



Amazing!

The Dog Walk and the Invention of Velcro

Have you ever heard of biomimicry?

It is when we mimic (in other words copy) events or actions that happen in nature. It helps us design and invent things and systems to solve problems.

Biomimicry in action

Engineer George de Mestral went for a dog walk in 1941. When he arrived home he saw the dog's fur and his own clothes had lots of 'things' attached to them. He realised these were from bushes on the walk. They are called burrs. A burr is the part of some plants that contain seeds. They have small hooks on the outside which makes them hook onto clothes and fur.

George looked at the burr under a microscope. He realised the small fine curved hooks on the burrs and the small loops of the fur and clothes allowed the burr to hook on and attach. He wondered if they could be used for something helpful. This sparked his idea to mimic (copy) the burr and create a type of fastener.

People did not believe his idea was going to work, some even laughed but he was determined. He worked hard and finally developed Velcro. There are lots of similar inventions to Velcro used all over the world. See if you can notice any Velcro type fasteners around you. What other materials are used to join and stick two things together?

Try the Stickiness Detectives Curiosity Challenge.



Are you curious enough to take on our challenge?

Stickiness Detectives

1.

The question

Which method of sticking a ball to paper works best, when tested under different conditions?

2.

The equipment

- 1 Airflow ball per group/pair
- 1 Piece of paper attached to a wall
- 1 Small self-adhesive Velcro dot (both sides)
- 1 Small blob of blu tack
- 1 Glue stick.
- 1 Small strip of sellotape / double sided tape
- Timer

3.

Create a fair test

- To identify which sticking method lasts the longest when sticking a ball to a wall.
- Using one sticking method at a time, stick the airflow ball to a piece of paper on a wall.
- Record how long it sticks for (up to 4 minutes). Record your findings.
- Another fair test could include testing all the different sticking methods by tapping the ball or using a fan against the ball or maybe placing some weight on the ball each time.

4.

Sharing results

Tick your chosen method

☐

Graph

☐

Presentation

☐

Photographs

☐

Pie Chart

☐

Report



Where will your curiosity take you?