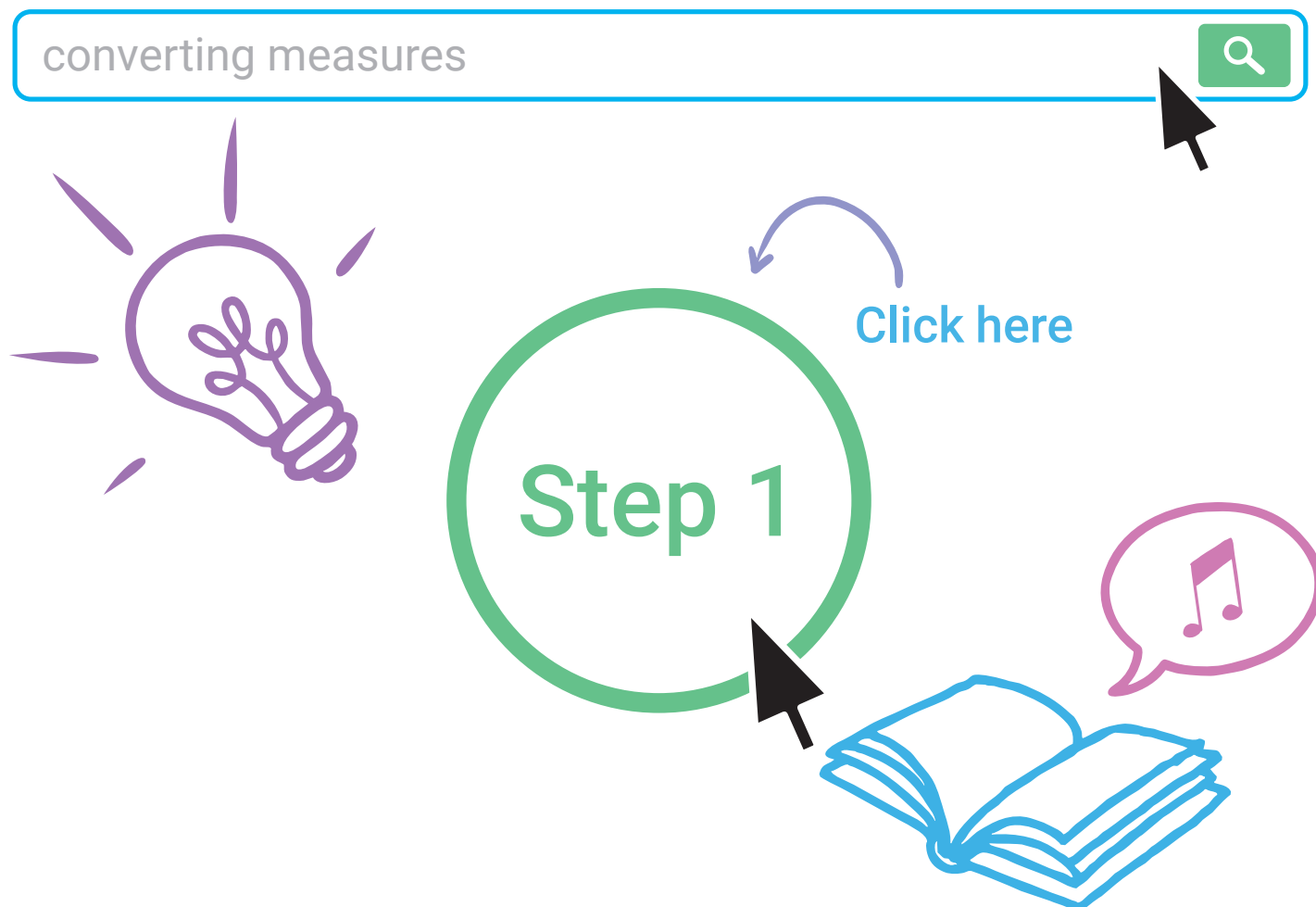


Year 6 Measurement, Dimensions, Mass and Capacity: A Step-by-Step Guide for Parents

This step-by-step explanation of measures, dimensions, mass and capacity in year 6 can help you support your child's learning at home. Each subject is broken down into manageable chunks, providing you with a simple guide to follow when exploring measures together, either as part of homework or if you decide to give your child some extra support. Your child may be applying their knowledge of converting measures to solve problems - including measurements with up to three decimal places. They may be estimating the volume of different shapes and then calculating and comparing volume - either by counting cubes or by using the formula: $\text{length} \times \text{width} \times \text{height} = \text{volume}$. Whatever the case, you will find a step that matches where your child is at now and ideas of where to go next.

Within **this area of the website**, you will find a selection of resources intended to help your child learn about each step of this guide. Each step also contains a keyword or phrase that you can use to search the Twinkl site for more resources and activities, designed to support your child in achieving that stage. Simply type the keyword or phrase into the search bar and press enter to explore together.



We hope you find the information on our website and resources useful. The contents of this resource are for general, informational purposes only. This guide is intended to offer parents general guidance on what subject areas tend to be covered in their child's year group and where they could support their children at home. However, please be aware that every child is different and information can quickly become out of date. There are some subject areas that we have intentionally not covered due to the nature of how they are taught or because a trained professional needs to teach these areas. We try to ensure that the information in our resources is correct but every school teaches the national curriculum in its own way. If you would like further guidance or are unsure in any way, we recommend that you speak to your child's teacher or another suitably qualified professional.

Measurement, Dimensions, Mass and Capacity

What Is Measurement?

Measurement involves height, length, width, mass (which we often call weight in everyday life), **capacity**, **volume**, money, temperature and time. During year 6, your child will begin to explore measures in more detail, using and applying their knowledge to solve a range of different problems.



They will investigate **area** and **perimeter** and begin to recognise that there is no direct link between the two measurements. A shape can have an area that is larger, smaller or the same as its perimeter. However, there are some simple ways to increase the perimeter of a shape while keeping the area the same or to increase the area at a quicker rate than the perimeter. At this stage, your child may investigate and explore these patterns and relationships to see what they can find.

So far, your child will probably have found the volume of a shape by counting the cubes inside it but, at this stage, they will begin to learn how to use a formula to calculate the volume of a shape. They will learn that if they multiply the length by the width by the height, they will find the volume. For example, a **cuboid** that is 6cm long, 5cm wide and 4cm high has a volume of $6 \times 5 \times 4$ which is 120cm^3 .

As well as using the resources found in this category and the keyword searches suggested to help your child learn more about measures, you will find below some ideas for games and activities. These will give your child further practice and help them become more familiar with measurement, dimensions, mass, volume and capacity.

Volume of Everyday Objects

Ask your child to find a selection of cuboid-shaped objects around the house, for example, a cereal box, a folder, a tissue box and a sponge. Ask them to use a tape measure or ruler to measure the length, width and height of each object. Can they then use this information to calculate the volume? Once they have worked out the volume, your child can sort each object from smallest to largest volume.

Journey Conversions

Think about different journeys you have been on with your child (either by car, train, bus, walking or even plane) and make a note of the distance travelled in miles. Can they can convert the distance of each journey to kilometres and then sort the journeys from shortest to longest distance? 1 mile equals approximately 1.6km.

Area of Everyday Objects

To give your child opportunities to practise using the formula for area (length \times width = area), you could ask them to measure different flat surfaces/objects around the house. Once they have measured the length and width of the surface/object, can they use the formula to work out the area? Once they have found the area of a selection of objects, can they order them from smallest to greatest?

Estimating the Capacity of Everyday Containers

This activity will help your child realise that different-shaped objects can have the same capacity and that, sometimes, containers which look smaller can hold more than they expect. Help your child to gather together a variety of different containers from around the house - mixing bowls, pans, empty bottles, cups, etc. Ask them to estimate how much liquid each container can hold and then use measuring jugs to see how close their estimate was.

Step 1

Converting Measures

At this stage of key stage 2, your child may be fairly confident with converting units of measure (changing cm to m, g to kg and ml to l, for example). However, they will now begin to use and apply their knowledge and understanding in more complex ways to solve problems and puzzles and to carry out investigations. This may require a combination of different skills - including all four operations and a number of different measures. Our **Measurement Problem-Solving Cards**, which contain short, snappy real-life puzzles, are a perfect way for your child to do this.



Miles to Kilometres

During this step, your child will begin to understand the link between miles and kilometres in more detail. In order to convert between mile and kilometre measurements, your child will need to be confident with multiplying and dividing decimals. As one mile is approximately equal to 1.61 kilometres, this will involve multiplying and dividing by 1.61. Our **Converting Kilometres and Miles Worksheets** are a great way for your child to practise this skill.

Step 2



Step 3

Area and Perimeter

Area is the amount of space taken up by a 2D shape and perimeter is the distance around the outside of a 2D shape. Your child should be confident with measuring and calculating both of these measurements: perimeter is calculated by adding together each length of the shape and the area of a rectangle is calculated by multiplying the length by the width). At this point, your child will begin to explore the relationship between area and perimeter. They will recognise that shapes with the same area can have different perimeters and vice versa. By using **display posters** with your child, you can give them visual reminders of how these measurements can change and of different methods they can use to increase and decrease the perimeter or area of a shape.



Step 4

Volume Formula

Your child may have been introduced to the concept of volume and used cubes to count and work out the volume of simple 3D shapes. Over the course of year 6, they will begin to extend this knowledge by using a formula to calculate the volume of shapes. A formula is a calculation that can be used to work out something. In this case, the formula for working out the volume of a cube or a cuboid is $\text{length} \times \text{width} \times \text{height} = \text{volume}$. Therefore, if a cuboid is 5cm long, 4cm wide and 2cm high, its volume will be $5 \times 4 \times 2$ which is 40cm^3 . This **Visual Display Poster** gives your child a clear reminder of the formula for calculating the volume of a 3D shape.

Estimate and Compare Volume

As your child's understanding and knowledge of volume increases, they will begin to make more accurate estimates and comparisons between the volume of different shapes and containers. Being able to estimate the volume of a shape or container, and then check to see if this is accurate, is a great way for your child to apply their knowledge to real-life situations. These **Maths Mastery PowerPoints** include opportunities for your child to practise estimating, calculating and comparing the volume of different shapes.

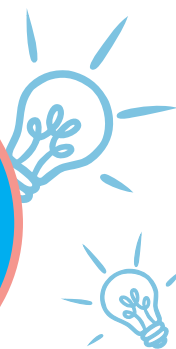
Step 5

Explore and Discover More

Twinkl Go! is a digital platform, hosting interactive content such as videos, games, audiobooks and more. Twinkl Go! enables digital content to be streamed to your computer or mobile device.



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Book Club

Twinkl Book Club is our book subscription service. Enjoy our original works of fiction in beautiful printed form, delivered to you each half-term and yours to keep!



Twinkl Boost is a range of intervention resources, created to support and lift learning with children at every level. These include our easy-to-use SATs and Phonics Screening resources.



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Boost



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imagine

Imagine resources are designed to help your children to think creatively, question and imagine. Every week, a new topic consisting of five photos, each with related activities, is created.



Twinkl Originals are engaging stories written to inspire children from EYFS to KS2. Designed to encourage a love of reading and help curriculum-wide learning through accompanying resources.



twinkl
ORIGINALS



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KIDS' TV

Twinkl Kids' TV is our wonderful YouTube channel dedicated to fun and informative video-style resources full of new and creative activities you can try at home!

