**Astronomy Inventory**

**Seasons:**

1. Draw a diagram of the earth and sun with the position of the earth labeled at the four seasons with the correct dates.

Include in your diagram:

Solstices

Equinoxes

Correct axial tilt

Direction of rotation

And revolution

Shade for night

Label perihelion

Aphelion

Direction of Revoluti

**Motions:**

1. How is the Foucault pendulum related to earth motions?
2. Explain how the rate of star motion on the celestial sphere gives evidence of earth’s rotation. What does Polaris have to do with this?
3. How can you use Polaris to determine your Latitude?
4. In an earth/sun diagram use the following terms:

Zenith/Horizon/Angle of Sun for each Season/Solar Noon/Sunrise/Sunset

1. Use the following diagram to discuss Kepler’s **3 laws of planetary motion**.

Label – major axis, foci, changes in gravitational attraction, changes in velocity

0 0

1. Find the eccentricity. How does the shape of the ellipse affect the eccentricity?
2. Predict the varying lengths of time other smaller and longer orbital paths will take.
3. Know the moon phases and the differences between waxing and waning
4. Why is the phase change time different than the moon’s revolutionary period?
5. What is the difference between the Geocentric model and the Heliocentric model?

**The Solar System and beyond:**

1. What is a Star? How about a Constellation?
2. How would you classify the **Sun** using Luminosity and Temperature.
3. Be able to interpret the Solar System data on page #15 in your ESRT.
4. Be aware of the following terms:

Comets/Meteors/Nebulae/Galaxy/Red Shift vs. Blue Shift/Big Bang/Cosmic Microwave Background/