



## Trophic levels

Remember to **practice** using these terms.

10% law	Heterotroph
Autotroph	Inorganic
Biological magnification	Keystone species
Carnivore	Organic
Consumer	Parasite
Decomposer	Predator
Food chain	Prey
Food web	Producer
Herbivore	Scavenger

### Questions

1. Diagram the carbon cycle. Where do plants, animals, and bacteria fit in the cycle?
2. Diagram the oxygen cycle. Where do plants, animals, and bacteria fit 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?