

Dancing snakes

Ages 4-11



Time: 10-20 mins

Skills: observing, planning variables and testing hypotheses

You will need:

- a balloon
- tissue paper or a single layer tissue
- scissors
- pens
- sticky tape



Method

1. Draw two snakes onto the tissue paper.
2. Use the pens to decorate the snakes. Then, cut them out with the scissors.
3. Use the sticky tape to stick the snakes' tails to the table.
4. Blow up the balloon and tie the end.
5. Rub the balloon on your hair, until your hair stands on end.
6. Hold the balloon in the air above the snakes and watch what happens!



What's the science?

This is all about static electricity. There are two types of electricity:

- **current electricity** is the electricity that flows along wires from a battery or the mains
- **static electricity** is when an electric charge builds up in an object.

When you rub the balloon on your hair, you pick up tiny particles from your hair, called electrons. (Electrons are found inside atoms. All matter is made from atoms.)

Electrons from your hair give the balloon a negative electric charge. The tissue paper has a positive electric charge.

When objects have different electric charges they attract (pull towards each other). The positively charged tissue snakes are attracted to the negatively charged balloon. That's what makes the snakes dance!

Let's investigate!

Rub the balloon on a different surface, such as a woollen jumper or a cotton shirt, or rub it for a different length of time. What happens?

Make your snake from different materials. Try plastic, aluminium foil, nylon. Try different sized snakes. Which one works best?

Make aeroplanes, plants and other animals instead of snakes.

Get talking!

Show your family the dancing snake trick and ask them to explain the science.

Ask each member of your family to rub the balloon on their hair. Then, tell them to put the balloon above some Rice Krispies™ or tiny pieces of paper or foil. Who can lift the most pieces?

Find out more

Static electricity builds up when raindrops rub against ice crystals in storm clouds. This causes lightning. Go online to find out more about how this happens.

