

DIY: Simple Pinhole Projector for Solar Eclipses

One of the simplest ways to safely watch a solar eclipse is to use two sheets of cardboard and make your own simple pinhole projector.

PROJECT THE SUN

Never look directly at the Sun without proper eye protection. You can seriously hurt your eyes and even go blind.

Projecting the Sun through a box projector, or using binoculars or telescope, or simply two pieces of card is a safe and easy way to view a solar eclipse.



Eclipses can be projected using only cardboard.
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Unfortunately, for planet transits like the Mercury Transit on May 9/10, 2016, Mercury is too small and too far away from Earth to be projected in this manner.

DIY: SIMPLE CARD PROJECTOR

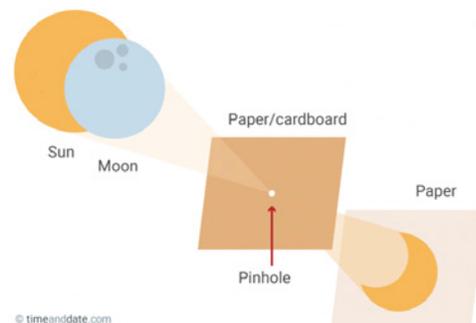
The simplest and quickest way to safely project the Sun, is with a projector made from only two pieces of paper.

You need:

- Two pieces of stiff white cardboard, like two paper plates.
- Alternatively, two sheets of plain white paper.
- A thumbtack or a sharp pin / needle.

What To Do:

1. To make a quick version of the pinhole projector, take a sheet of paper and make a very small hole in the middle of it using a pin or a thumbtack. Make sure that the hole is round and smooth.
2. With your back towards the Sun, hold one piece of paper above your shoulder allowing the Sun to shine on the paper.
3. The second sheet of paper will act as a screen. Hold it at a distance, and you will see an inverted image of the Sun projected on the paper screen through the pinhole.
4. To make the image of the Sun larger, hold the screen paper further away from the paper with the pinhole.



Using two pieces of cardboard or paper you can project an image of the Sun that does not hurt your eyes.

A box projector works on the same principles, but is sturdier and requires a little more time and a few extra items to construct.

KEEP SAFE!

- Never look at the Sun directly without protective eye gear. Even sunglasses cannot protect your eyes from the damage the Sun's rays can do to them.
- Always keep your back towards the Sun while looking at a pinhole projection.
- Do not look at the Sun through the pinhole.