

Name: \_\_\_\_\_

Date Started: \_\_\_\_\_ Date Completed: \_\_\_\_\_ Score: \_\_\_\_\_

**Learning Activity Sheet**  
**Cycling of Materials in an Ecosystem**

A. Read and answer each item carefully. Circle the letter of the correct answer.

1. Which of the following gases makes up most of the atmosphere?
  - A. nitrogen
  - B. oxygen
  - C. water vapor
  - D. carbon dioxide
2. What do you call the source of a nutrient which organisms can easily access?
  - A. niche
  - B. exchange pool
  - C. reservoir
  - D. biogeochemical cycle
3. Which of the following processes is involved in the carbon–oxygen cycle?
  - A. ammonification
  - B. assimilation
  - C. cellular respiration
  - D. precipitation
4. Which of the following serves as the exchange pool for phosphorus in the environment?
  - A. soil
  - B. animals
  - C. air
  - D. rocks
5. Which of the following processes occurs when the leaf of a plant loses water to the atmosphere?
  - A. assimilation
  - B. condensation
  - C. transpiration
  - D. precipitation
6. Which of the following processes utilizes light energy, carbon dioxide, and water to produce glucose?
  - A. ammonification
  - B. photosynthesis
  - C. cellular respiration
  - D. precipitation

7. Which of the following cycles of materials involves the process of sedimentation and mineralization?
- A. water cycle
  - B. nitrogen cycle
  - C. phosphorus cycle
  - D. carbon dioxide cycle
8. Which of the following is an incorrect pairing of bacteria and the form of nitrogen they produce in the nitrogen cycle?
- A. nitrogen-fixing bacteria –  $N_2$
  - B. nitrifying bacteria –  $NO_3^-$
  - C. denitrifying bacteria –  $N_2$
  - D. none of these
9. Which of the following is true about the amount of matter after physical and chemical changes occur, as stated by the law of conservation of matter?
- A. The amount remains the same.
  - B. The amount of matter decreases.
  - C. The amount of matter increases.
  - D. none of these
10. When human beings dig up fossil fuels like coal and oil buried deep underground, which of the following material sources are they tapping into?
- A. reservoir
  - B. exchange pool
  - C. niche
  - D. hydrosphere
- B. Identify human activities that affect ecosystems and suggest ways to minimize these effects. Write your answers on the space provided below.**

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