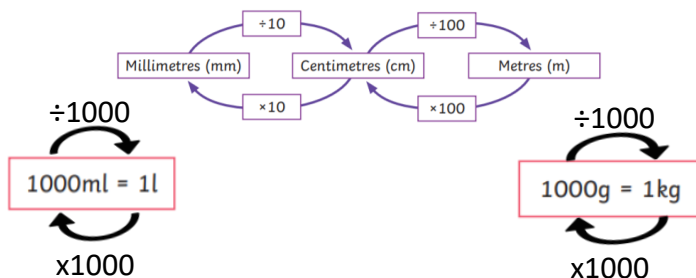## Key concepts and questions

How is perimeter calculated?

To measure perimeter, add up the lengths of all the sides of the shape.

In a rectangle, opposite sides are equal, the perimeter of this rectangle is 3cm + 3cm + 4cm + 4cm = 14cm

4 cm
3 cm

How do you convert between different measures?

÷10   ÷100

Millimetres (mm)   Centimetres (cm)   Metres (m)

×10   ×100

÷1000   ÷1000

1000ml = 1l   1000g = 1kg

x1000   x1000

Key Vocabulary

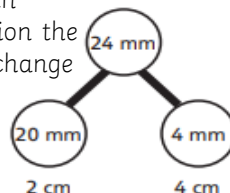| distance	length	width	height
millimetre	centimetre	metre	weigh
mass	grams	kilograms	millilitres
litres	compare	total	difference
perimeter	total length of all the sides of a shape	scale	a line to show measures
convert	changing from one unit of measure to another	interval	the difference between the jumps on a scale
capacity	amount a container can hold	volume	how much is actually in a container.

Representations

Scales

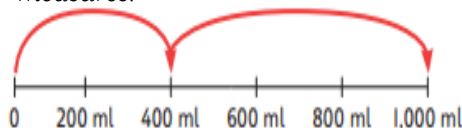Used to measure. Can be seen on weighing scales, rulers, thermometers and other measuring equipment.

1 litre, 900 ml, 800 ml, 700 ml, 600 ml, 500 ml, 400 ml, 300 ml, 200 ml, 100 ml, 0

1,000 ml, 900 ml, 800 ml, 700 ml, 600 ml, 500 ml, 400 ml, 300 ml, 200 ml, 100 ml, 0

Part Whole Models

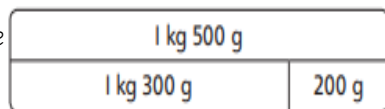Part/whole models help with converting measures. Partition the whole into parts and then change the measure.

24 mm
20 mm   4 mm
2 cm   4 cm

Number Lines

Help to find the difference between measures or find the total of measures.

0   200 ml   400 ml   600 ml   800 ml   1,000 ml

Bar Models

Represent measure problems.

1 kg 500 g	
1 kg 300 g	200 g

Making connections

Counting in multiples

Scales on measuring equipment go up in intervals. Use knowledge of counting in 1s, 2s, 5s, 10s, 50s and 100s to help read and use scales.

Multiplication

Converting measures involves x and ÷ by 10, 100 and 1000, use knowledge of 10 times table to support you. E.g. 2x10=20 so 2x100=200 and 2x1000=2000

Scaling also connects to multiplication. For example Book A is 12cm long, Book B is twice as long. 12cm x 2 = 24cm, Book B is 24cm long.