

Observe the Total Solar Eclipse with GLOBE Observer

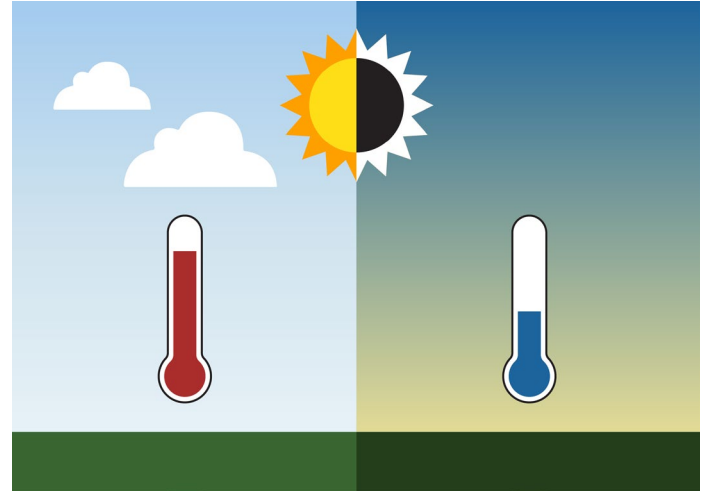
National Aeronautics and Space Administration



Save the date for the total solar eclipse on April 8, 2024!

Explore the Sun-Earth connection by observing what happens to our atmosphere during the solar eclipse on April 8, 2024.

The Sun drives many processes in Earth's atmosphere. During an eclipse, the Moon casts a shadow on the Earth's surface. In the shadow, the air temperature drops and clouds that are fueled by the heat of the Sun may begin to dissipate. With just a smartphone and a thermometer, you can help us better understand the complex relationship between the Sun and Earth.



Get the App

Download the GLOBE Observer app onto a smartphone or tablet by scanning the QR code or going to observer.globe.gov/get-the-app.



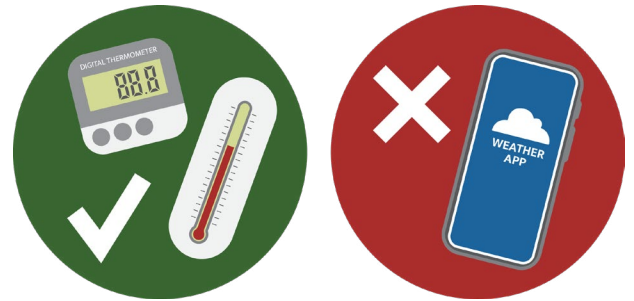
Don't worry if you don't see the Eclipse tool in the app yet; it will become available closer to the eclipse. You will only see the tool if you are in an area that will experience a partial or total eclipse.



Set up an account and complete the tutorials for Land Cover and Clouds before the day of the eclipse.

Find a Thermometer

You will need a thermometer to collect air temperature data.



You can use a digital or liquid-filled thermometer. However, the weather app on your phone is not a substitute for a thermometer.

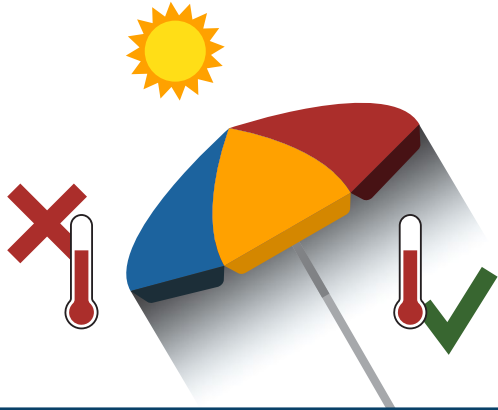
Gather everything you need to safely observe the eclipse, such as water, sunscreen, eclipse glasses, and anything else you need to stay safe and comfortable during the eclipse.



Remember, looking directly at the Sun without proper eye protection is unsafe EXCEPT when the Moon completely blocks the Sun. This happens ONLY within the narrow path of totality. Outside the path of totality, it is NEVER safe to look directly at the Sun without a solar filter.

Set-up Your Thermometer

Place your thermometer in a shaded, but well-ventilated area. For example, you can place your thermometer under a chair or hold it in your own shadow. Be sure to hold the thermometer away from yourself or other sources of heat.



Using the App

You do not need a connection to the internet to record observations. The app will walk you through all of the steps.

Next Observation:
4 mins 45 secs

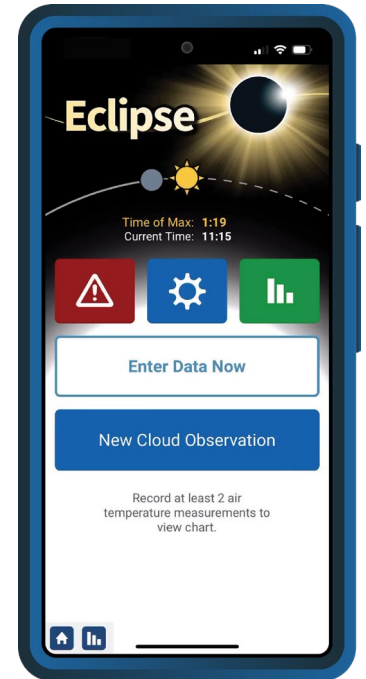
Clouds

Would you like to perform a clouds observation now?

NO

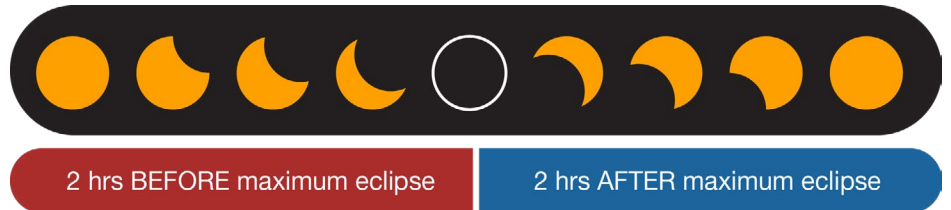
YES

The app will remind you when it is time to take the next observation.



Collect Data

Your observations are most useful to scientists if you collect data through all phases of the eclipse (about 2 hours before and after maximum eclipse).



When you first arrive, document the land cover around you.

Take photos of the landscape in each direction. Include your thermometer in one photo.

The land cover affects the way that solar energy is absorbed.



Every 15-30 minutes, or any time you notice a change in the clouds, observe the clouds and sky conditions.

Cumulus clouds are fueled by the heat of the Sun. If these clouds are present before the eclipse, they may dissipate as the Moon blocks the Sun.



Every 5-10 minutes, measure the air temperature.

Use your thermometer to measure air temperature and enter the data into the app.

We can expect the temperature to drop as the moon blocks the Sun's energy.

Share Your Observations

The app will generate a graph of your data, which you can share on social media. Remember to send in your observations after the eclipse. All GLOBE data is made freely available to researchers and students around the world.

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