



Biology 101

Biomes & Environments

Remember to practice with the study questions on the BIOL 101 web site.

Annual	Herbivore
Autotroph	Heterotroph
Biomass	Inorganic
Carnivore	Life zones
Climate	Limiting factors
Consumer	Organic
Deciduous	Perennial
Decomposer	Predator
Ecology	Prey
Ecosystems	Producer
Evergreen	Rain shadow
Feral	Temperate
Food web	Tropics



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. 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?
3. Using an atlas or encyclopedia, 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.