

YR1 Knowledge Organiser - Length, Mass and Capacity

Key Concepts

- Compare, describe and solve practical problems for:
 - lengths and height (e.g. long / short, longer / shorter, tall / short, double / half)
 - mass / weight (e.g. heavy / light, heavier than, lighter than)
 - capacity and volume (e.g. full / empty, more than, less than, half, half full, quarter)
- Measure and begin to record the following:
 - lengths and heights
 - mass / weight
 - capacity and volume

Key Vocabulary

- length and height
- centimetres
- mass and weight
- capacity and volume
- long / longer
- short / shorter
- tall / taller
- heavy / heavier
- light / lighter
- equal



Compare Lengths and Heights

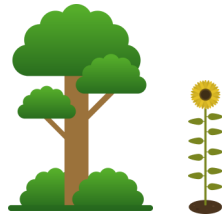
The length of objects can be described by how long or short they are in relation to something else.



The paintbrush is **longer** than the pencil.

The pencil is **shorter** than the paintbrush.

Height is a type of length. The height of objects can be described by how tall or short they are in relation to something else.



The tree is **taller** than the sunflower.

The sunflower is **shorter** than the tree.

Measure Length: Non-Standard Units

Non-standard units, such as cubes, can be used to measure length and height. The units need to be equal in length. They should be lined up with one end of the object and no gaps in between.

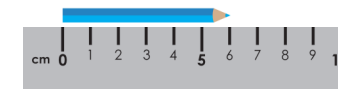


"The teddy is 4 cubes tall. The Lego man is 2 cubes tall. The teddy is double the height of the Lego man."

When comparing objects, it is important that the same object is used to measure both of them to make sure the comparison is accurate and fair.

Measure Length: Standard Units

Standard units, such as centimetres, can be used to measure length and height. Rulers are commonly used to measure in centimetres. One end of the object must line up with 0cm to make sure the reading is accurate.



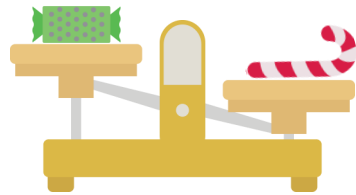
The blue pencil is 6cm. The green pencil is 8cm.
The blue pencil is the **shortest**.
The green pencil is the **tallest**.



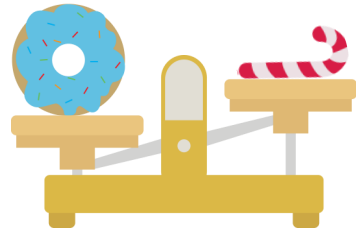
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Weight and Mass

The weight or mass of objects can be described by how heavy or light they are in relation to something else.



The chew is **lighter** than the candy cane.



The doughnut is **heavier** than the candy cane.

The weight of all three objects can be compared:

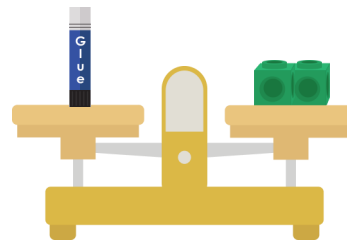


The chew is the **lightest**.
The doughnut is the **heaviest**.

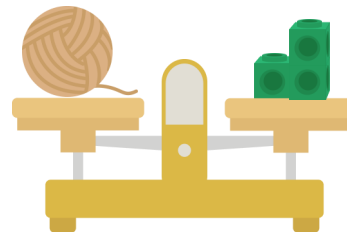
Measuring Weight and Mass

After comparing with other objects, more accurate measurements can be made using non-standard units.

Balance scales enable this comparison. The key to understanding the weight of an object is knowing that the scales will balance when both sides are equal in weight.



The glue stick weighs 2 cubes.



The ball of string weighs 3 cubes.
The glue stick is **lighter** than the ball of string.
The ball of string is **heavier** than the glue stick.

Capacity and Volume

The capacity of a container refers to the total amount it can hold. The volume describes the amount of liquid it contains at present. When considering the volume of containers, descriptions can be made based on how full they are:



full



almost empty



empty

Links can be made to the fractions learnt previously:



half full



quarter full

Measuring Capacity

Uniform sized containers can be used to measure the capacity of different containers and then comparisons can be made.



Jug = 4 cups



Bottle = 2 cups

The jug has a **greater** capacity than the bottle.

