

**Mrs. Whittaker: Advanced Earth Science  
Unit 1 Review (Chapters 1, 28, and 29)**

**Key Terms:**

- Atmosphere
- Lithosphere
- Asthenosphere
- Hydrosphere
- Biosphere
- Hypothesis
- Variables
- Independent variable
- Dependent variable
- Constants
- Control
- Scientific theory
- Scientific law
- Terrestrials Planet
- Gas Giant Planet
- Precession
- Planetesimal
- Asteroid
- Meteor
- Meteoroid
- Meteorite
- Comet (nucleus, coma, dust/ion tail);
- Meteor Shower
- Ecliptic
- Perihelion
- Aphelion
- Summer/ Winter Solstice
- Autumnal/ Vernal Equinox
- Albedo
- Waxing
- Waning
- Synchronous Rotation
- Perigee
- Apogee

**Review Questions and Key Concepts:**

1. Give an example of how a molecule of water could be a part of each of the four spheres (atmosphere, biosphere, hydrosphere, lithosphere). Be specific.  
\*To properly answer this question, you need to remember what each sphere entails.
  
2. You believe that argon (another gas found in nature) makes balloons float better than helium or air. Describe an experiment you could conduct to test this.
  - a. Describe your experiment
  - b. Explain the parts of your experiment (independent variable, dependent variable, constants, and any controls).

3. The average surface temperature of Venus is 476 °C. Why is it so hot?! Be specific in your answer.
  
4. If the Martian atmosphere is 95% CO<sub>2</sub>, why does it not have a strong greenhouse effect?
  
5. List two of the most distinguishing features you can think of for each planet.
  
6. What is one of the most important things that makes Earth habitable?
  
7. What are the differences between asteroids and comets (what does a comet look like)? Where did they each originate?
  
8. What is the difference between a meteoroid, meteor, and meteorite?
  
9. Would it have been possible for a gas giant to form close to the Sun? Why or why not?
  
10. Consider Earth's moon – What would happen on Earth if our moon was closer? What would happen if it were smaller?

\*Be comfortable knowing the phases of the moon and where they occur.

\*Be able to explain the positions of the Sun, Earth, and Moon during solar and lunar eclipse as well as spring and neap tides.