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| **Carbon Nitrogen Practice Questions** |

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| **Carbon Cycle**  http://www.qacps.k12.md.us/cms/teachers/sci/ecounit/CCycle.jpg |
| 1. Carbon is essential to life because             A. It’s the most common element.  B. There can’t be life without it.  C. It is produced in both photosynthesis and respiration.  D. It is the molecule around which the organic molecules of life are built.    2. Plants get the carbon to make their molecules from  A. The carbon dioxide in the air              B. The ground              C. The combination of oxygen and water              D. The waste of animals    3. Which of the following decreases carbon dioxide levels in the atmosphere?  A. Cellular Respiration              B. Decomposition by bacteria              C. Burning fossil fuels              D. Photosynthesis    4. The oxygen for your body comes from  A. Cellular Respiration              B. The ground              C. Eating plants and animals              D. Photosynthesis in plants    **5.** The large increase in atmospheric carbon dioxide in the last 50 years most likely comes from  A. An increase in cellular respiration              B. Increased decomposition by bacteria              C. An increase in the burning of fossil fuels              D. An increase in photosynthesis |

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| http://www.qacps.k12.md.us/cms/teachers/sci/ecounit/NCycle.jpg |
| 6. Nitrogen is essential to life because             A. It is needed for building the proteins needed for cells.              B. It is the molecule around which all the molecules of life are built.              C. It is needed for making carbohydrates and lipids.              D. It is the most common element.    7. Plants get nitrogen from             A. Breathing it in through their leaves from the atmosphere              B. Absorbing it through roots from the ground              C. Basic photosynthesis              D. Cellular Respiration    8. Nitrogen-fixing bacteria are important because              A. They turn nitrogen from the air into nitrogen compounds in the soil              B. They are essential for plants being able to carry out photosynthesis.              C. They break up dead plants and animals in the soil.              D. They release excess nitrogen from the soil into the atmosphere.    9. Which statement about decomposition is most correct?              A. Bacteria and fungi carry out the photosynthesis needed for breaking down proteins.              B. Bacteria and fungi produce the oxygen needed for photosynthesis.              C. Bacteria put oxygen back into the atmosphere.              D. Bacteria and fungi use oxygen to break down organic nitrogen to nitrates that plants can use.      10. Excess nitrates in water cause problems for the Chesapeake Bay because              A. They cause excessive cellular respiration in plants and animals, resulting in a large amount of                    carbon dioxide production.              B. They cause excessive bacteria growth resulting in too much oxygen which hurts photosynthesis                     in plants.              C. They cause excessive algae growth, blocking sunlight and reducing oxygen when the algae dies.              D. Nitrates are poisonous to fish, crabs, and oysters. |

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| http://www.qacps.k12.md.us/cms/teachers/sci/ecounit/foodchain.jpg | http://www.qacps.k12.md.us/cms/teachers/sci/ecounit/Pyramid.gif |
| 11. The arrows in the food chain above     A. Point to the predators.    B. Show the path of energy through the food chain.     C. Show the path of oxygen through the food chain.      D. Point to the primary consumers.      12. The deer in the food chain is the      A. Decomposer      B. Producer      C. Primary Consumer      D. Secondary Consumer    13. The giraffes in the pyramid are      A. Decomposers      B. Producers      C. Herbivores      D. Carnivores    14. Each triangle in the energy pyramid gets smaller because      A. The organism’s habitat area is smaller.      B. The lion is the top of the food chain.   1. Energy is lost as it moves up through the food chain. 2. D. The lion requires less carbon dioxide than the layers below.       15. The trees in the pyramid and plants in the food chain are examples of      A. Decomposers      B. Producers      C. Herbivores      D. Carnivores | |
| http://www.qacps.k12.md.us/cms/teachers/sci/ecounit/foodweb.gif | |
| 16. Which organism in the web above is a secondary consumer?     A. squirrel      B. mouse      C. herbivorous insect    D. fox      17. Which organism serves as a food source for the greatest number of organisms?     A. toad      B. mouse      C. herbivorous insect      D. rabbit      18. Based on the web above, what will happen to snakes if toads decrease in population?       Snakes will   1. Be unaffected since they can eat other organisms. 2. Decrease in population since their primary food source is in decline.       C. Increase in population since there will be less competition for food.      D. Start eating rabbits. | |