People across North America will be able to see an eclipse on August 21. A solar eclipse happens when the Moon passes between you and the Sun. The Moon blocks your view of the Sun. Some lucky people in the USA will see the Moon totally block the Sun. Most people will see the Moon only partially block the Sun.

Plan Ahead

Find a Spot

Look for your shadow. At the same time as the eclipse, you need to clearly see the shadow of your head and shoulders. Your shadow can fall on the ground or on a wall. You can be indoors or outdoors.

Make your Pinhole Projector

Materials:
• 2 cards or small paper plates
• push pin

Procedure:
Use the pin to poke a hole in a card. That’s it! You now have a pinhole projector. The card with the hole is your pinhole card. The other card is your screen.

Using a Pinhole Projector

1. Go to your eclipse viewing spot. Stand facing AWAY from the Sun, and find your shadow.
2. Hold your pinhole card up so that you can see the card’s shadow above your shoulder’s shadow.
3. Hold the other card (the screen card) in front of you. Make its shadow overlap with the shadow of the pinhole card.

You should see a circle of light on your screen card. That is actually an image of the Sun!

When you use your projector during the solar eclipse, you will see something other than a circle. You will see the shape of the eclipsed Sun.

You can watch the Sun’s crescent grow smaller and then bigger again.

Extra fun

Make a fancy pinhole projector. Draw a simple design on your card and use the push pin to punch holes about 1/4 inch apart. What does its shadow look like during the eclipse?

Look for natural pinhole projectors, like in the dappled shade of trees. What happens to the tree shade during the eclipse?