

## Eclipse Video (<https://www.youtube.com/watch?v=PRgua7xceDA>)

The Sun is about \_\_\_\_\_ times wider than the moon and it's about \_\_\_\_\_ times farther away than the moon. The \_\_\_\_\_ size of an object in the sky depends on how \_\_\_\_\_ it is and how \_\_\_\_\_ away. This means the Sun and the moon appear to be about the \_\_\_\_\_ size in the sky.

An \_\_\_\_\_ is a when one object passes into the \_\_\_\_\_ of another object darkening it or blocking it.

A \_\_\_\_\_ eclipse is when the \_\_\_\_\_ blocks the \_\_\_\_\_ casting a shadow on the earth.

The moon orbits the earth once per \_\_\_\_\_ and the Earth orbits the Sun once per \_\_\_\_\_.

The moon's orbit is tilted with respect to the Earth's by about \_\_\_\_\_ degrees. At new moon, the moon can pass \_\_\_\_\_ or \_\_\_\_\_ the Sun in the sky and we will not see an eclipse.

There are \_\_\_\_\_ shadows from the moon one inside the other. If you are anywhere physically inside this cone the moon appears big enough to completely block the Sun and we call it the \_\_\_\_\_, which is Latin for \_\_\_\_\_.

Outside of this deep umbral shadow is a wider conical region. If you're in it the Sun is only partially blocked. This region is called the \_\_\_\_\_. Pen is Latin meaning \_\_\_\_\_ or \_\_\_\_\_.

The \_\_\_\_\_ is the sun's atmosphere. When the moon blocks the Sun's face the corona becomes \_\_\_\_\_.

The longest a solar eclipse can last is only about seven or eight \_\_\_\_\_.

A \_\_\_\_\_ solar eclipse is a local event. If you're too far north or south you don't get a total solar eclipse you only get a \_\_\_\_\_ solar eclipse.

The moon's orbit around the Earth is an \_\_\_\_\_. Sometimes it is closer to the earth and sometimes it is farther. If a solar eclipse happens when the moon is at the far end of its orbit it can actually be smaller than the Sun in the sky. It doesn't block the entire face of the Sun and it leaves a ring of light around the black circle of the moon. The technical name for this shape is \_\_\_\_\_ so this event is called in \_\_\_\_\_ eclipses.

A \_\_\_\_\_ eclipse is when the \_\_\_\_\_ blocks the \_\_\_\_\_ casting a shadow on the moon.

Sometimes during a \_\_\_\_\_ eclipse the moon changes color. When you look at the red eclipsed moon you are seeing the light from all the \_\_\_\_\_ and \_\_\_\_\_ in the world hitting the moon and reflecting back to us.

A total lunar eclipse can last nearly two \_\_\_\_\_.

Ancient \_\_\_\_\_ used \_\_\_\_\_ to calculate the relative sizes of the Earth and moon by observing lunar eclipses. They also knew the shape of the Earth's shadow was always a \_\_\_\_\_. If the earth were flat it would sometimes cast a thin shadow, but it never does.