

## Maths: Units of Measure

For the next few weeks we will be looking at the different ways in which we measure. We spend lots of time using measuring in the real world so it is important that we feel confident with how we measure. During lockdown I have spent a lot of time baking and I would have had some disasters if I hadn't measured the weight of my ingredients properly! Try and look out for different units of measure being used all around you and get as much hands on experience as you can.

Measurement conversions

### Weight

1 tonne = 1000 kilograms

1 kilogram = 1000 grams

1 gram = 1000 milligrams



twinkl www.twinkl.co.uk

t  
kg  
g  
mg

When we are measuring the mass or weight of something, we use the metric measure of grams. You are probably familiar with grams and kilograms as these are the most common units of measure that we use for mass in our day to day lives. However, if something is smaller than a gram we use milligrams. Or if it's larger than 1000 kilograms we use tonnes.

Can you spot grams being used in your home? Keep an eye out when you next help in the kitchen.

Measurement conversions

### Length

1 kilometre = 1000 metres

1 metre = 100 centimetres

1 centimetre = 10 millimetres



twinkl www.twinkl.co.uk

km  
m  
cm  
mm

When measuring length or distance we use millimetres, centimetres, metres and kilometres. We often use rulers in the classroom to measure shapes in our books in centimetres. When we measure shadows on the playground we used metre sticks as these were much larger. We might use kilometres to measure how far we have walked or run as this is a much larger unit of measure.

Can you use a ruler to measure any lengths or distances at home?

Measurement conversions

### Capacity

1 litre = 1000 millilitres

1 centilitre = 10 millilitres



twinkl www.twinkl.co.uk

l  
cl  
ml

We often use the term 'capacity' to discuss how much liquid an object can hold. Mostly, we use litres for larger amounts of liquids and millilitres for smaller amounts of liquid. Occasionally, you can spot centilitres being used (I have spotted these on drinks cans).

To measure capacity we often use measuring jugs or cylinders. For very small amounts we might use a small syringe or specialist equipment.

Do you have to measure any liquids day to day at home?

These are all **metric units of measure**. This unit of measurement is used in the **UK** and in lots of places in **Europe**. However, for some things we still use **imperial units** which we will look at later on.

## Maths: Units of Measure

### Vocabulary tip

We can look at the **prefixes** used in units of measure to help us understand what they might be representing. Take a look at the meanings of each of the prefixes below.

**milli** – one thousandth

**cent**- hundred

**centi** – one hundredth

**kilo**- one thousand

I now know that a **centimetre** is one hundredth of a meter.

A **kilometre** must be one thousand meters.

What else can you discover?

**Help! Lots of this vocabulary is new to me.**

There is lots of terminology to get your head around when starting a new unit of maths. Use the link below to take you to an online maths dictionary. Here it will help explain any key vocabulary you are not familiar with and provide you with some examples.

<https://www.mathsisfun.com/definitions/index.html>

### Useful videos:

- This video introduces you to the **language** we use when measuring and starts to look at how we might convert unit of measure. I wonder how many of us can learn the dance as well as the lyrics!  
<https://www.bbc.co.uk/teach/supermovers/ks2-maths-measurement-with-max-and-Harvey/zdv2cqt>
- This is another great summary of metric measures  
<https://www.bbc.co.uk/bitesize/topics/z4nsgk7/articles/zqf4cwx> The information below is also a great guide to refer to.
- Some ideas of where you might find different units of measure  
<https://www.bbc.co.uk/bitesize/clips/zdxn39>

### Want some practice of calculating with these measures?

The following BBC Teach videos provide you with a short clip, followed by some questions for you to try and answer. Make sure you have a pencil and paper ready and give them a go!

- **Using grams and kilograms.** Can you write your answers in grams and kilograms?  
<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-using-grams-and-kilograms/zm7tf4j>
- **Capacity and measure.**  
<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-capacity-and-measure/z7gkqp3>
- **Measuring distances.**  
<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-measuring-distance/z4r87nb>

This is also good revision for perimeter.



We cannot use the measuring equipment in school at the moment, but you might be surprised at how much you find you have at home. Just make sure you ask an adult's permission before using anything.

## Units of Measure: Practical Investigation

The best way to secure your understanding of units of measure is to have some practice measuring. We would like you to try at least one practical investigation into units of measure. Discuss this with an adult, some units may be easier for you to investigate at home than others. You could record what you find in a table, like the example below. You could also take pictures and write a summary telling us what you learned.

### Example:

I am going to carry out an investigation into mass and how to use grams and kilograms. I have kitchen scales which I can use for lighter items and bathroom scales for heavier items.

Item	Predicted Mass	Actual Mass
Apple	90g	160g
Notepad	400g	430g
Remote control	190g	203g

I found predicting the mass of objects became easier, the more I did. This was because I was able to compare the weights of the different objects. The weight of the remote control surprised me, I thought it would be much heavier.

Above is one example of how an investigation could be carried out (you could do many more objects). This can easily be adapted to measure capacity or length – do whatever works best for you.

You could also challenge yourself by starting to write your measurement using more than one unit of measure. For example, my apple was 160g which could also be written as 0.16kg.