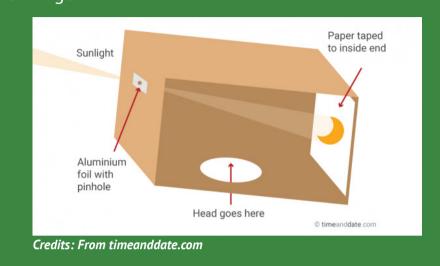
# Easy Ways to View the Eclipse

#### **Pin-hole box**

You can poke a pin-hole in the centre of one face of a long cardboard box, paste a white paper on the inside of the opposite side, and cut a hole on the side to view the image.



#### Projection with telescope or binoculars

If you have a small telescope or binoculars with no plastic parts, you can project the image of the sun on to a piece of paper. This is a perfectly safe method and produces the sharpest image of the sun. However, take care that no one looks into the telescope from either end by accident even for a moment - they may burn their retinas.



Credits:Projection of the solar eclipse on 3 Oct 2005 by Luis Fernández García from Spain

#### Flat mirrors as pin-holes

You can take a flat mirror which is 0.5 cm in size (or mask a larger mirror suitably) and stick it on a sturdy ball. This ball can be placed on a bowl or a scotch-tape ring, and on a stool outside your house. You can rotate the ball to send the reflected beam of sunlight into a darkened room through a window. This can produce an image of the sun that is 30-40 cm big, on the opposite wall. Try doing this on the days before the eclipse. Be careful that no one gets in the path of the reflected light!



The ball-mirror mounted on a scotch-tape roll



The sun's image formed by the ball-mirror inside a room

Credits: Navnirmiti Foundation, India

#### Eclipse glasses

Specially made eclipse glasses (ISO standard 12312-2:2015) by professional dealers are safe to use to see the sun directly for the entire duration of the eclipse. If you do have them, make sure they are not damaged, and remember that sharing them with everyone may transmit coronavirus.



School students looking at the solar eclipse on 3 Nov 2013 using eclipse glasses. Credit: Chuck Ruehle/Telescopes to Tanzania

## Did you know?

The ball-mirror method acts just like a pin-hole projection, but using reflection instead of transmission. Also, since the distance from the mirror to the screen is many metres away, the mirror behaves as if it were a tiny pin-hole.

### Activity

Make a pin-hole projection box and the ball-mirror and look at the sun's projected image everyday. Show it to people around you

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Background image: A montage of the stages of the annular solar eclipse of 26 Dec 2019, by Aasif Iqbal J from Coonoor, India.