

Teacher guide to British Science Week activity: Key stage 1

Explore

- Take the class outside and organise pupils into groups of five.
- Ask pupils to collect a range of natural materials and place them next to the bowl of water.

Question

- Write the question prompt ‘Which ones...?’ on the flipchart and read it aloud.
- Ask the pupils to think of at least one question using the same structure. Encourage them to consider:
 - the natural materials they have collected;
 - the equipment available (the bowl of water);
 - their knowledge of materials and properties explored so far.
- Ask the pupils to share their questions within their group.
- Invite each group to share one question with the class and record these on the flipchart.
- Repeat the process using the prompt ‘What happens if...?’
- Add ‘Which ones float and which sink?’ to the flipchart as a model question.

Assess

- To help decide which questions can be investigated, ask the pupils to underline the questions on the flipchart using different colours for:
 - ‘which’ questions;
 - ‘what’ questions;
 - easy-to-test questions (can be tested using a Super Science Skill);
 - hard-to-test questions.
- Explain that scientists do not test every question; they choose questions that can be investigated.
- Optional: to extend thinking, select a few questions and discuss which Super Science Skill could be used to test each one.

Focus question

- Introduce the focus question: **‘Which natural materials float and which sink?’**
- Explain that this ‘which’ question can be tested using the Super Science Skill of grouping (materials that float and materials that sink).
- Define floating (stays on top of water) and sinking (goes to the bottom).

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Test

- Invite one pupil at a time to choose a material.
- Ask the class to predict whether it will float or sink by point up (floating) or pointing down (sinking).
- Place the material in the water and ask the pupils to observe carefully.
- Ask the pupils to show a thumbs up if their prediction was correct.
- Optional: to extend skills, ask the pupils to record results on whiteboards.
- Repeat with a range of materials.

Reflect

- Use think, pair, share for the following questions with their group:
 - What did we find out? (Answers may include: some natural materials float and some sink; some parts of soil float and some sink; not all leaves behave the same; some materials float at first and then sink.)
 - How easy was it to test our question? (It was easy because we could place the materials in water and observe what happened.)
 - What new questions do we have now?
- Discuss responses as a class.
- Explain that answering questions often leads to new questions.

Extend

- Ask the pupils to draw and label pictures showing:
 - the materials – each natural material collected and labelled;
 - the method – placing a material into a bowl of water;
 - the results – which materials floated and which sank.
- Alternatively, provide each group with their own bowl of water and ask them to choose and test one further question.