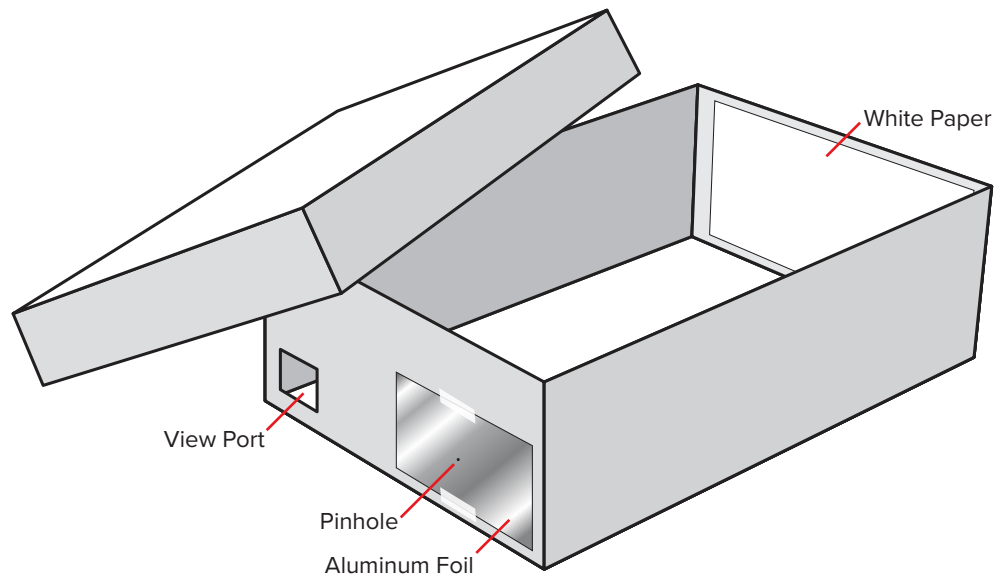


# Pinhole Eclipse Viewer

## Materials

- cardboard box (such as a cereal or shoe box)
- scissors
- tape
- 3 x 3 inch piece of aluminum foil
- push pin
- white paper
- ruler



## Conduct an Investigation

1. Open the box. Tape the white paper to the inside of the short side of the box.
2. On the opposite side of the white paper, cut two holes side-by-side about 10 cm apart.
3. Cover one of the holes with aluminum foil and tape into place.
4. Carefully poke a small hole in the aluminum foil with the pin. **⚠ Use CAUTION when using the push pin; it has a sharp point. ⚠**
5. Seal the box with tape.
6. Go outside during the eclipse. Stand with your back to the Sun. **⚠ NEVER look directly at the Sun. ⚠**
7. Look through the open hole in your box.
8. Position your body so that you can see the Sun's light shining on the white paper.
9. Observe the eclipse safely through your pinhole viewer.
10. In the space below, draw your observations.

## Eclipse Observations



## Communicate Information

1. Explain what happens during an eclipse.

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2. What are the advantages of using a pinhole viewer to see the eclipse?

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# Pinhole Eclipse Viewer

## Materials (per pair)

- cardboard box (such as a cereal or shoe box)
- scissors
- tape
- 3 x 3 inch piece of aluminum foil
- push pin
- white paper
- ruler

**Objective:** Students can safely view the solar eclipse by using an easy-to-assemble pinhole viewer.

## Teacher Notes

Have students collect cardboard boxes and bring them to class. The longer the box, the larger the eclipse will appear in the viewer.

## Conduct an Investigation

**Step 2.** Students may need assistance cutting holes in the box. If you teach younger students, precut the holes in the boxes prior to class.

**Step 4.** Monitor students when using the push pins. Only a small hole needs to be made in the aluminum foil.

**Step 5.** You may wish to use an opaque tape, such as masking or duct tape, to seal the boxes.

**Steps 6–9.** Remind students to never look directly at the Sun. If students are sharing pinhole viewers, be sure that students are taking turns and are able to view the eclipse. Help students find the right position to safely watch the eclipse through their viewer.

