

Easy Ways to View the Eclipse

There are many easy methods to enjoy the solar eclipse that can be done from home.

Pin-hole methods

A pin-hole creates an upside-down image of an object on a screen and can be used to safely view the solar eclipse. The size of the image is bigger if the distance between the screen and the pin-hole is longer. For the sun, its image will be about 110 times smaller than the distance to the pin-hole. You can think of clever ways of making this distance longer while shielding the screen from ambient light to increase contrast. Here are some methods that you can try in the days before the eclipse.

Trees - nature's pin-holes

The gaps between the leaves of trees act as pin-holes, creating dozens of images of the sun on the ground below. Look for suitable trees ahead of time, and put large sheets of white paper on the ground to increase contrast.



A tree casting pin-hole images of the partial solar eclipse, on 3 Oct 2005, photographed by Ellywa from Malta

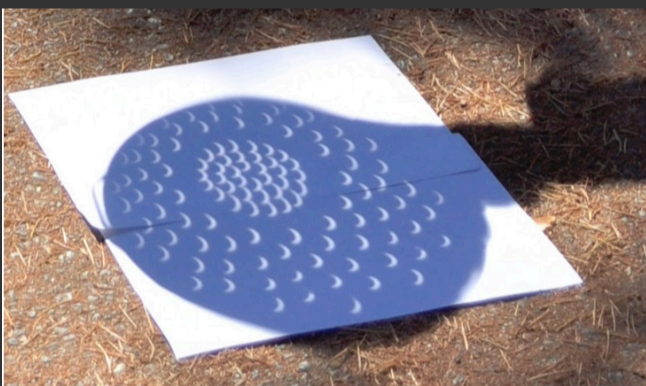


Credits: AAS / Rick Fienberg



Forming pin-holes from household items

We can form pin-holes with our hands, with kitchen sieves, and even poke multiple holes on a piece of cardboard to make interesting patterns on the ground below. What patterns did you come up with?



Credits: Multiple pin-hole images of the partial solar eclipse on 21 Aug 2017 through a kitchen sieve, photographed by Joe Mabel from USA



Credits: <http://www.eclipseafrica.org/>

Did you know?

Imaging by pin-hole projection was known to various civilisations for around 2500 years and it was first explained correctly by the physicist Ibn al-Haytham from Cairo in the 11th century. It has been used by astronomers like Kepler and Galileo to study the sun, and artists like Leonardo da Vinci to draw correct perspectives.

Activity: Pin-hole Challenge

Can you think of innovative ways of projecting the sun's image with pin-holes using what is available in your house? Interesting patterns of pin-holes on a paper to cast striking collection of images? Take a photograph now and post on facebook or twitter with #EclipsePinholeChallenge and tag us at @afas2.0 (facebook) or @africaastronomy (twitter).

LOOKING AT THE SUN DIRECTLY WITH YOUR NAKED EYES OR THROUGH A TELESCOPE, BINOCULARS OR A LENS, MAY PERMANENTLY DAMAGE YOUR EYES.

Download this poster series and our Eclipse Handbook for Africa from our website

<https://www.africanastronomicalsociety.org/solar-eclipse-2020/>

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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.