

Solar Eclipse Safety



Partial Eclipse (Use filter)

Total Eclipse (No filter)

Partial Eclipse (Use filter)

*A total solar eclipse is about as bright as the full Moon — and just as safe to look at.
But the Sun at any other time is dangerously bright; view it only through special-purpose safe solar filters.*

IMPORTANT REMINDERS:

1. Greeneville is not in path of TOTALITY, we are in the 98% portion of eclipse. **YOU MUST WEAR ECLIPSE GLASSES TO VIEW THE ECLIPSE IN OUR AREA! CANNOT BE SUNGLASSES!** You will get permanent eye damage from looking at the eclipse without Eclipse glasses. Eclipse glasses have to have ISO 12312-2 safety standard. These are the ones purchased for Greeneville City Schools.
2. If you do not have Eclipse glasses, turn on the back of the page to get directions to make a pinhole projector and Youtube video links about safety.
3. Inspect glasses for scratches or damage--do not use them if they are damaged. Make a pinhole projector.
4. To put on eclipse glasses, stand still and cover your eyes with your eclipse glasses or solar viewer before looking up at the bright sun. To take glasses off, turn away from sun, look down and take off glasses.
5. Do not use your cell phone or camera to take picture of eclipse. This will damage your cell phone and cameras. You have to have a special filter.
6. If you normally wear eyeglasses, keep them on. Put your eclipse glasses over them. Make sure they are secure.
7. Always make sure your child uses Eclipse glasses and they cannot "peak" beneath them. The glasses are very dark and they will not be able to see. See directions for making an "adapter" for the glasses.
8. If you are in the **path of totality**, check out Nasa's website for recommendations for safe viewing without glasses.

Pinhole Projector:

Note that pinhole projection does not mean looking at the Sun through a pinhole! You project sunlight through the hole onto a surface and look at the solar image on the surface.

Pinhole Projection

As noted in [How to View a Solar Eclipse Safely](#), a convenient method for safe viewing of the partially eclipsed Sun is *pinhole projection*. You simply pass sunlight through a small opening (for example, a hole punched in an index card) and project an image of the Sun onto a nearby surface (for example, another card, a wall, or the ground).

You don't need any special equipment to do this! Just cross the outstretched, slightly open fingers of one hand over the outstretched, slightly open fingers of the other. Then, with your back to the Sun, look at your hands' shadow on the ground. The little spaces between your fingers will project a grid of small images on the ground. During the partial phases of the solar eclipse, these images will reveal the Sun's crescent shape, as shown in the accompanying photo.

If your observing site has trees, look at the shadows of leaves on the ground. During the partial solar eclipse, the tiny spaces between the leaves will act as pinhole projectors, dappling the ground with images of the crescent Sun!

Safety Videos on YouTube:

(Good General Video for Eye Safety) <https://www.youtube.com/watch?v=D9xCXsPxoFI>

(Nasa Video; General Information and Safety):

<https://www.youtube.com/watch?v=Sc62a5tfUmk>

Great Sites to Investigate:

Eclipse 101: <https://eclipse2017.nasa.gov/>

To STREAM the ELIPSE: <https://www.nasa.gov/eclipselive>

Adapter for Small Children:

1. Number one thing to ensure safety is closely monitoring your child. Use your best judgement—if your child tries to take off sunglasses normally and cannot be still; it **is not worth the risk to damage their eyes**. There will be other opportunities in their lifetime to view an eclipse.
2. Because the eclipse glasses are so dark, kids make think they are missing something and try to “peek” around their glasses—damaging their eyes. You can make a “mask” that should help prevent kids from “peeking” under/over the glasses
3. Below is a suggestion of how to make a frame for your glasses. You must make sure that glasses are secure. Use a rubber band or ribbon to tie the “frame” to your child’s face. **IF YOU PUNCTURE YOUR CHILD’S GLASSES MAKING THE MASK—DISCARD THE GLASSES.**
4. This is just a suggestion; if you are hesitant in any way---**DO NOT TAKE THE RISK!! DO NOT LET THEM VIEW THE ECLIPSE.**

