Biogeochemical Cycles

Directions: Color and make a key for each of the following cycles. Answer the questions as you read about each cycle.

The Water Cycle

- 1. Name three important needs for the water cycle.
- 2. How is water distributed through the biosphere?
- 3. What draws water back down to Earth?
- 4. What is transpiration?
- 5. What determines which plants grow where?
- 6. Name two ways water travels from land to enter the ocean.
- 7. What does runoff include?
- 8. How much water enters the hydrologic cycle?
- 9. How much water falls back as rain?

Biogeochemical Cycles

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The Carbon Cycle

- 1. What are macronutrients? What are micronutrients?
- What is the role of each of the following in the carbon cycle? Give an example of each.
 a. Primary producers

 - b. Secondary producers
 - c. Decomposers
- 3. Where is most of the Earth's carbon located? What form is it?
- 4. How does carbon enter the biotic part of the ecosystem?
- 5. What function do plants have in the forest in the carbon cycle?
- 6. How is carbon dioxide returned to the atmosphere?
- 7. What happens when primary and secondary consumers die?
- 8. What do detritus feeders contribute to the carbon cycle?
- 9. What is a fossil fuel?
- 10. How does carbon get in the oceans?

Biogeochemical Cycles

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The Nitrogen Cycle

- 1. What percent of the air is nitrogen?
- 2. Why is nitrogen essential to life?
- 3. How do plants and animals get nitrogen if not from the atmosphere?
- 4. What are nitrogen fixing bacteria?
- 5. What is a major reservoir for ammonia?
- 6. Why do herbivores need nitrogen?
- 7. What is denitrification?

Biogeochemical Cycles

<u>Directions:</u> Color and make a key for each of the following cycl es. Answer the questions as you read about each cycle.

The Phosphorous Cycle

- 1. Why is phosphorus an important biological molecule?
- 2. What happens to phosphorus that erodes from rock and soil?
- 3. How are phosphates incorporated into the organic molecules in plants and animals?
- 4. What happens to the phosphat es when plants and animals die?
- 5. What happens to the phosphorus that is carried by runoff to the oceans?
- 6. How are phosphates incorporated into the organic molecules in aquatic plants and animals?
- 7. What is different about the phosphorous cycle as compared to the water, carbon and nitrogen cycles?