

Charles Macintosh



Aim

Monday 16th November 2020

I can describe Charles Macintosh and his famous invention.

I can investigate the most suitable materials for a particular use.

Success Criteria

- I can give facts about Charles Macintosh.
- I can describe Macintosh's famous invention.
- I can test materials to find out how waterproof they are.
- I can choose the best materials for a new waterproof coat.

Wet Weather Wear



When it is raining, people wear special wet weather clothes.
Which of these items would you use or wear in the rain?
Think about the things they are made from. What do they have in common?



Charles Macintosh

The clothes that people wear to protect them from the rain are waterproof. Waterproof fabric was invented by a scientist called Charles Macintosh. His invention was so important that raincoats are named after him! Click on this link to find out more.

https://www.youtube.com/watch?v=5fcCo0G3Z_w



**Raincoats
are called
Mackintoshes,
or macs.**



Waterproof Coat Test



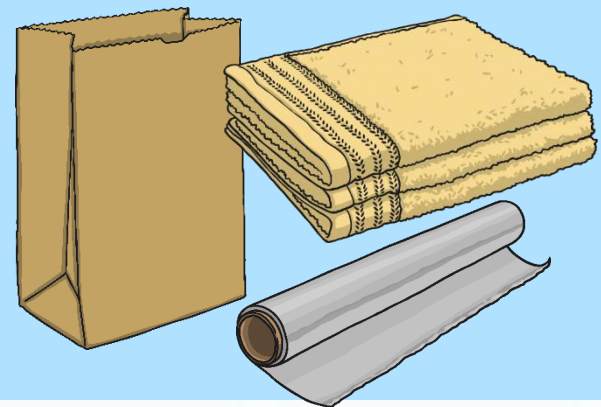
This is Harley. He needs a new raincoat to keep him dry in the rainy weather.



You need to find the best material to use to make his new coat.



Look around your home and see if you can find 5 different materials to test.



Waterproof Coat Test



See if you can stretch the materials over some cups. If not, just keep them flat.

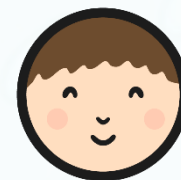
Drop some water onto each fabric. Not too much though!

If the water drips through into the cup, the material is not waterproof.

If the water stays on top, the material is waterproof.



Design the Waterproof Coat



Record your results like the sheet below. When you have finished, use your results to choose the most suitable material for Harley's coat.



Waterproof Coat

I can test materials to find out how waterproof they are.

I can choose the best material for a new waterproof coat.



Harley needs a new waterproof coat. Can you test fabrics or sheets to choose the most suitable one for his coat?

Fabric / Sheet	Waterproof or not?

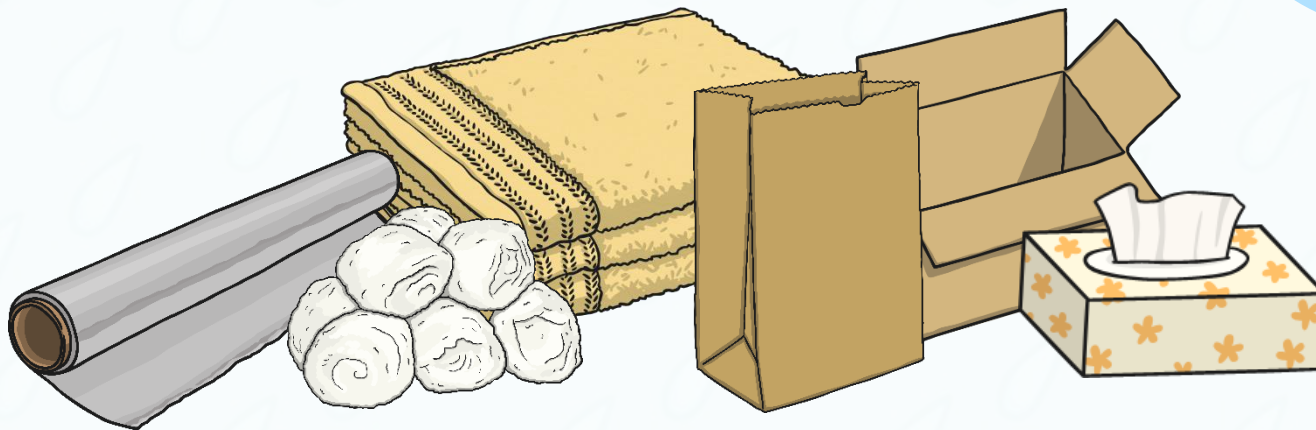
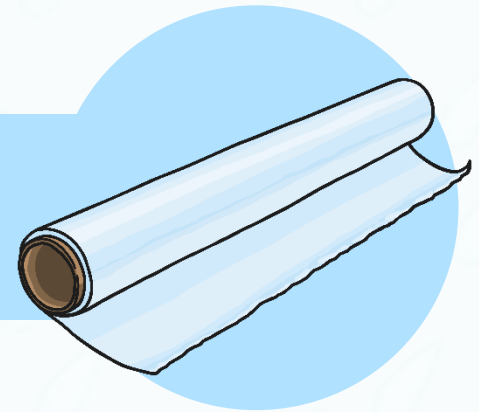
Which fabric or sheet would be most suitable for Harley's waterproof coat?

Draw Harley's new raincoat here.



Materials

The different things you tested are all made from different materials.
For example, the cling film sheet is made from plastic.



What are the other things that you tested made from?

Unsuitable Materials



Materials are chosen for particular uses based on their properties. Charles Macintosh created a fabric that was waterproof and flexible, so it could be used to make clothes.

A sheet of tinfoil is made from aluminium. This is a waterproof metal. Why would this not be a good choice of material for a waterproof coat?

Think about its other properties.

