Ecology

What You Must Know:

1. The role of abiotic factors in the formation of biomes
2. How biotic and abiotic factors affect the distribution of biomes
3. How changes in these factors may alter ecosystems
4. The difference between a fundamental niche and a realized niche
5. The role of competitive exclusion in interspecific competition
6. The symbiotic relationships of parasitism, mutualism, and commensalism
7. The impact of keystone species on community structure
8. The difference between primary and secondary succession
9. How density, dispersion and demographics can describe a population
10. The differences between exponential and logistic models of population growth
11. How density-dependent and density-independent factors can control population growth
12. How a change in matter or energy will affect the population or community
13. The effect of age distributions and fecundity on human populations as presented in age-structure pyramids
14. How do human and global natural events impact ecosystem distribution
15. How energy flows through an ecosystem by understanding the terms in bold that relate to food chains and food webs
16. The difference between grow primary productivity and net primary productivity
17. The carbon and nitrogen biogeochemical cycles
18. How biogeochemical cycles impact individual organisms and/or populations and ecosystems
19. Predict the effects of a change of matter or energy availability in an ecosystem
20. Be able to use a representation to illustrate the movement of matter or energy through an ecosystem
21. The value of biodiversity and the major human threats to it
22. How human actions are changing the Earth
23. How to predict consequences on both local and global ecosystems of specific human activities