Lunar and Solar Eclipses

Complete this worksheet after you finish reading the section "Moons."

A lunar or solar eclipse happens when the Earth, sun, and moon line up in such a way that an unusual phenomenon occurs.

1. Imagine you are at a place on Earth that is experiencing a total solar eclipse. Is it daytime or nighttime? Describe the event that you are observing.

2. Draw a sketch showing the relative positions of the Earth, moon, and sun during a solar eclipse.

3. Imagine you are at a place on Earth that is experiencing a total lunar eclipse. Is it daytime or nighttime? Describe the event that you are observing.

4. Draw a sketch showing the relative positions of the Earth, moon, and sun during a lunar eclipse.
The moon's orbit is tilted 5 degrees from the Earth's orbit. There are two points in this orbit that can cause an eclipse to occur.

**Fill in the blanks using this word bank & then color in the diagram:**

- **Earth** – (BLUE) the planet on which we live.
- **Moon** – (WHITE) the natural satellite of the Earth.
- **Penumbra** – (GRAY) the area in which the shadow of an object (the moon on the Earth) is partial, and the area in which a partial solar eclipse is experienced.
- **Sun** – (YELLOW) the star in our Solar System.
- **Umbra** – (BLACK) the area in which the shadow of an object (the moon on the Earth) is total, and the area in which a total solar eclipse is experienced.