

# Solar Eclipse 2017

There will be a solar eclipse visible from North America on August 21, 2017. One way to view the eclipse safely is to construct a pinhole projector, just like those that appear in the diagrams on this page. All you need is a cardboard box, scissors, tape, white paper, aluminum foil, and a pin.

## INSTRUCTIONS

Cut a small square (approximately 4 cm x 4 cm) out of the box at one end. Cover the square hole with aluminum foil (approximately 10 cm x 10 cm) and use duct tape to hold it in place.

Carefully use a pin to poke a very small hole into the aluminum foil so that light can enter into the box.

At the other end of the box, place some white paper inside to act as a screen and be sure to secure it with some tape.

Cut a hole into the bottom of the box so that you can fit your head inside. Do not make the hole too big because you want to keep as much light out of the box as you possibly can.

Seal up the corners and the flaps of the box the best you can, using duct tape. Once again, you want to keep as much light as possible out, but don't cover up the pinhole and don't cover the hole where you stick your head into the box.

On the day of the eclipse, go outside, turn your back to the Sun, place the pinhole projector over your head and observe the eclipse indirectly by viewing the image on the white paper located inside the box.

## Here are some tips that will help you make a great pinhole projector.

- If you want a sharp image, try to make a really small pinhole.
- Small pinholes give you sharp, but dim images.
- If you want a bright image, make your pinhole a bit bigger.
- Large pinholes give you bright, but fuzzy images.
- Longer boxes give you larger images, try to get a box that is at least 60 cm long.

## MAKE YOUR OWN CARDBOARD PROJECTOR

You can make this simple eclipse projector with some cardboard, paper, tape and foil.

The longer the distance from the pinhole to screen, the larger the image of the sun will be.

White paper screen taped to inside end of the box

Small image of partially eclipsed sun

Sunlight

Aluminum foil with pinhole

