Year 6 Knowledge Organiser - Maths (3) - Autumn 2/Spring 1

Section 1

Metric Measure

Kev Vocabulary mass gram kilogram capacity Volume millilitre litre millimetre

centimetre

kilometre

Metric Measure

Metric measure is used to measure length, weight, and capacity. There are various places where we use metric units in our daily life.

Capacity is the amount an object can contain. Volume is the amount actually in an object.

	METRIC
Length	millimetre, centimetre, metre, kilometre
Mass	milligram, gram, kilogram
Capacity	millilitre, centilitre, litre

Learning To Learn

You could have a go at finding different items in your home that would be measured using the different metric measures. Example: Sugar = grams



Section 2

Convert metric measure

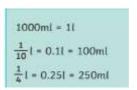
Mass

1 tonne = 1000kg 1000g = 1kg $\frac{1}{10}$ kg = 0.1kg = 100g

Length

1000m = 1km 100cm = 1m10mm = 1cm

Capacity





You could watch the video and have a go at the quiz

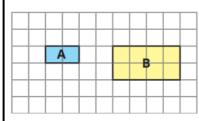
To convert metric measures, you will use your knowledge of multiply and divide numbers by 10, 100, and 1000.

Section 6

Similar shapes

Similar shapes are defined as shapes where corresponding sides are in the same proportion and the corresponding angles are equal, so if one shape is an enlargement of the other, the two shapes are similar.

You need to work systematically around a shape to ensure that all sides have been enlarged by the same scale factor.



Section 3 **Imperial**





Key Vocabulary

foot inch ounce pound stone pint gallon

1 inch = 2.5cm 1 foot = 12 inches

1 pound = 16 ounces

1 stone = 14 pounds

1 gallon = 8 pints

Section 4 Ratio



Ratio shows the relationship between two values and can describe how one is related to another.















For every 2 blue flowers, there are 4 pink flowers.

This is written as **2:4** or can also be written as **1:2** (divided each number by 2)

For every 2 oranges there are 3 apples.





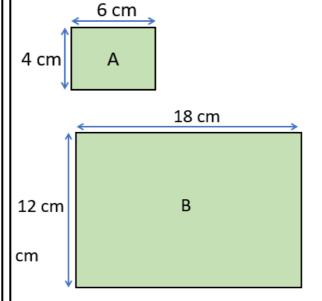




Section 5 Scale factors

A scale factor is a number by which all the dimensions of a shape are multiplied to create a proportional enlargement.

A 2D shape is given with a scale factor such as, "Shape B is 3 times as big as shape A."



Scale factors can also reduce in size. In this case, you would need to divide. If you started with shape B and wanted to reduce it to shape A, you would have to divide all of the dimensions by 3.

> One shape is an enlargement of another if all the matching sides are in the same ratio

Key Questions

- 1) Which units could you use to measure length/mass/capacity?
- 2) What is the difference between capacity and volume?
- 3) What are similar shapes?
- 4) What does ratio show?
- 5) How is a shape an enlargement of another?