

# Exploring measures

Children's understanding of size, length, weight and quantity comes from experiencing and talking about things that are *bigger, smaller, heavier, lighter, taller, longer, empty* and *full...* in a variety of different contexts.



They learn about amounts and comparing things by size, length or weight, by handling and exploring different objects as part of their play and everyday life.

**Understanding how big, small, heavy or long something is makes a lot more sense if you can see and touch it!**

## Understanding measures

It's very difficult to explain what heavy, small or long means unless you can see and experience them for yourself. As adults, we might mutter or talk to ourselves about how big or heavy something is, but not necessarily say it out loud!

Your child will find it really helpful if you chat with them about how big, small, tall, short, heavy or light things are, and also how much of something there is.

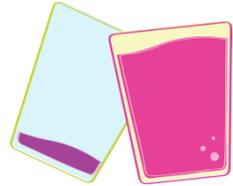
Here are some examples using situations you might be familiar with:

### At home

- *"I wonder if that piece of ribbon is **long** enough to go round the cake."*  
(length)



- “Those two **big** boxes are full of books – I’ll need someone to help me lift them as they are so **heavy**!” (size and weight)
- “Your cup is **empty**... would you like some more juice? I’ve **filled it up**, so be careful when you drink it.” (amount)



### Playing with toys

- “Your paddling pool is only **half full** – shall we **top it up**?” (amount)
- “Is your train track **long** enough to reach the door?” (length)
- “The box is really **light** now you’ve **emptied** the bricks!” (weight and amount)

### Out and about

- “You went on a really **long** wiggly slide at the park today!” (length and distance)
- “That big bag of rice is really **heavy** – I’ll help you put it in the trolley.” (weight)
- “Look at **all** the **tiny** ants scurrying on their ant hill – what are they carrying? Here – try this magnifying glass, it makes things look much **bigger**!” (size and amount)

Seeing and experiencing things of different size, weight, length, quantity and amount help children to understand measures.



## The language of measures

Children learn about size, length and weight by exploring everyday objects during playful and practical situations. Talking about these things helps children to become familiar with the important mathematical language associated with them, such as:

- **size** (including **height**) – *big, bigger than, huge, small, smaller than, tiny, tall, taller, tallest...*
- **length** (including **distance**) – *short, shorter, less than, long, longer, more than...*
- **weight** – *heavy, heavier, weighs more than, light, lighter, weighs less than...*
- **amounts and quantities** – *full, half-full, empty, a little bit, a lot, more, less...*
- **comparing** – *same, similar, different...*



Using these words when discussing measures with your child will help them to grasp these tricky ideas.

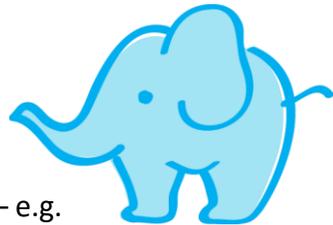
## Exploring measures

Understanding measures can be tricky!

How big, small or long something is

depends on what it is being compared to – e.g.

one mouse can be big when compared to a smaller mouse, but both mice are small when compared to an elephant!



**It's hard to understand 'biggest' or 'smallest' without seeing and talking about what might be in between!**



There is also the fact that size isn't necessarily linked to weight. For example, a box of tissues is lighter than a house brick, but they are about the same size... and a tonne of bricks weighs the same as a tonne of feathers.



Your child will develop their understanding of tricky maths ideas such as size by hearing the maths language used to describe it in different contexts:

- *"I'm big, I'm three and I go to pre-school now."*
- *"I'm small, I'm only three, so I mustn't cross the road without an adult."*
- *"My feet have grown – look how big my new shoes are!"*
- *"Your shoes look really small next to Daddy's."*

Talking about size, length, weight, amounts and quantities helps children to learn:

- that size is relative, e.g. a small suitcase can be bigger than a bag, but smaller than a bigger suitcase
- that size and weight aren't always connected, e.g. a large bag of crisps is lighter than a small bag of potatoes
- about amounts, and to develop their understanding of 'how much' of something there is.



**Chatting about the size and weight of things will help your child begin to grasp the meaning of these important maths ideas.**