

Ecology



Remember to **practice** with the study questions on the BIOL 101 web site and remember to take the wordlist 4 quiz.

Annual

Herbivore

Autotroph

Heterotroph

Biomass

Inorganic

Biome

Keystone species

Carnivore

Limiting factors

Climate

Organic

Consumer

Perennial

Deciduous

Predator

Decomposer

Prey

Ecological niche

Producer

Ecology

Rain shadow

Evergreen

Resource partitioning

Feral

Temperate

Food web

Tropics



Questions

1. Diagram the carbon cycle. In doing so, explain how carbon enters the living system and how it leaves and indicate the role of microorganisms in the cycle.
2. Diagram the oxygen cycle. In doing so, explain how oxygen enters the living system and how it leaves and indicate the role of microorganisms in the cycle.
3. Suppose that a fox feeds only on rabbits, squirrels, mice, and seed-eating birds, all of which feed on plant material. How many square meters of plant material are then required to support the fox if the net primary productivity of the plant material is $8000 \text{ Kcal/m}^2/\text{year}$? Assume that the fox's daily caloric requirement is 800 Kcal, and that only 10% of the energy at one trophic level can be passed on to the next. If the fox were to feed only on insect-eating birds, how many square meters of plant material would be required?

4. Find a map of Hispaniola. This island is divided between the countries of Haiti and the Dominican Republic. Provide an ecological explanation for the more abundant forests in Haiti. In an effort to produce food and sell wood, the forests in Haiti have been cut down. Explain why farming the land in Haiti has been extremely difficult.