



Topic: Investigating physical changes to materials

Investigating wetting

Lesson concepts

- A Everyday materials can be physically changed in a variety of ways
- Science involves asking questions and describing changes
- People use science in their daily lives
- A Questioning can be responded to, posed, and predictions made
- A Investigations can explore and answer questions
- Observations can be collected and recorded
- Information can be sorted
- Observations can be compared with predictions
- Observations can be compared with others
- A Observations and ideas can be represented and communicated

Today students will:

- ▶ understand that some materials can be physically changed by wetting them
- ▶ recognise how the properties of a wet material affect the purpose for which it is used.

Resources

Digital

Slideshow — Physical changes: wetting materials for a purpose

Find and prepare

Sheet 9 — Investigation: Wetting materials

Materials for investigating wetting: aluminium foil, a drinking straw, crepe paper, wool, wood, plastic bag, paper, waterproof modelling clay, a bowl of water

A collection of everyday objects, for example: cup, plastic mug, bowl, food container, bucket, box, vase, tray, book, pencil, ruler, sharpener, fork, spoon, face cloth, tissue, wallet, fabric bag, envelope, newspaper, strainer, gift bag, shower hat, gumboots, umbrella

Key terms

waterproof

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

Learning alerts

Be aware of:

- students thinking that all objects are suitable for wet conditions because they will dry
- students not recognising that it is the properties of materials that can change when the materials get wet.

Suggested next steps for learning

- Explain that although all objects may get wet, some are more suitable for a purpose due to the physical changes caused when wet.
- Allow students to experience changes to properties when materials are wet.

Lesson

Say to students

Scientists observe physical changes to materials in order to choose materials for particular purposes. Scientists also observe what happens to materials when they get wet.

In this lesson, you will be investigating what happens to materials when they get wet. You will be thinking about how this science knowledge helps people choose materials for particular purposes.

Focus questions

Q. *What have you noticed about objects when they get wet?*

A. For example: Sometimes they become soggy; sometimes the water runs off; sometimes it soaks in.

Q. *How are objects able to get wet?*

A. For example: Dropping things into water (for example: teddy bear into the pool), being rained on, in the washing machine, in the bath or shower.

Investigate how materials are affected by wetting

1. Display materials for investigating wetting: aluminium foil, a drinking straw, crepe paper, wool, wood (for example: iceblock stick or ruler), plastic bag, paper, waterproof modelling clay, a bowl of water.

Say to students

You are going to conduct an investigation to see what happens to these materials when they get wet. You are going to test these materials to find out which ones physically change when they are wet.

- a. Display **Sheet 9** — [Investigation: Wetting materials](#).
- b. Support students to read the question in the question bubble.

Say to students

‘ Before you test the materials to see what happens when they get wet, you are to predict whether they will change or not. ’

c. Explain the steps of the investigation for students to follow, and support students to conduct the investigation by completing the steps for each material in turn.

- Examine each sample of material.
- Discuss the properties of the material.
- Consider what will happen if the material is wet.
- Circle ‘yes’ or ‘no’ to predict if the material will change when wet.
- Test the material by wetting it in the bowl of water.
- Draw the wet material.
- Circle ‘yes’ or ‘no’ to show whether or not the material changed.
- Discuss the properties of the material when wet. For example: It is soft and soggy and falls apart.
- Guide students to compare the results with predictions.



Observe real-world applications

2. Display a collection of everyday objects arranged randomly.



Say to students

‘ Let’s have a look at these objects and find out which ones are suitable for getting wet. Sort these objects into groups: those that are suitable for getting wet and those that are not. ’

Say to students

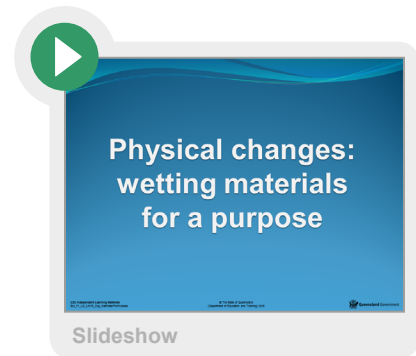
‘ You have seen that some materials physically change when they are wet and that some do not physically change when they are wet.

Scientists use knowledge of what happens to materials when they are wet when they choose materials for particular purposes.

People all over the world use knowledge of what happens to materials when they are wet when choosing materials for particular purposes.

Now, we are going to watch a slideshow which shows what happens to some materials when they are wet, and how this knowledge is used for particular purposes. ’

3. Display the **Slideshow — Physical changes: wetting materials for a purpose**.



In your investigation, you observed what happens when materials get wet.

These slides will show you examples of materials being wet for a purpose. As each slide is viewed:

- read the text to students
- use the text to explain to students what is shown in the illustrations
- relate any familiar situations to those shown in the slides, for example, making sandcastles at the beach; creating clay objects, such as plant pots or vases; using paints.

Say to students

‘ Knowing what happens when materials are wet, enables people to choose materials suited for particular purposes. ’

4. Ask students to suggest a new understanding about physical changes to materials when they get wet.