

Length and Height

WHY THIS UNIT IS IMPORTANT

Length and height are familiar and useful ideas from daily life. Children will probably take an interest in measuring their own height and making comparisons with others' heights, and this can easily be extended to looking at heights and lengths more generally. This work also makes use of simple standard units and scales; reading a simple scale accurately is an important skill which will be useful in a wide range of settings.

WHERE THIS UNIT FITS

Before they start this unit, it is expected that children:

- have at least an informal understanding of the ideas of length and height
- can accurately manipulate simple apparatus such as multilink cubes, rulers and metre sticks and are familiar with some of the basic vocabulary that will be needed, such as 'how long?' and 'how high?'

ASSESSING MASTERY

Children who master the work in this unit will be able to estimate, measure and compare the lengths or heights of a range of objects, using simple measuring equipment, such as rulers, metre sticks and tape measures, and appropriate standard units (centimetres or metres). Children will be aware of some of the common practical difficulties that arise when measuring, such as not starting at zero when using a ruler, or failing to deal with flexible objects consistently, and will know how to avoid these difficulties.

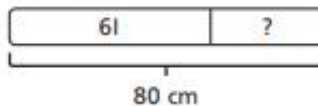
COMMON MISCONCEPTIONS	STRENGTHENING UNDERSTANDING	GOING DEEPER
Children may confuse metres and centimetres.	Provide plenty of practice in measuring and estimating lengths in order to build up children's understanding of the range of sizes over which metres and centimetres are appropriate units.	Children will benefit from developing a feel for the size of a range of objects. This will enable children to make quick estimates of lengths and heights in centimetres or metres without using measuring apparatus.
Children may struggle to read scales on rulers and metre sticks (including not aligning objects on zero or failing to compensate where this is not possible).	Measuring objects in centimetres and metres is a key skill that you should encourage children to practise repeatedly.	Measurement provides a simple but useful practical context for basic arithmetic, so make sure that children understand the connections between the scale on a ruler and the number line.

WAYS OF WORKING

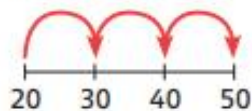
These pages provide an overview of key content in this unit, including the idea of using a ruler and the role of centimetres and metres, which are the standard units that children will use. Discuss these pages with children, questioning them to assess their familiarity with the main content and key language.

STRUCTURES AND REPRESENTATIONS

Bar model



Number lines



Rulers



KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit:

- length, height
- width, distance
- long, longer, short, shorter
- tall
- metres (m), centimetres (cm)
- order, compare
- ruler, metre stick
- measure
- zero
- greater than (>)
- less than (<)
- equal to (=)

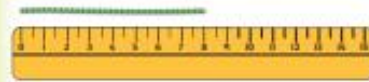
Length and height



In this unit we will ...

- ✂ Measure objects in centimetres and metres
- ✂ Compare two lengths
- ✂ Put lengths in order
- ✂ Solve word problems about length

We will be using rulers.
How long is this piece of string?



78

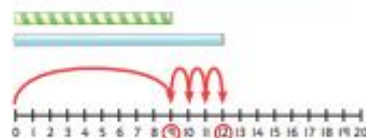
PUPIL TEXTBOOK 2B PAGE 78



Here are some maths words we have seen before. Which ones mean the same thing?

length	centimetres	cm	
metres	m	longer	shorter
metre sticks	height	width	
compare	distance		

We can also use a number line to compare lengths. Which straw is longer? What is the difference between them?



79