



# MATHEMATICS



**N.S. Yr. 4 P.92**

**Units to estimate or measure  
length, mass or capacity.**

## Equipment

Paper, pencil, ruler  
Various measuring instruments, balance scales

# MathSphere

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## **Concepts**

When children measure something they should think about the units they are going to use and what a sensible approximation might be. This module deals with making sensible decisions about what units, as well as giving some ideas for mini investigations using weight and capacity.

A selection of jam jars and containers should be available so that children can discover which holds the most, what a litre of water looks like etc.

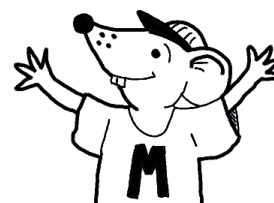
It is also a good idea to make a collection of containers and labels - can the children match the label to the container? Cards could be made with popular measurements such as a litre, 330 ml, 250 grams etc.

When estimating distance we are still in a state of confusion, as children are taught the metric units of millimetres, centimetres, metres and kilometres, but our standard measure for longer distances is still the mile.

Whenever possible metric units should be used - they are far easier to use than Imperial!

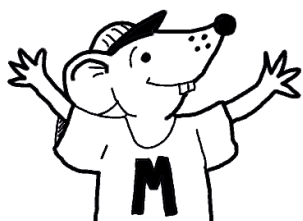
**What do you think?**

Circle the answers  
which you think are  
most sensible.



- |                                       |       |        |         |           |
|---------------------------------------|-------|--------|---------|-----------|
| 1. A potato weighs about              | 20 g  | 200 g  | 2000 g  | 20 kg     |
| 2. The width of a finger is about     | 1 mm  | 10 mm  | 10 cm   | 10 m      |
| 3. A can of drink holds about         | 3 ml  | 33 ml  | 330 ml  | 3 litres  |
| 4. The length of a pen is about       | 14 cm | 140 cm | 1.4 m   | 14 m      |
| 5. A jug of water holds               | 1 ml  | 10 ml  | 100 ml  | 1000 ml   |
| 6. The height of a car is about       | 15 mm | 150 mm | 15 cm   | 150 cm    |
| 7. The height of a door is about      | 2 cm  | 2 m    | 20 m    | 200 m     |
| 8. A jar of coffee holds              | 10 g  | 20 g   | 200 g   | 200 kg    |
| 9. A large packet of cereal contains  | 10g   | 75g    | 750 g   | 7.5 kg    |
| 10. A bottle of lemon squash contains | 20 ml | 200 ml | 1 litre | 50 litres |

### How much do you drink in a day?



Have you any idea how much you drink in a day?  
Try to keep a record.  
You can use the chart on the next page or make your own up.

Did you know that that a mug holds about a quarter of a litre - that's about 250 ml.  
There are about four mugs in a litre!



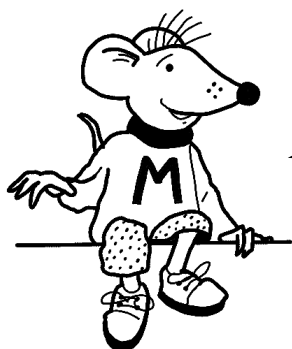
I think I'm the mug around here - he's just drunk my coke!



Cans often have the amount in ml on the side.  
Sometimes they have the weight in grams.  
This is about the same because 1 ml of water weighs 1 gram.

**How much do you drink in a day?**

Drink	Amount in millilitres
Total	



Remember: there are 1 000 ml in a litre.

So 3 450 ml would be 3.45 litres.

Try to find out how much doctors recommend that we drink each day.

### Which units to use?

It's important to think about which units you are going to use to measure something - it's no good trying to measure the length of a piece of string in millilitres!



**Write down the units that you think are best for making these measures - and keep to metric please (no feet and inches or pounds and stones - we are not in the stone age now!)**

1. The distance round a jam jar.

2. The amount of water in a bath.

3. The weight of a baby elephant.

4. The width of 10 sheets of paper.

5. The amount of water in a raindrop.

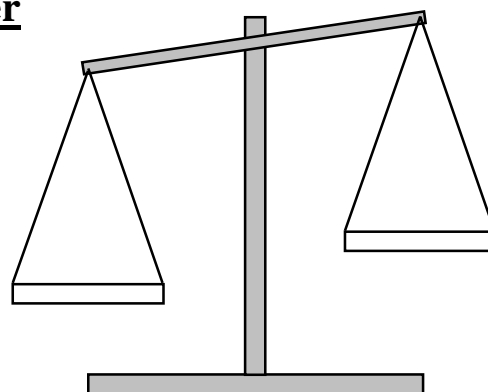
6. The weight of a pencil.

7. The distance across the English Channel

### Putting in order



You need to work  
in a logical way  
for this!



You need a pair of balance scales like the ones above. You also need 6 objects which are all more or less the same weight.

By using the scales, put the objects in order, starting with the lightest.

Note: you can not put anything else on the scales apart from the objects.

	The objects
The lightest	
The heaviest	

**Answers****Page 3****1.** 200 g**2.** 10 mm**3.** 330 ml**4.** 14 cm**5.** 1 000 ml**6.** 150 cm**7.** 2 m**8.** 200 g**9.** 750 g**10.** 1 litre