

Build Your Own Solar Eclipse Viewer

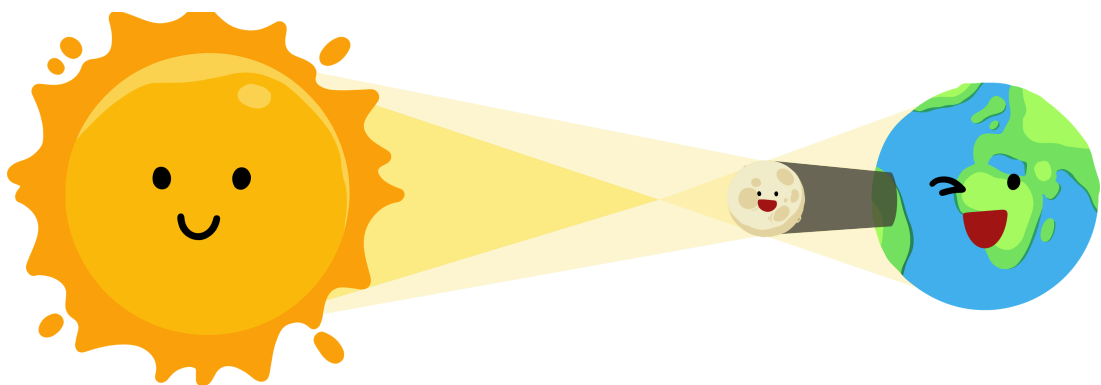
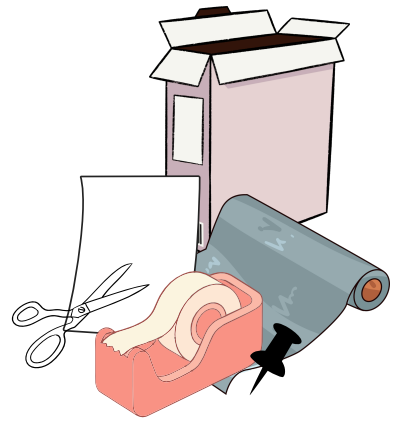


Safety First

NEVER look directly at the sun — not with your eyes, not through the pinhole, not through sunglasses or a camera. This viewer works by looking at a small projected picture of the sun, with your back turned **AWAY** from it.

What you'll need:

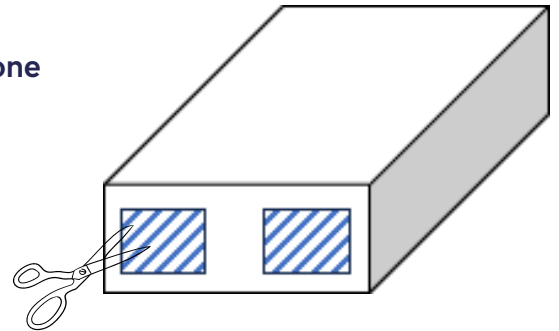
- ☐ A long box (a shoebox or cereal box works great)
- ☐ A piece of aluminium foil
- ☐ A sheet of plain white paper
- ☐ Tape
- ☐ Scissors (ask an adult to help with cutting)
- ☐ A pin or thumbtack



A solar eclipse happens when the Moon passes exactly between the Sun and the Earth, blocking some or all of the Sun's light. Researchers in Aberystwyth's Department of Physics study light from stars and planets every day — today, you're one of them!

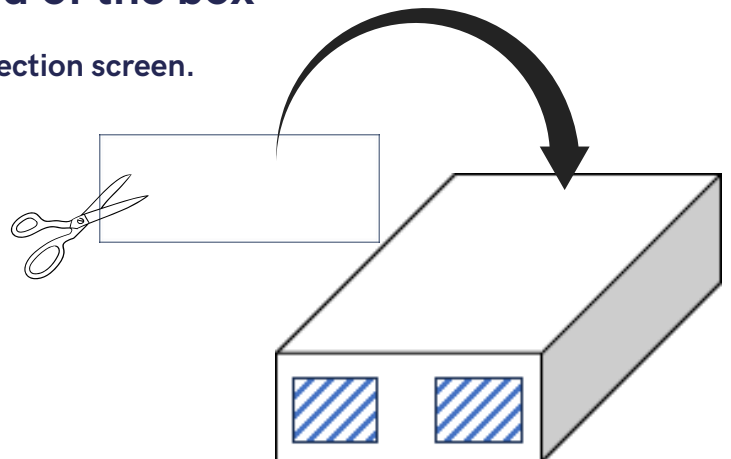
Cut two holes in one short end of the box

Ask an adult to help you cut two small square holes (about the size of a stamp) in one short end of the box.



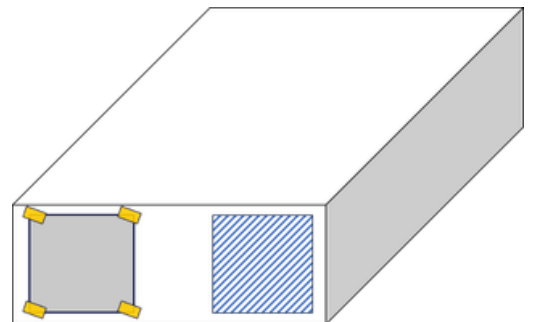
Cut a piece of plain white paper to fit in the other short end of the box

This will be your projection screen.



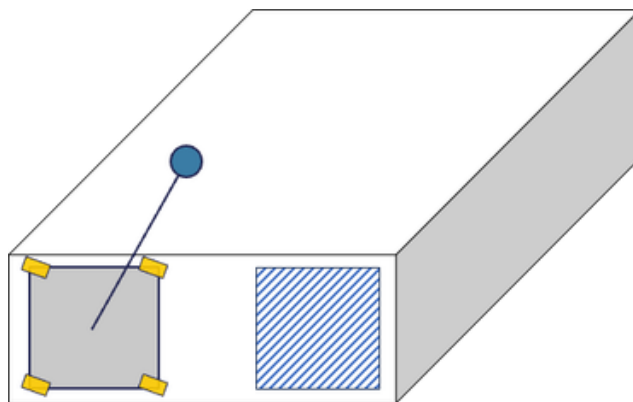
Tape foil over one hole

Tape down all four edges so no extra light can sneak in around it.

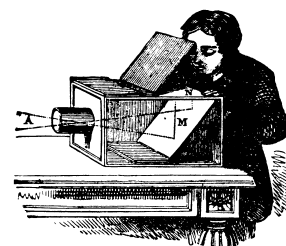




Poke one tiny pinhole in the middle of the foil



The smaller and rounder your pinhole, the sharper your projected image will be. This is the same principle behind a “camera obscura” — one of the earliest tools ever used to study the Sun.



Now you are nearly ready to go!

Before you use your solar viewer, answer these questions with an adult.



Is it ever safe to look straight at the sun without special protection?



Which way does your body face when you use the viewer?

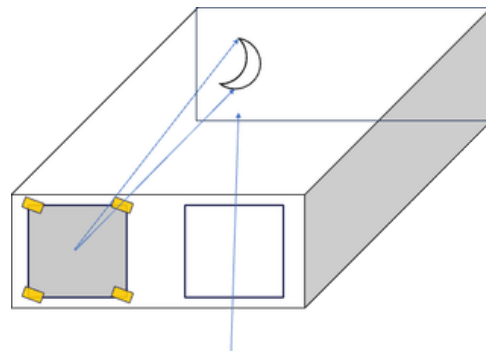


Use your solar viewer

Stand with your back to the sun.

Hold the pinhole end up so sunlight passes through it.

Look through the viewing hole at the little image of the sun on the paper inside.



NEVER turn the box around and look at the sun through the pinhole!

Draw what you see

