

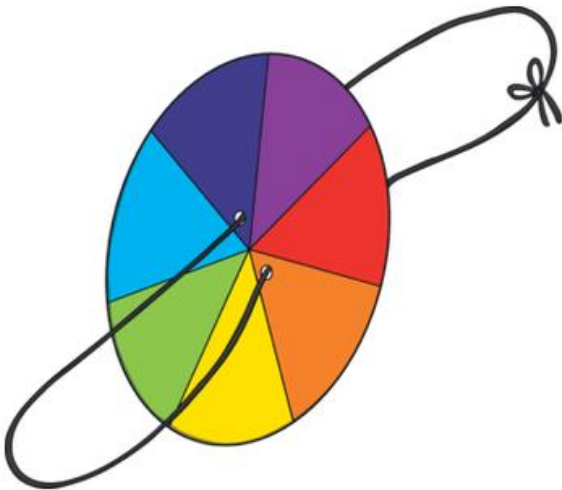


# Rainbow Spinners

Rainbows are formed by white light from the sun being split into all its component colours by *diffraction*. The rainbow spinner reverses the process by taking all the colours of the rainbow and merging them back into white!

## You will need:

- coloured pens or pencils
- string/wool
- scissors
- ruler
- wooden skewer or toothpick
- white cards
- spinner template (see below)



## Method

1. Use the template to cut out a circle of white card (alternatively cut both templates and stick together). Each side should be divided into six equal sections.
2. Colour both sides of the spinner. Make sure each section is a different colour.
3. With an adult, make two holes near the centre of the wheel (see template).
4. Measure 60cm of thin string or wool.
5. Thread one end of the string through both holes, so one side of the spinner has a loop of string and the other side has two loose ends. Tie the loose ends together.
6. Wind the wheel on the spinner several times. The more you wind the wheel, the better it will spin.
7. Hold the ends of the string, pull your arms to make the wheel spin around. Look closely at the wheel - what colour do you see?

## Background science:

Ordinary light is made up of 7 colours (red, orange, yellow, green, blue, indigo and violet).

Isaac Newton was the first person to show that light could be split up into seven different colours.

Just as raindrops and prisms can split white light into these seven colours so can white light be made by mixing the seven colours together.

By spinning the disc quickly, the eye sees all the colours together and so the disc appears white.

*Rainbow Spinner Template*

