

# ECLIPSE SAFETY

## Remember...

Never look directly at the sun without proper eye protection. Special eclipse glasses or an indirect viewing method like a pinhole projector are the safest viewing methods. Don't point camera lenses or telescopes at the sun without proper solar filters.



## Vocabulary to know...

**Eclipse:** an obscuring of the light from one celestial body by the passage of another between it and its source of illumination.

**Umbra:** the fully shaded inner region of a shadow cast by an object, especially the area on the earth or moon experiencing the total phase of an eclipse.

**Penumbra:** the shadow cast by the earth or moon over an area experiencing a partial eclipse

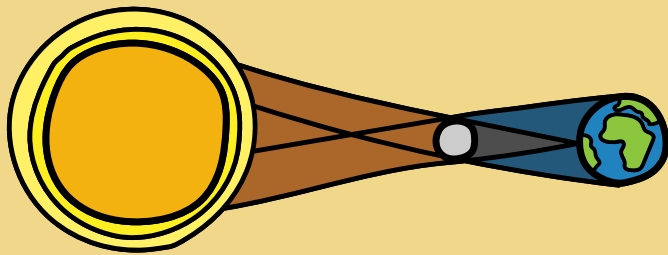
## Eclipses



On April 8th, 2024 Long Island will experience a solar eclipse.

# Solar Eclipses

A solar eclipse occurs when the Moon passes between Earth and the Sun, thereby obscuring the view of the Sun from a small part of Earth, totally or partially.



For solar eclipses they can happen 2-4x a year around the world, but for a total eclipses it can be once every 100 years in specific locations.

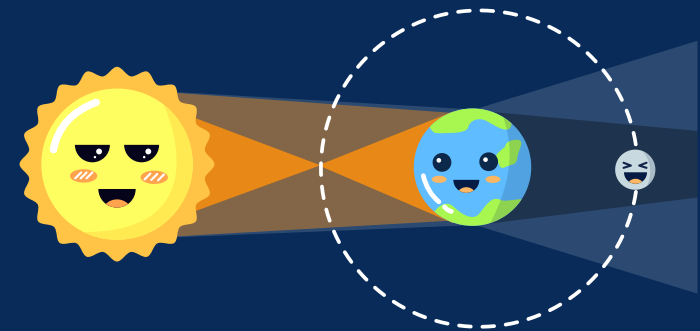
To find out more information on eclipses...



Scan the QR code!

# Lunar Eclipses

A lunar eclipse is an astronomical event that occurs when the Moon moves into the Earth's shadow, causing the Moon to be darkened



It varies on how often lunar eclipses can happen, you can see 3 in one given year or none. However these are able to be seen by over half of the Earth.

# Image from NASA.gov



# Types of Solar Eclipses

**Total Solar Eclipse**: A total solar eclipse happens when the Moon passes between the Sun and Earth, completely blocking the face of the Sun. People located in the center of the Moon's shadow when it hits Earth will experience a total eclipse. The sky will darken, as if it were dawn or dusk. Weather permitting, people in the path of a total solar eclipse can see the Sun's corona, the outer atmosphere, which is otherwise usually obscured by the bright face of the Sun.

**Partial Solar Eclipse**: A partial solar eclipse happens when the Moon passes between the Sun and Earth but the Sun, Moon, and Earth are not perfectly lined up. Only a part of the Sun will appear to be covered, giving it a crescent shape. During a total or annular solar eclipse, people outside the area covered by the Moon's inner shadow see a partial solar eclipse.

**Annular Solar Eclipse**: An annular solar eclipse happens when the Moon passes between the Sun and Earth, but when it is at or near its farthest point from Earth. Because the Moon is farther away from Earth, it appears smaller than the Sun and does not completely cover the Sun. As a result, the Moon appears as a dark disk on top of a larger, bright disk, creating what looks like a ring around the Moon.