



## To complete this activity, you will need:

- printed spectroscope cut-out (printed card works much better than paper)
- diffraction grating sheet (this can be purchased from online retailers)
- a light source to look at (e.g., a lamp or a torch)
- scissors
- ruler
- sticky tape

## Safety advice



Never look directly at the Sun!

Take care when using the scissors to score through the paper or card!

## Instructions

1. Print off the spectroscope cut-out (make sure to print on one double-sided sheet or carefully stick the 2 pages back-to-back using glue).
2. Cut out the spectroscope around the edges of the large shape.
3. Score down the short, dashed line on the bottom flap using scissors. This is the slit you will look through, so make sure your scissors break through the paper or card.
4. Cut out the small circle at the top. This hole will let light into your scope.
5. Cut out 2 squares of diffraction grating a similar size to the hole you cut out.
6. Rotate one of the pieces by 90 degrees and lie it on top of the other.
7. Carefully tape the gratings across the circular hole. It doesn't matter which side of the hole but make sure you don't bend the grating and ensure the tape doesn't cover the hole.
8. Carefully fold along the dotted lines on the spectroscope to create a long box. Make sure the writing ends up on the outside of the box.
9. Stick the two flaps at the end down to seal the box. Again, be careful not to bend or cover the diffraction grating.
10. Point the hole at different light sources and look through the slit.

**You should be able to see a spectrum of light inside your spectroscope.  
It may remind you of a rainbow!**

