

## The 2017 Eclipse: How to Safely View the Sun!

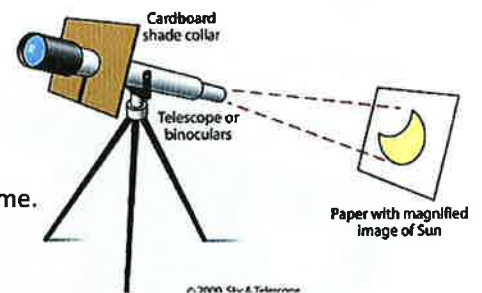
Monday August 21<sup>st</sup>, beginning at approximately 9:03 am, you'll be able to see a partial Solar Eclipse here, in Tehama County; the maximum eclipse will be at about 10:10 with it ending at roughly 11:35 am. While this is crazy cool and does not happen often, it can be damaging to your eyes. Many of the "safe" viewing glasses that are sold in stores and online are not truly safe. A safer way to view the eclipse is through an indirect method. There is a variety of great websites with more information on the eclipse. I recommend <https://www.exploratorium.edu/eclipse> for more information and <https://www.timeanddate.com/eclipse/in/usa/redding> to see a time projection of the eclipse.

In case you or your child are wondering what the dangers of viewing the eclipse are, please watch this video: <https://www.exploratorium.edu/eclipse/video/how-view-solar-eclipse-eyeball-safety> it has an easy to understand explanation of what happens to your eye when looking at the sun.

At Lincoln Street School, we'll have a telescope set up for **indirect** viewing from about 9:50 until 11 am on Monday, August 21, 2017 for students and parents to safely view the eclipse. Please note, this is not a drop off event; to get the most out of our viewing party, you'll want to be here no later than 9:55 and plan on staying until about 10:30.

If you make your own indirect viewing device, please feel free to bring it to our school viewing party!

Following are directions you can use to make two different in-direct viewers at home.



*There are a variety of ways to view the eclipse safely, and here we present a few of the cheapest (or free!) options.*

## Make a Box Pinhole Viewer



*Household items can be used to safely view the sun at little or no cost.*

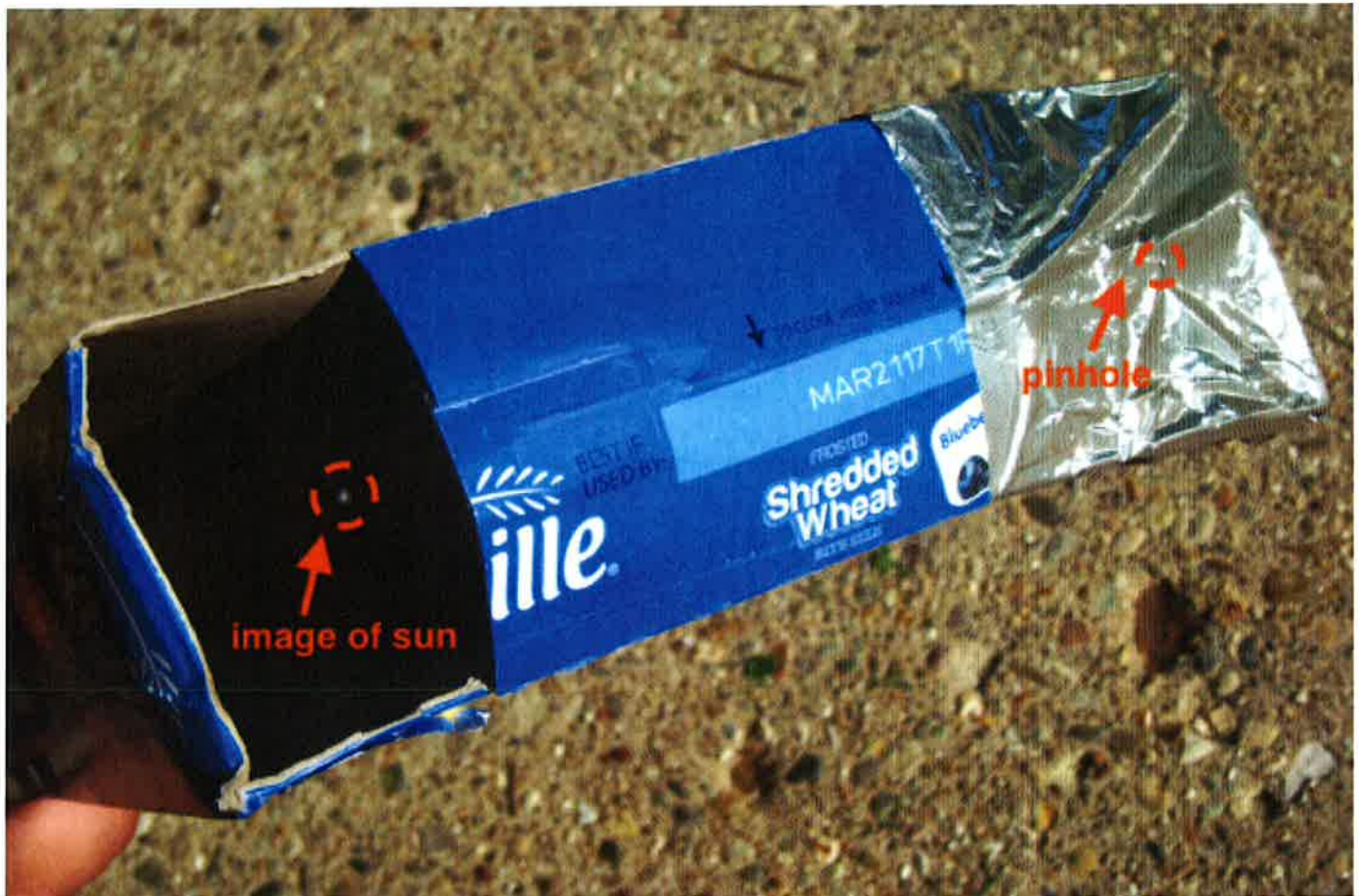
Another easy method to make a pinhole viewer is to use a long box. Here we demonstrate with a cereal box, but any box will work, and longer boxes will result in larger projected images to view. Boxes tend to be shorter than tubes, which makes them easier to aim, however the projected image will typically be smaller than using a tube.

Open the top of the box, remove the short flaps completely, and cut 1.5-2 inches off both ends of each long flap. Tape the remainder of the long flaps together. Place aluminum foil over one end of the box so that it covers one of the holes completely, and tape the foil into place. Use a small pin, needle, or thumb tack to make as tiny of a hole as possible in the center of the foil. The other open side becomes the view hole to look into to find the image of the sun.

The box pinhole viewer is quite easy to aim at the sun, and elementary-aged children can often aim box pinhole viewers on their own. Simply turn your back to the sun, and face the end of the box with the foil and the hole. Aim the pinhole viewer at the sun behind your back; the foil will reflect the most light when you have aimed the box correctly. Look into the open view hole in the box and you will see a small projection of the sun. A regular-sized cereal box makes an image about 3 millimeters across, large enough to see the main features of the eclipse.



*Modify the flaps on a cereal box to turn it into an eclipse viewer.*



*While the image projected with the cereal box is smaller than the image made with the longer tubes, the shorter cereal box makes it easier to aim and ideal for younger children to use.*