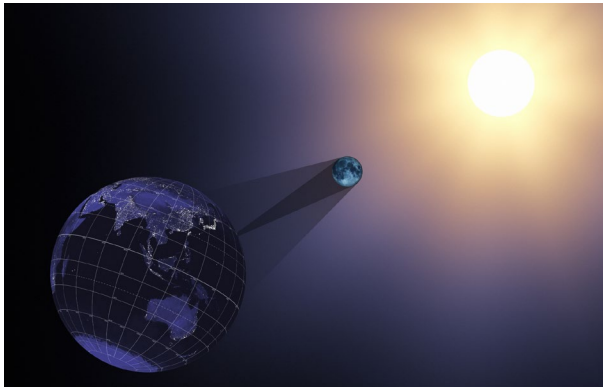




<https://pixabay.com/images/search/eclipse/>

### **What are the phases of a total solar eclipse?**

An eclipse of the Sun occurs when the Earth, Moon, and Sun are aligned in such a manner that the moon's shadow is cast onto the surface of the Earth. The trick is the perfect alignment of the three celestial bodies and that you have to be in the correct position on Earth to be in the Moon's shadow. The path of totality over New York State for 4/8/2024 can be seen on [NASA's website](#).



Images: <https://svs.gsfc.nasa.gov/12170/>

There are different phases of a solar eclipse:

**1st Contact** - as the moon begins to travel in front of the Sun, it casts a partial shadow on the Earth. This is called a penumbra. This is the beginning of the eclipse. As the moon begins to cover the majority of the Sun's disk it is possible to begin to see Baily's Beads and finally the Diamond ring effect. The Baily's Bead effect is seen as the moon makes its final move over the Sun during the total solar eclipse. The rough surface of the moon allows some "beads" of sunlight to shine through the troughs of the rough surface while higher points on the moon block the sunlight. This allows the effect of "beads" showing around the moon. As explained in [wikipedia](#), the name Baily's Beads came from the scientist who first explained the phenomena, Francis Baily in the early 1800's.

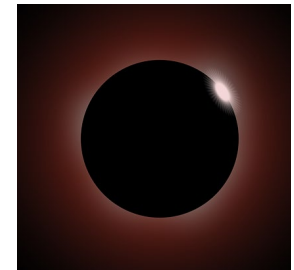
The diamond-ring effect explained by [NASA](#), occurs at the beginning and end of totality during a total solar eclipse. As the last bits of sunlight pass through the valleys on the moon's edge and after Baily's Beads are seen, when the corona (outer edge of the atmosphere) around the Sun is just becoming visible, it looks like a ring with glittering diamonds on it.



<https://pixabay.com/images/search/eclipse/>

**2nd Contact:** Totality - during totality, the moon is centered in front of the Sun and the moon's shadow is cast onto the Earth's surface creating a "nighttime" effect on Earth. The moon's shadow when it fully blocks the Sun's rays is called the umbra. The sky is dark, the temperature may drop (due to blocking of the Sun's energy), and there may be a corona or halo of light around the moon. This is the Sun's outermost layer of its atmosphere shining out from around the moon. In addition, in some locations it can be very quiet. Animals normally active in the daytime, such as birds can become very quiet.

<https://pixabay.com/images/search/eclipse/>



**3rd Contact:** similar to the 1st contact, the moon is traveling away from the Sun allowing the partial shadow to be visible. Similar effects such as the diamond-ring effect and Baily's Bead may be visible.

**4th Contact:** when the moon has completely left the disk of the Sun and the eclipse is over.

### Websites for eclipse information:

Best site for information within the Rochester region:

- **Rochester Museum and Science Center**  
Rock the Eclipse Festival: Saturday, 4/6 – Monday 4-8 (Eclipse time!)  
<https://rochestereclipse2024.org/roc-the-eclipse/>
- You might find resources for your community at the link below, if they have submitted any plans. This site will also show the path of totality, when it will start, and how long it will last in your community.  
<https://eclipse2024.org/communities/USA/states/New+York/>
- **Visit Rochester** estimates 350 – 500 *thousand* visitors to the Rochester region.  
<https://www.visitrochester.com/search/?q=eclipse> This site has many resources for activities to do related to the upcoming eclipse!

## Fingerlakes Region:

- **Fingerlakes**  
<https://www.fingerlakes.org/eclipse-2024>

- **Visit Fingerlakes**  
<https://www.visitfingerlakes.com/eclipse-2024/>

- **Fingerlakes Region:**  
[Search \(fingerlakestravelny.com\)](https://www.fingerlakestravelny.com)

- From the **Genesee/Finger Lakes Regional Planning Council**

Incredible slide show with details of the upcoming eclipse. This is worth your time!

<https://webgen1files.revize.com/geneseeny/Document%20Center/Program%20Areas/Local%20Government%20Assistance%20and%20Training/Local%20government%20workshops/Spring%20LGW%20-%20Planning%20for%20the%202024%20Total%20Solar%20Eclipse.pdf>

Slides 17 and 18 show what the "Eclipse Ambassadors" as established by the Rochester Museum and Science Center, have received and what organizations you might contact to find out what they are planning.

- **Genesee County Events**  
<https://visitgeneseeny.com/2024-eclipse/events-and-eclipse-promotions>

- **Batavia Library Viewing**  
<https://batavialibrary.org/calendar>

- **Wyoming County Events**  
<https://www.gowyomingcountyny.com/solar-eclipse-2024>

- **Livingston County Events**  
<https://www.visitlivco.com/livcosol/events/>

- **SUNY Geneseo**  
<https://eclipse.geneseo.edu/geneseo-solar-eclipse-2024/>

- **Viewing at Livingston County Fairgrounds**  
<https://www.visitlivco.com/listing/livingston-county-agricultural-society-and-fair/909/>