

Materials and change



Exploring the effects of water on a variety of materials

Waterproof

What does waterproof mean?

If a material is waterproof it keeps water out.

Why do we need waterproof materials?

To keep us dry! Our raincoats are waterproof to stop the rain from making our clothes wet. Boots are waterproof so that we can walk through puddles without our socks getting wet.

We all know the story of the Wizard of Oz and the fate of the Wicked Witch of the West but....

What could the Wicked Witch have worn to protect herself from the water that Dorothy threw?

We are going to explore the different properties of materials and try to answer this question.

Which material would you wear to keep yourself dry and why?



Making a prediction

Before we start our experiment testing different materials, we first need to make a prediction of what we think will happen.

Scientists make predictions all the time. In fact, scientists use predictions as part of their hypothesis, or question they try to answer through their experiments.



For each of the materials explore these questions...

What does it feel like?

What does it look like?

Does it make a sound when you squash it?

Can you fold it?

Do you think it will be waterproof?
(write your predictions down in the table)



Write your predictions down in the table.

LO: To observe and perform a simple test to answer a question. 09|02.21

Question: _____

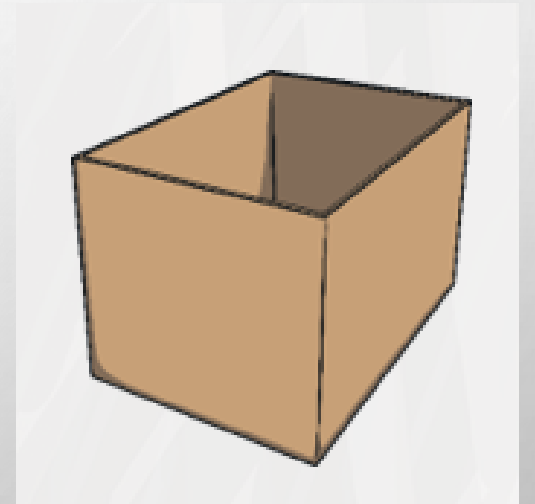
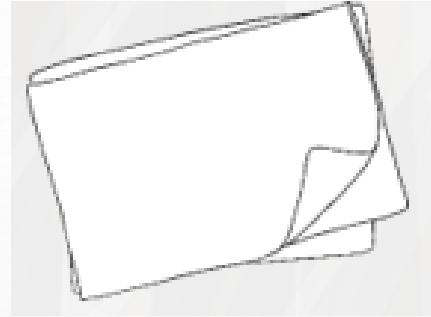
Experiment

Waterproof = Yes or No (tick or cross)

Material	Prediction	Result
Wood		
Metal		
Paper		
Brick		
Fabric		
Cardboard		
Glass		

Let's Investigate the Following Materials:

- Wood
- Metal
- Paper
- Brick
- Fabric
- Cardboard
- Glass



Find something made out of these materials ready to test

What Happens to the Material When Water Is Added?

Use a pipette or teaspoon to pour some water on to each material.



Does the material let the water soak in or does it keep the water out?



Which materials were waterproof?

LO: To observe and perform a simple test to answer a question. 09/02.21

Question: _____

Experiment

Waterproof = Yes or No (tick or cross)

Material	Prediction	Result
Wood		
Metal		
Paper		
Brick		
Fabric		
Cardboard		
Glass		

Fill in the results



Answering the question (your findings)

Now that you have finished testing the different materials have a go at answering the question....

What could the Wicked Witch have worn to protect herself from the water that Dorothy threw?