



Earth Moon Sun Relationships

Rotation versus Revolution

- **Rotation** is the turning of a body about an axis.
 - The earth rotates once every 24 hours.
- **Revolution** is the motion of one body around another.
 - The earth revolves around the sun once every 364 $\frac{1}{4}$ days.



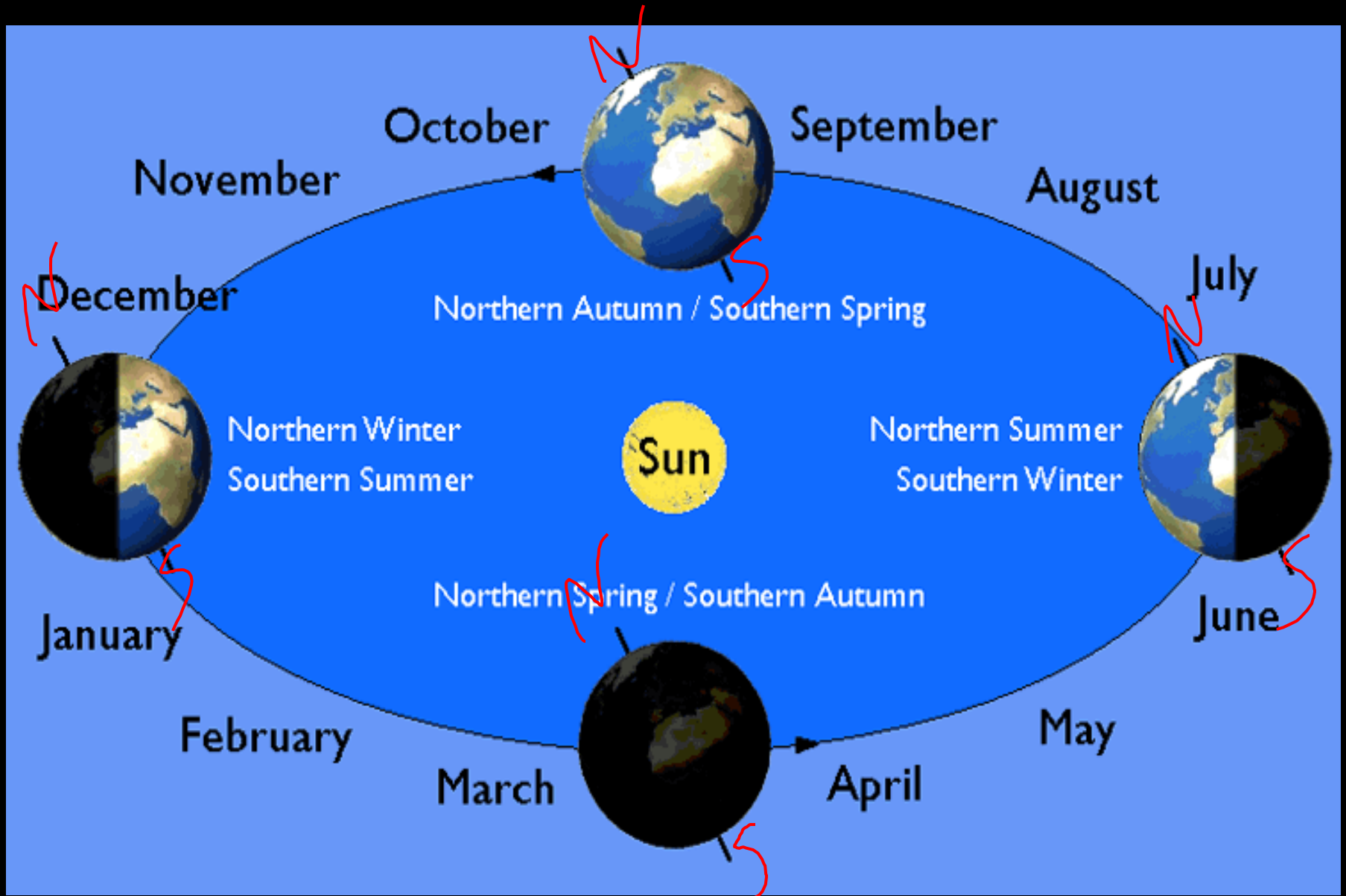
Why Does the Length of Day on Earth Change?

- The **tilt of the Earth's axis**, and the **rotation and revolution of the Earth** is responsible for the changes in the length of day and night.

Why Do We Have Seasons?

- The tilt of the Earth's axis and the revolution around the Sun cause the Earth to have seasons.

Earth's Seasons - Year



Why Does The Moon Have Phases?



- **Phases of the moon are determined by:**
 - **The relative positions of the earth, moon and sun.**
 - **Revolution of moon around the earth.**
 - **Your position on the earth.**

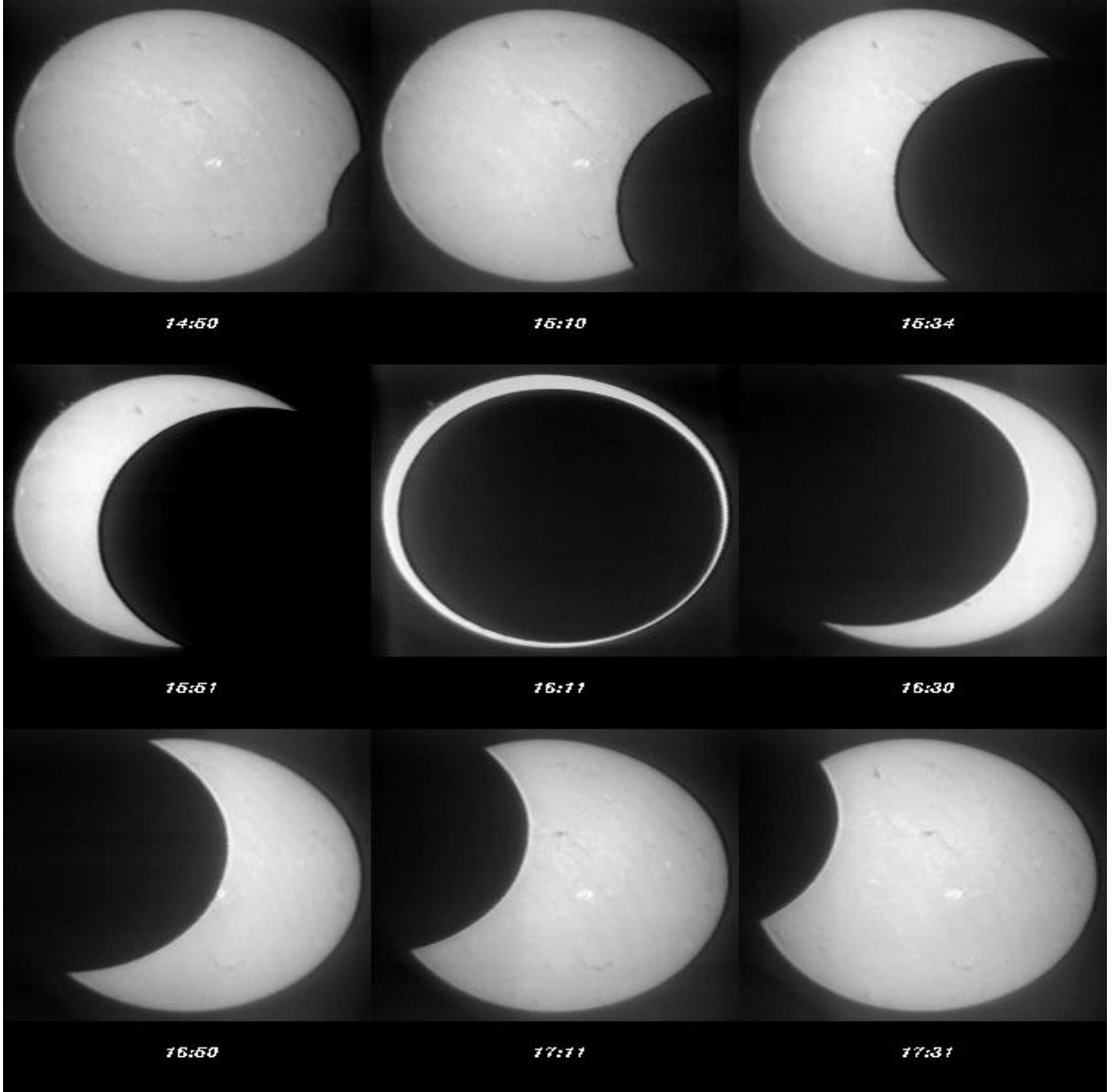
What is a **Solar** Eclipse?

- A **Solar** Eclipse is when the **Sun** is **blocked** from view by the moon.
 - The moons orbital path places it in between the earth and the sun.

A Total Solar Eclipse



Phases of a solar eclipse



Solar Eclipse



What is a Lunar Eclipse?

- A **Lunar eclipse** is when the **moon** is **blocked** by the shadow of the earth.
 - The moon's orbital path takes it into the shadow of the earth.

Phases of a Lunar eclipse



Solar versus Lunar Eclipse

