

Name \_\_\_\_\_ Pd \_\_\_\_\_ Date \_\_\_\_\_

## **CYCLES OF THE EARTH**

**Directions:** Answer the following questions after you have read the "Cycles of the Earth" article.

### **Summary Questions:**

- 1. What are the four things needed by living things?**

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_

- 2. Bio means \_\_\_\_\_**

**Geo means \_\_\_\_\_**

**Chemical means \_\_\_\_\_**

- 3. What are the nutrients needed by all living things made up of?**

- 4. What are the four major cycles on Earth?**

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and

\_\_\_\_\_

### **The Carbon Cycle**

- 5. Provide at least three examples of where we can find carbon on Earth.**

- 6. How does the Plant Kingdom contribute to the carbon cycle?**

- 7. How does the Animalia Kingdom contribute to the carbon cycle?**

## **The Nitrogen Cycle**

8. "Nitrogen is necessary for \_\_\_\_\_. In fact, it is necessary for the  
\_\_\_\_\_!"

9. What are the Earth's sources of "free nitrogen"?

10. What is the role of nitrogen-fixing bacteria in the nitrogen cycle?

11. How does the Plant Kingdom obtain nitrogen?

12. How does the Animalia Kingdom obtain nitrogen?

13. What is the role of denitrifying bacteria?

## **The Oxygen Cycle**

14. How much of the Earth's atmosphere is made up of oxygen?

15. Which energy role is responsible for keeping the oxygen cycle going?

**16. Explain how photosynthesis works and the role it plays in the oxygen cycle:**

**17. What are the basic elements of the water molecule?**

\_\_\_\_\_ and \_\_\_\_\_

**Bonus:** How do you write the chemical name for "water" \_\_\_\_\_.

**18. What process (occurring in the cells of all living things) requires oxygen? (*hint: it combines with glucose to create energy for cells*)**

### **The Water Cycle**

**19. How does the water cycle begin?**

**20. Where does water vapor come from?**

**21. Describe how water returns to the Earth after it has evaporated into the atmosphere. Be sure to include how it transitions from water vapor into precipitation.**

**22. What is groundwater?**

**23. What is runoff?**

**24. How does the Plant Kingdom obtain water?**

**Bonus: Why is water needed by organisms in the Animalia Kingdom?**