

Make a pinhole projector to safely see the solar eclipse

One of the easiest ways to safely watch a solar eclipse is to use 2 sheets of cardboard and make your own simple pinhole projector.

Never look directly at the Sun without proper eye protection. You can seriously hurt your eyes and even go blind. Always keep your back toward the Sun while looking at a pinhole projection. Do not look at the Sun through the pinhole.

Projecting the Sun through in pinhole projector with simply two pieces of paper is a safe and easy way to view a solar eclipse.

DIY: Simple Card Projector

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

You Need:

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

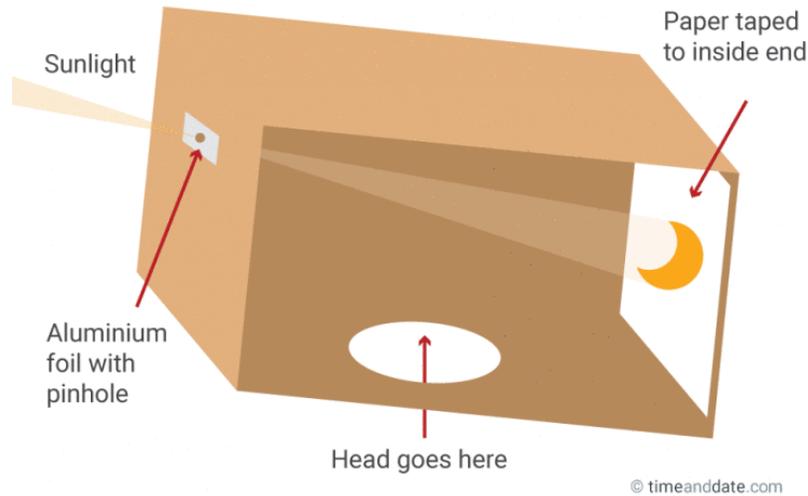
What to do:

1. To make a quick version of the pinhole projector, take a sheet of paper and make a tiny hole in the middle of it using a pin or 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.

Flip page for instructions on making a box projector.

<https://www.timeanddate.com/eclipse/make-pinhole-projector.html>





Make a box pinhole projector to safely watch the solar eclipse

A simple and safe way to watch a solar eclipse is with a box pinhole projector. It is easy to make from a cardboard box and ordinary household items

Never look directly at the Sun without proper eye protection. You can seriously hurt your eyes and even go blind. Always keep your back toward the Sun while looking at a pinhole projection. Do not look at the Sun through the pinhole.

DIY: Projector using a box

This type of pinhole projector works on the same principle as a basic pinhole projector. However, the box makes this projector much sturdier and easier to set on a surface. And it only requires a few extra items to construct.

You Need:

- | | |
|----------------------|-----------------------------|
| A long cardboard box | Scissors |
| Duct tape | Aluminum foil |
| Pin or thumbtack | sharp knife or paper cutter |
| Sheet of white paper | |

What to do:

1. Cut a rectangular hole at the end of the box. You can tape two boxes together to make a long box. The longer the box, the larger the projected image.
2. Using the scissors, cut out a piece of the aluminum foil slightly larger than the rectangular hole. Make sure the foil is completely flat and not crinkled.
3. Tape the foil over the rectangular hole in the box.
4. Use the pin to poke a tiny hole in the center of the foil.
5. Tape the sheet of paper on the inside of the other end of the box.
6. Stand with your **back** toward the Sun. Place the box over your head with the pinhole towards the Sun. Adjust your position until you see a small projection, a negative image, of the eclipsed Sun on the paper inside the