

Make a magical Möbius strip

DID YOU KNOW?

The Möbius strip is named after mathematician and astronomer August Ferdinand Möbius. He invented this new shape in 1858.

Explore the weird world of an object with a single surface.

What you need

- Coloured paper
- Ruler
- Pencil
- Scissors
- Sticky tape

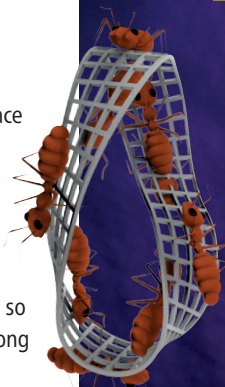
How does it work?

A Möbius strip only has one surface – there is no top or bottom.

If an ant were to walk along an ordinary loop, it could only walk on one side at a time – either on the outside or the inside.

A Möbius strip only has one side, so an ant crawling along it walks along both the bottom and the top.

Try cutting your loop more than once, or see what happens when you make loops with more than one twist.



Ants on a Möbius strip.



1 Cut a strip of paper measuring 2cm wide and 20cm long. Make a loop, twisting the strip once before completing it. Stick the ends together with tape.



2 Your loop with a single twist in it is an object called a Möbius strip. Now, cut carefully down the middle of your loop, splitting it in half lengthways.



3 Rather than falling apart into two paper hoops, a Möbius strip does something surprising. When you cut it in half it stays as one loop.