




Topic: Using units of measurement

Comparing the mass of objects

Lesson concepts

-  Mass — Language (describing, comparing, ordering)
-  Mass — Direct comparison
-  Mass — Indirect comparison

Today students will:

- compare the mass of objects.

Resources

Find and prepare

Objects of varying mass including some that can be held in hands for hefting (lifting)

Balance scales or materials to make a simple balance scale (skirt hanger and 2 resealable bags) OR materials to make a seesaw (a cylinder and board)

Weights, such as paperclips or blocks (include objects that are large and light as well as small and heavy, for example: bags of marbles or pebbles and bags of cotton wool or tissues)

Key terms

mass

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

Lesson

Note

It is important to highlight and develop the following vocabulary throughout this lesson: compare, order, mass, heavy, light, lighter, heavier, too heavy, too light.

Introduce the lesson: Identify contexts for measuring mass

- Discuss with students when it would be important to know how heavy an object is (for example: when packing school bags, boating, going up and down hills, on a seesaw, or on a plane).

Focus questions

- Q: *Why would it be important to know how heavy an object was?*
- Q: *What makes you think that?*
- Q: *What might happen if an object is too heavy/light?*
- Q: *When would it be important for an object to be heavy/light? (anchors, sinkers on fishing lines)*
- Q: *When have you seen that happen?*

- Have students:
 - select one of the situations discussed
 - consider what might happen if an object was the wrong mass in one of the situations discussed
 - represent the situation, for example: draw, act out or tell the story
 - share and discuss the scenario.

Note

There may be differing responses.

Explore methods for comparing mass

- Discuss ways of comparing the mass of objects.
- Show and explain to students that they may compare mass by:
 - observing
 - hefting (lifting)
 - using balance (for example: scales, seesaws, planks)
 - observing actions as floating/sinking objects
 - identifying objects that are the same mass/heavier/lighter.

Compare the mass of objects

- Ask students to explore the room to find two objects that are similar in shape but different in mass.
- Have students practise different ways of comparing the mass of these objects.

Focus questions

Q: Which is heavier/lighter? How do you know?

Q: What did you find out when you hefted/used a balance? How did you know that?

Q: If you used another way of measuring, would you get the same result? How do you know?

Q: How did you go about finding another object with the same mass as yours?