

Worksheet: Motion of the Earth and Moon

Mrs. Côté

Name: _____

Phys. Geo. 110

Directions: Please answer the following questions (except question 1) on your own paper. Refer to pages 80 – 83 in the textbook Earth Science for questions #1 – #4. Refer to pages 562 – 563 in the textbook Earth Science for questions #5 – #8.

- Using diagram 1, label the following on it:
 - both solstices & their dates
 - both equinoxes and their dates
 - perihelion and aphelion & their dates
- Explain what causes the seasons to occur. What would happen if there was no tilt to the earth?
- The Earth is closest to the sun in January, explain why our winters are so cold when we are closest to the warmest part of our solar system. Where is it summer in January?
- The Land of the Midnight Sun refers to the North Pole, and the Arctic Circle in the Northern Hemisphere. Answer the following questions regarding the Land of the Midnight Sun:
 - Draw a sketch of the Earth showing the boundaries to the land of the midnight sun in the Northern Hemisphere. Use page 82 in the textbook Earth Science to help you.
 - Why does this area get 24-hour sunshine in summer?
 - What does this means happens during the winter?
- It appears that the Sun rises in the east and sets in the west. Explain why this is not really what happens.
- What are moon phases and what are the two reasons why they occur?
- Explain what waxing and waning are in relation to the phases of the moon.
- Explain what the difference between a new moon and a full moon is and explain what causes each. Create a drawing showing what each looks like from earth.

Earth's Orbit Around the Sun: Seasons

Diagram 1

