

#### Topic: Using units of measurement

#### Describing the mass of objects

##### Lesson concepts



**Mass** — Language (describing, comparing, ordering)



**Mass** — Direct comparison

Today students will:

- describe the mass of objects.

#### Resources

##### Digital

Video — Jack and Jill

##### Find and prepare

A bucket (or container with a handle)

Water or sand to pour into the bucket

A container to hold the water, sand or rice

Six (or more) everyday objects that are different masses, such as three objects that weigh 1 kg or more and three objects that weigh less than 500 g (for example: pencil, toy car, plastic cup, can of soup, bag of flour, plastic bottle full of water, empty plastic bottle)

Two objects that demonstrate the link between the mass of the object and its use (for example: a fishing-line sinker, a brick or a paperweight, and a feather)

#### Key terms

heft, mass, sort, weight

For definitions and explanations of terms, please see the [Glossary](#).

## Lesson

### Introduce the lesson

#### Note

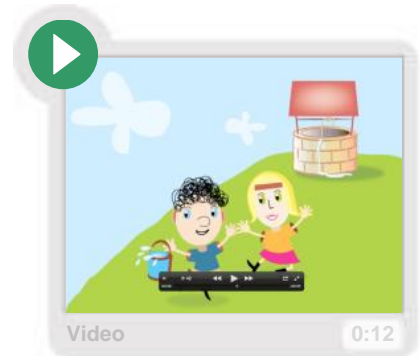
The following language is important to highlight and develop throughout this lesson.

light, heavy, lighter, heavier, length, shape, size, lift, sort

#### R&T

### Describe the mass of object in familiar contexts

- Have students view and listen to the **Video — Jack and Jill**.
- Have students repeat the rhyme 'Jack and Jill'.
- Ask questions to help students talk about the rhyme.



### Focus questions

- Q: *What happened to Jack and Jill in the rhyme?*  
A: They fell down the hill.
- Q: *When do you think Jack fell down: on the way up or down the hill?*  
A: For example, on the way down the hill.
- Q: *Why do you think he fell down?*  
A: For example, he was carrying a heavy bucket of water; he was running too fast.
- Q: *In the illustration in the video, is there anything in the bucket?*  
A: Yes, it is full of water.
- Q: *Do you think it would feel heavy or light for Jack?*  
A: Heavy
- Q: *Why do you think that?*  
A: I have carried a bucket of water and it felt heavy.
- Q: *How would it feel when it is empty?*  
A: It would feel light.

- Show students an empty bucket.
- Ask students to lift the bucket and describe how heavy it feels.

### Focus questions

Q: *How heavy is it?*

A: For example, it is not heavy.

Q: *Why do you say that?*

A: For example, I can lift it easily.

Q: *How could you make it heavier?*

A: Putting something in it will make it heavier.

Q: *How could you tell if it is too heavy?*

A: For example, I wouldn't be able to lift it up.

- Assist students to 'fill' the bucket, a little at a time, with water or sand.
- Each time, ask the students to test how heavy the bucket is.

### Focus questions

Q: *How heavy does the bucket feel now?*

A: For example, it is very heavy; I can hardly lift it up.

Q: *What is happening to the weight (mass) of the bucket?*

A: It is getting heavier.

Q: *What do you have to do as the bucket gets heavier?*

A: For example, use more strength to lift it.

### Note

At this stage, the terms 'weight' and 'mass' are interchangeable, because students are only beginning to become aware of measuring mass.

- Explain to students that they were describing the mass of the material in the bucket. They used lifting to tell how heavy the material was. Heavy objects require more effort to lift.

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## Sort light and heavy objects

Show students the six or more everyday objects that have different masses.

- Ask students to hold the objects one at a time and describe how heavy they feel.
- Ask students to describe the mass or weight of the objects, using words such as 'heavy', 'heavier', 'heaviest', 'light', 'lighter' and 'lightest'.
- Ask students to sort the objects into 'light' and 'heavy'.

- Explain to students that when we are talking about how heavy or light an object is, we use the words 'mass' or 'weight'. We weigh an object to find out how heavy it is, or its mass.
- Ask students to explore their home and locate two or three objects that they could add to their 'light' and 'heavy' piles.
- Ask students to lift the objects and determine which pile they would put them in.

### Focus questions

Q: *Why did you put that in the 'heavy' pile?*

Q: *How did you decide where to place it?*

A: For example, when I held an object from the heavy pile in one hand, I could feel that another object was also heavy by holding it in the other hand.

Q: *Was the colour or shape of the object important when you were finding out how heavy or light it was?*

A: No.

Q: *Can you find two objects that are about the same size, but very different in mass or weight?*

### Make connections between function and mass

- Show students the two objects that demonstrate the link between the mass of the object and its use (for example: a fishing-line sinker, a brick or a paperweight, and a feather).
- Ask students to share what they know about the mass of these objects.

### Focus questions

Q: *How would you describe the mass of the feather?*

A: It is very light.

Q: *What is a feather used for?*

A: For example, to help birds to fly.

Q: *Why do you think the mass of the feather is important?*

A: If a feather was too heavy, birds would not be able to fly.

Q: *How would you describe the mass of the sinker on the fishing line?*

A: For example, it feels heavy for its size.

Q: *What is the sinker used for?*

A: To make the fishing line and hook stay under the water.

- Ask students to select objects, one at a time, from the piles sorted earlier, and discuss how each is used.

### Focus questions

- Q: *What is this used for?*
- Q: *What might happen if it was very heavy?*
- Q: *What might happen if it was very light?*
- Q: *What could you use it for then?*
- Q: *What else could you use this for?*

- Ask students to imagine a situation where the mass of the object was too heavy or too light (for example: if a bird had wings that were as heavy as rocks; if the bricks on a house were as light as paper; if a bench seat had an elephant sitting on one end and a child on the other; if leaves on a tree were as heavy as bricks; or if a cup was made of concrete so that it was too heavy to lift).
- Help students to discuss what might happen in these situations.

**RL** During everyday activities, help students to talk about and compare the mass or weight of objects.

### Say to students

- ‘ The car is heavy. What would happen if it were too light?  
I am heavier than you are, but I am lighter than Dad is.  
The bag of potatoes is heavier than the bag of onions. ’