

Properties of solids, liquids and gases



Additional material

Purpose of activity

In this first lesson in the unit, children will revise their understanding of materials and their simple physical properties by revisiting key vocabulary. In addition, they will learn that materials exist in different states of matter: solid, liquid or gas. Through teaching and investigation, children will learn the properties of each of the states of matter. They will develop their disciplinary knowledge by exploring and describing the properties of balloons filled with a solid, liquid and gas. They will also match properties to materials in each state.

Materials

Task A

Each group will need:

- a balloon full of frozen water (fill it with water, tie it and leave in a freezer overnight)
- a balloon full of liquid water (fill it with water and tie it)
- a balloon full of air (inflate it with a pump or by blowing, and tie it)
- a bowl
- scissors

Method

Task A

Each group should be given a set of the three balloons and encouraged to explore their properties by answering these questions:

1. Which balloons can you change the shape of?
2. Use scissors to cut the knot off each balloon then try to empty the contents of each one into a bowl. What happens?

Sample data

None required.

Health and safety

Remind pupils that care is needed when using scissors. Be aware of any individuals allergic to rubber or latex.

Risk assessment

The information outlined in this guidance contains advice for how to work safely in and out of the primary classroom. However, risk assessments are the responsibility of the individual school. Please contact a local or national advisory service, such as CLEAPSS, on all aspects of health and safety for further support.

