

**Activity description: Make Moebius strips**

- see <http://www.csiro.au/resources/moebius-strip-activity.html>

Age level: 6+

Time frame: short

Equipment needed:

- paper
- scissors
- tape
- a pen or pencil

Set-up:

- hand out equipment as above

Running the activity:

- have students cut their paper into strips
- join the ends to form a circle, but give it a twist before joining it
- cut the strip in half along its length
- answer these questions:
  - How much bigger is your loop than the one you started with? How much bigger is the loop if you cut the strip into thirds or quarters? Can you draw on only one side of a Moebius strip?

What's going on:

Moebius strips are often used as belts in machinery because they last longer - they wear out both 'sides' at once. This useful strip is part of a branch of mathematics called topology. Topology can be hard to explain, because in it straight lines or edges aren't important, and a circle is considered to be the same as a square. In topology, one is just a distorted or deformed version of the other!