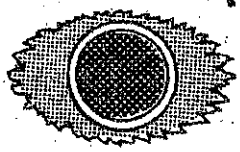
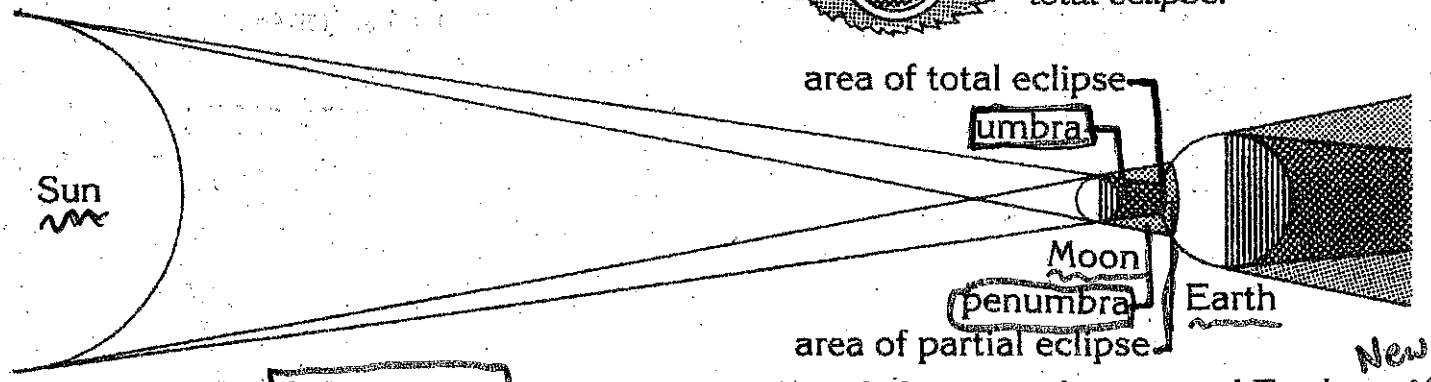
Eclipses

This is a keeper!

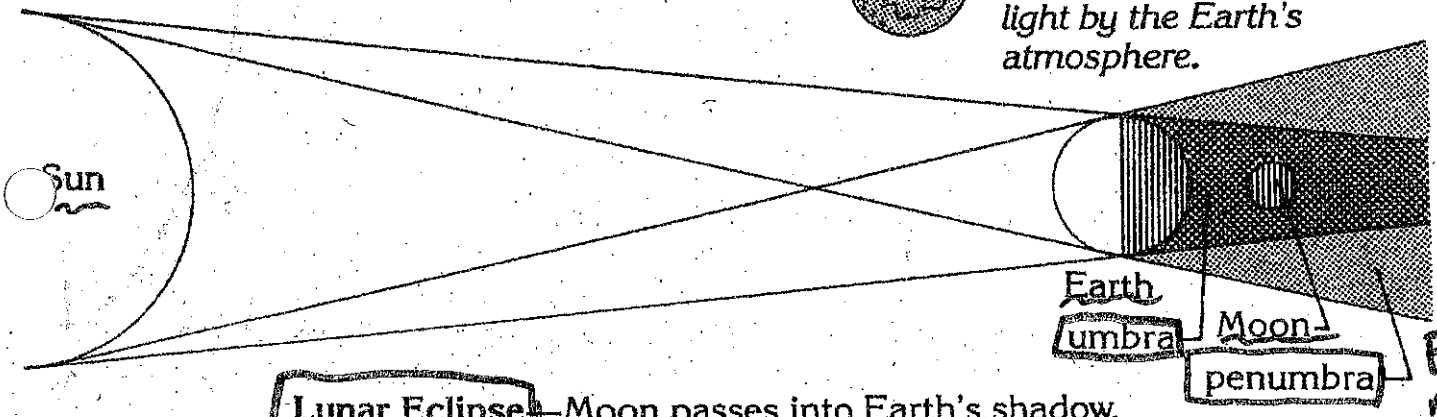


The sun's corona during total eclipse.



Solar Eclipse—Moon passes directly between the sun and Earth. New moon

Total eclipse of moon shines with a dull orange glow due to scattering of light by the Earth's atmosphere.



Lunar Eclipse—Moon passes into Earth's shadow.

1. During a solar eclipse, the shadow of the moon falls on the Earth; in a lunar eclipse, the shadow of the Earth falls on the moon.

2. The darkest part of a shadow is called the umbra; the broader, outer part is called the penumbra. (wider)

3. In a total solar eclipse, the sun's corona is visible because the moon blocks out the sunlight.

4. Why do partial eclipses of the moon occur more frequently than total solar eclipses?

• Moon passes through Earth's penumbra often causing partial eclipse. (Earth's penumbra much larger than moon)

• Total eclipses are rarer b/c the S-M-E must be aligned and the moon's umbra covers a small area of the Earth's surface.

• In an annular eclipse the moon is too far from Earth to completely block the sun.

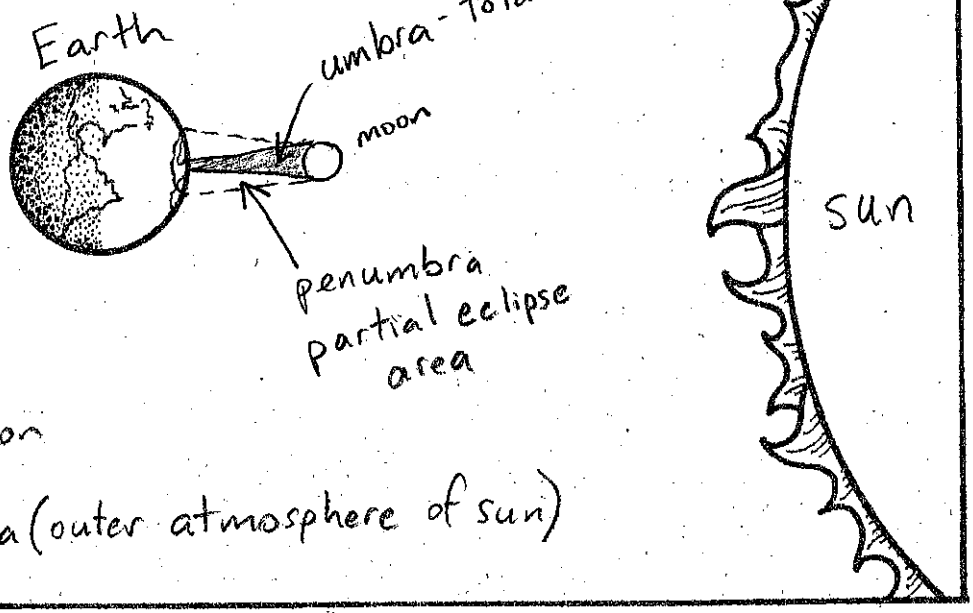
Space Shadows

Name_____

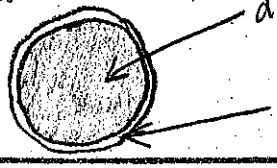
When the sun, moon and Earth are in the proper alignment, either the moon can cast a shadow on the Earth, or the Earth can cast a shadow on the moon. Draw the position of the moon and the shadows for both a lunar and solar eclipse. Label the type of eclipse.

Solar Eclipse:
moon blocks sun from Earth

New moon phase

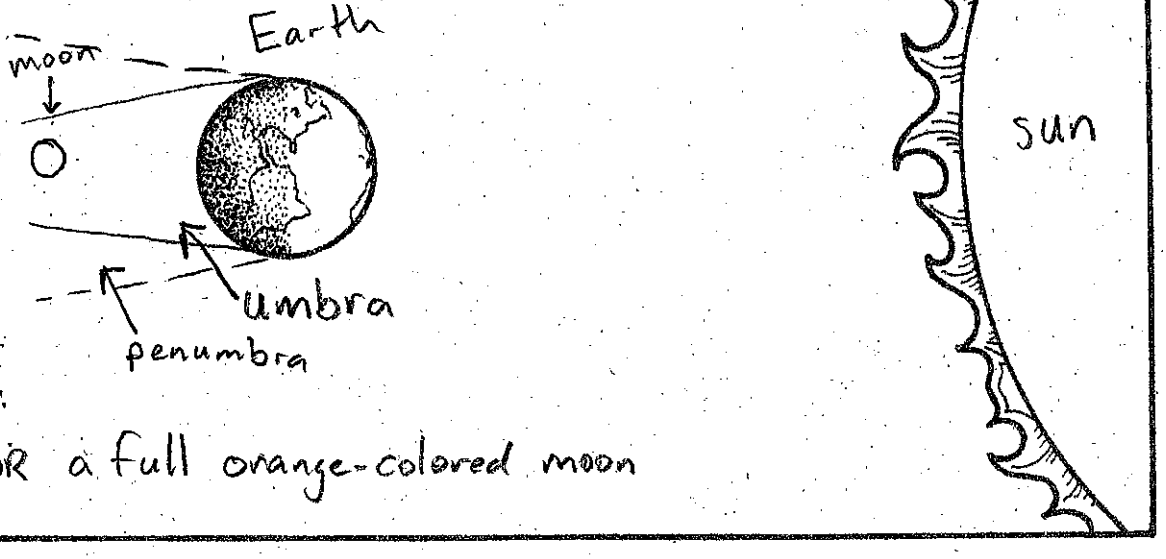


Earth's view:



Lunar Eclipse
Earth blocks sun from moon

Full moon phase



Earth's view:
Nothing OR a full orange-colored moon