

Name _____ Date _____ Class _____

The Sun-Earth-Moon System Notes

Daily Motions

- The most obvious pattern of motion is the daily rising and setting of the _____, _____, and _____.
- They rise in the _____ and set in the _____.
- These daily motions result from Earth's _____.

Earth's Rotation

- There are 2 simple ways to demonstrate that Earth is rotating.

1. _____
2. _____

Day Length

- The time period from one noon to the next is called the _____.
- Our _____ system is based on the solar day.
- The length of a day as we observe it is _____ minutes longer than the time it takes Earth to rotate once on its axis.

Annual Motions

- Earth orbits the sun in an _____ pattern
- The plane of Earth's orbit is called the _____.
- Earth's axis is tilted _____ degrees relative to the ecliptic plane
- Rotation vs revolution

The Effects of Earth's tilt

- Sometimes the _____ hemisphere is tilted toward the sun
- 6 months later the _____ hemisphere is tilted toward the sun
- Reason for the seasons

Solstice and Equinox

Solstice

- The sun is overhead at its _____ distance from the equator

- _____ (maximum daylight) & _____ (shortest day)

Equinox “ _____ ”

- Earth's axis is _____ to the sun's rays and at noon the sun is directly over the equator.

- _____ and _____

Solar Eclipse

- Occurs when the _____ passes directly between the and Earth and blocks the sun from view.
- The moon's orbit is tilted ____ degrees relative to the ecliptic plane...we only see an eclipse when the moon crosses the ecliptic plane. (p.783)
- Solar Eclipses

Annular Eclipses

- The closest point in the Moon's orbit to Earth is called the _____.
- The furthest point is called the _____.
- When the moon is near apogee, it will not _____ block the sun.

Lunar Eclipse

- Occurs when the moon passes through the Earth's _____.
- Moon is faintly visible b/c sunlight that has passed near Earth has been filtered and refracted by the _____.