Moon-Earth-Sun - 22.2 & 22.3 Notes

Motions of Earth

- _____________________: the turning, or spinning, of a body on its axis
  - Two measurements for rotation
    1. _____________________ is the time interval from one noon to the next, about ________ hours.
    2. _____________________ is the time it takes for Earth to make one complete rotation (360º) with respect to a star other than the sun - ________ hours, ________ minutes, ________ seconds
- _____________________: the motion of a body, such as a planet or moon, along a path around some point in space
  - _____________________ is the time in January when Earth is closest to the sun
  - _____________________ is the time in July when Earth is farthest from the sun
  - _____________________ is the apparent annual path of the sun against the backdrop of the celestial sphere.
- _____________________ traces out a cone over a period of 26,000 years

- _____________________ is the point at which the moon is closest to Earth
- _____________________ is the point at which the moon is farthest from Earth

Phases of the Moon

- The _____________________ of the moon are the progression of changes in the moon’s _____________________ during the month.
- Lunar phases are a result of the _____________________ of the moon and the sunlight that is _____________________ from its surface.

Lunar Motions

- The _____________________ month is based on the cycle of the moon’s phases. It lasts ____________ days.
- The ___________ month is the true period of the moon’s revolution around Earth. It lasts ___________ days.

- The ___________ of two days between the synodic and sidereal cycles is due to the Earth–moon system also moving in an ___________ ___________ ___________ ___________ ___________.

- The moon’s period of ___________ about its axis and its ___________ around Earth are the ________, ___________. It causes the ________ lunar hemisphere to ___________ ________ Earth.

**Eclipses**

- ________ eclipses occur when the ________ moves in a line directly between ________ and the ________, casting a shadow on Earth.

- ________ eclipses occur when the ___________ passes through Earth’s ________.

- During a ___________ or ___________ phase, the moon’s orbit ________ ________ the plane of the ecliptic for an eclipse to take place.

**Lunar Surface**

- ___________: a depression produced by a meteorite impact.
  - Most craters were produced by the impact of ___________ moving debris

- ________ are any of a system of ___________, ___________, ___________, sometimes associated with a crater on the moon.

- Most of the lunar surface is made up of densely pitted, light-colored areas known as _____________.

- ___________, ancient beds of basaltic lava, originated when ____________ punctured the lunar surface, letting ____________ bleed out.
• A ________ is a long channel associated with lunar maria. A rille looks similar to a ______________ or a ______________.
• The ______________ ______________ is a thin, gray layer on the surface of the moon, consisting of loosely compacted, fragmented material believed to have been formed by ______________ ______________.

**Lunar History**

• The most widely accepted model for the ______________ of the moon is that when the solar system was ______________, a body the size of Mars ______________ Earth. The resulting debris was ______________ into space, began orbiting around Earth, and eventually ______________ to form the moon.