

Name _____



3-3 Cycles of Matter

1. What four elements make up most living things? _____
2. Unlike the one-way flow of energy, matter is _____ between ecosystems.
3. Elements are passed from one organism to another through _____ cycles.
4. You inhale oxygen atoms that might have been inhaled by _____ millions of years ago.

The Water Cycle

5. The process by which water changes from a liquid form to a gas is _____
6. When water evaporates from the leaves of plants, it is called _____
7. Water returns to the earth in the form of _____
(name 4) _____
8. See Fig 3-11. Condensation leads to _____.
9. See Fig 3-11. Water seeps into ground water which eventually runs into the _____ or is taken up by _____

Nutrient Cycles

10. All the chemical substances that an organisms needs to sustain life is called _____
11. Living organisms use nutrients to build _____ and carry out life processes.
12. What two elements form carbon dioxide? _____
13. See Fig 3-13. Which of the following activities RELEASE (R) carbon, and which TAKE UP (T) carbon?

_____ Photosynthesis	_____ Respiration	_____ Volcanic Activity
_____ Erosion	_____ Human Activity (burning fossil fuels)	

14. What percentage of the atmosphere is nitrogen gas? _____
15. What is a major component of plant fertilizer? _____
16. See Fig 3-14. What organism takes nitrogen from the atmosphere? _____
 NH_3 and NO_2 are taken up by [producers / consumers]

17. What important molecule of heredity contains phosphorous? _____
18. Where is phosphorus found in the biosphere? _____

Nutrient Limitation

19. The rate at which organic matter is created by producers is called primary _____
20. What is the limiting nutrient for oceans? _____
21. What causes algal blooms? _____