



Something to make

The Mobius Ring

*Have fun making your own Mobius ring...
...and be prepared to be amazed!*

The **Mobius ring** is named after German mathematician and astronomer, August Mobius. He and another mathematician - Johann Listing - discovered this extraordinary ring in the mid-19th century.

Mathematicians still find it fascinating today!

You will need:

- Two strips of paper about 3cm wide and 30 cm long.
- A glue stick.
- Scissors.
- A felt-tipped pen.

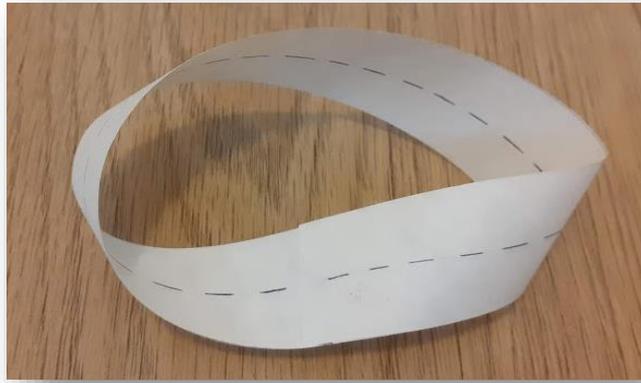
Make your Mobius ring

- Take a strip of paper, make a half-twist, then glue the ends together. That's it!



Your first trick

- Use your felt-tipped pen to draw a line along the middle of strip. Don't stop until you join up to where you started.
- What do you notice?
- Do you remember drawing a line on both sides of the paper...?!



Your next trick

- Cut along your line. Don't cut from the edge, but make a fold so that you can start **on the line**.
- Cut until you end up where you started. What do you think will happen?
- What does happen?!



**A mathematician confided
That a Möbius band is one-sided;
But you'll get quite a laugh,
If you cut one in half,
For it stays in once piece when divided.**

From a book of *Humorous verse*, compiled by Carolyn wells.

Your final challenge!

- Make a new Mobius ring.
- Cut along a line again, but this time **a third of the way across** the strip (you might want to ask someone to help with this), not in the middle.
Keep cutting until you end up where you started.
This [video](#) from youtube.com may help. Watch from 1 minute 10 seconds in, then pause it at 1 minute 50 seconds until you have made your cut!
- What do you think will happen this time?
- What does happen?