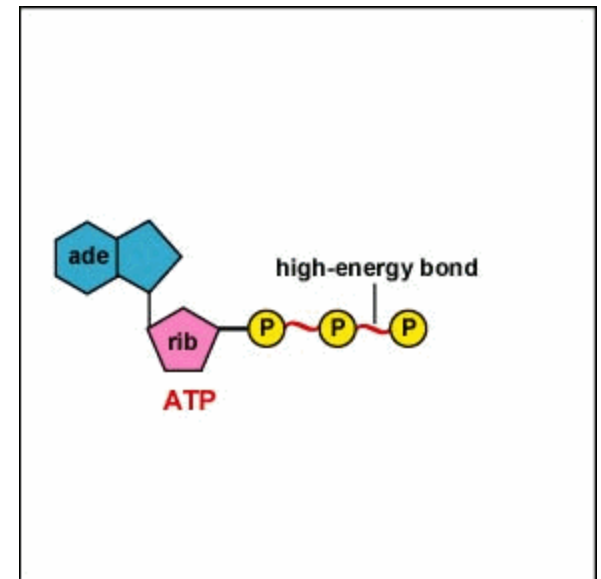
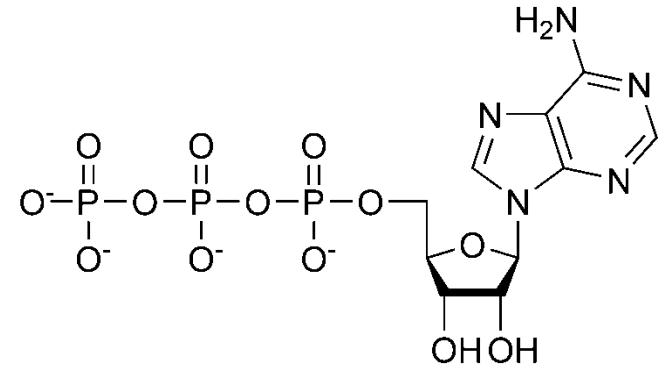


# Ch 4: Ecosystem Notes

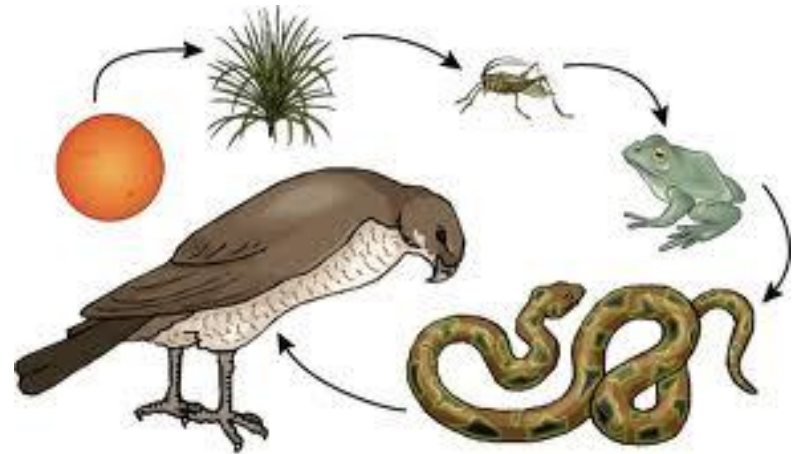
# Energy in the Body

- Energy = ability to do work
- Energy molecule = ATP: adenosine triphosphate
  - $\text{ATP} \rightarrow \text{ADP} + \text{P} + \text{released energy}$



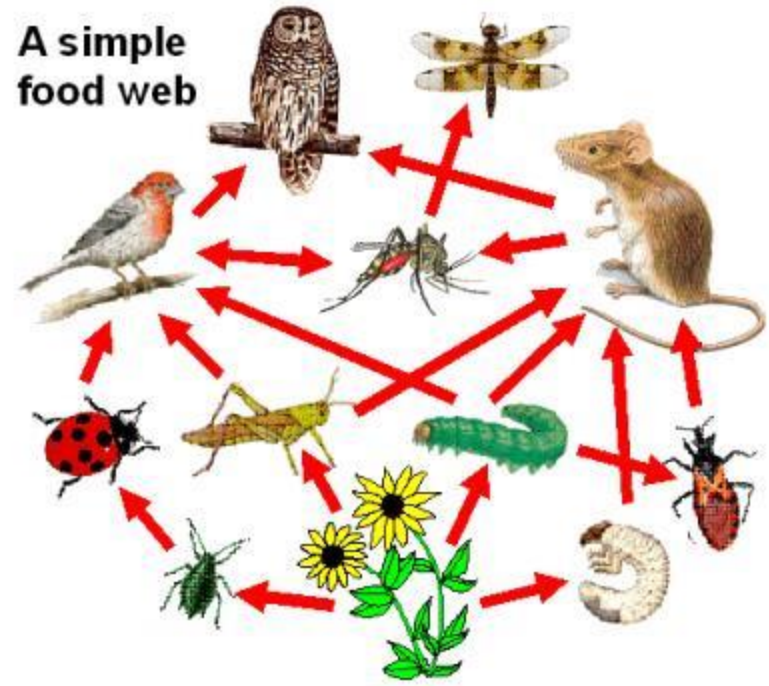
# Energy Transfer

- Sun = ultimate source of energy
- Food Chain =
  - the pathway of energy transfer through a **simple, linear feeding relationship**



# Energy Transfer

- Food Web =
  - A diagram that shows **interconnected food chains**



# Parts of Food Web or Chain

1. Producer = organism that makes their own food (autotroph)
2. Consumer = organism that consumes its food by eating other organisms (heterotroph)

## 3 Types

1. Primary consumer = eats producers (herbivores)
2. Secondary consumer = eats other consumers (carnivores)
3. Tertiary consumer = eats other consumers and/or producers (carnivores or omnivores)

# Parts of Food Web or Chain

- Scavengers = organisms that feed on leftover food items
  - Ex: rats, vultures, hyenas



- Decomposers = organisms that feed on dead or dying organisms to add nutrients to soil
  - Ex: fungi and bacteria



# Energy Flow

- Trophic levels = One of the steps or organism's position in the food chain or web
- Energy transfer rule =
  - 10% of energy gets transferred to the next trophic level
- Why?
  - Organism needs energy to survive, not all organisms get eaten, not all parts of organisms get eaten, lost as heat

# Ecological Pyramids

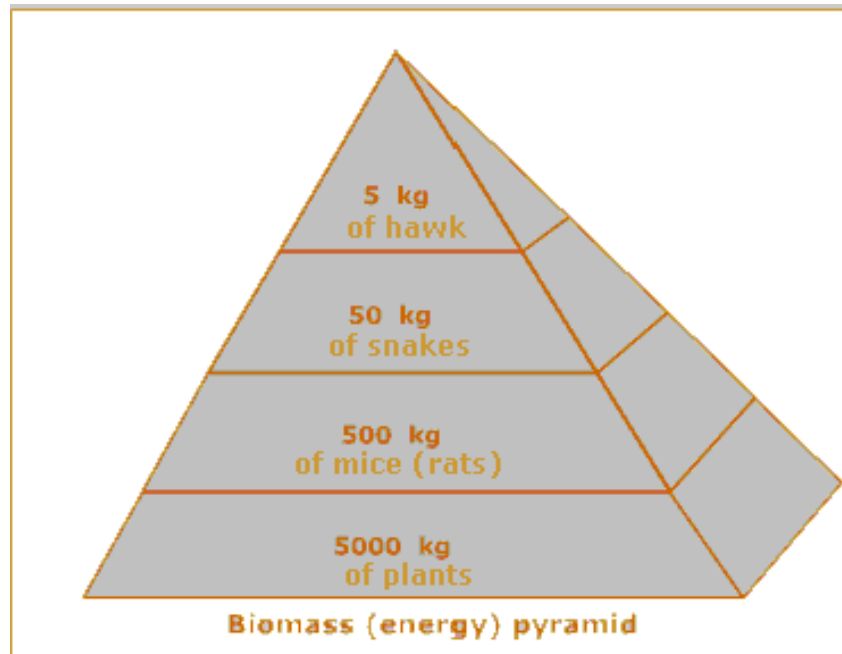
- Numbers pyramid = diagram showing relative population sizes in each trophic level





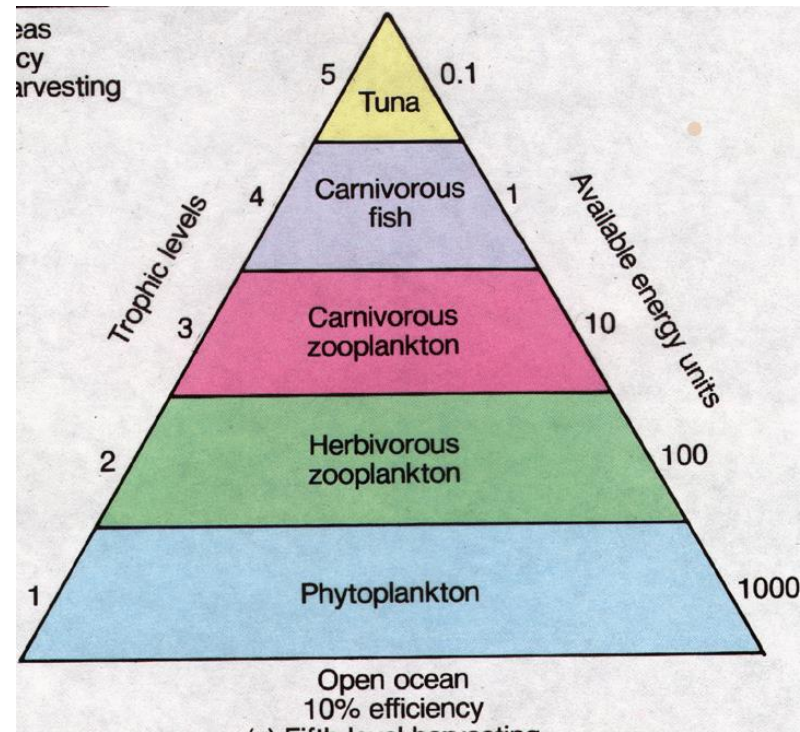
# Ecological Pyramids

- Biomass pyramid = diagram showing the amount of mass of living organisms in each trophic level



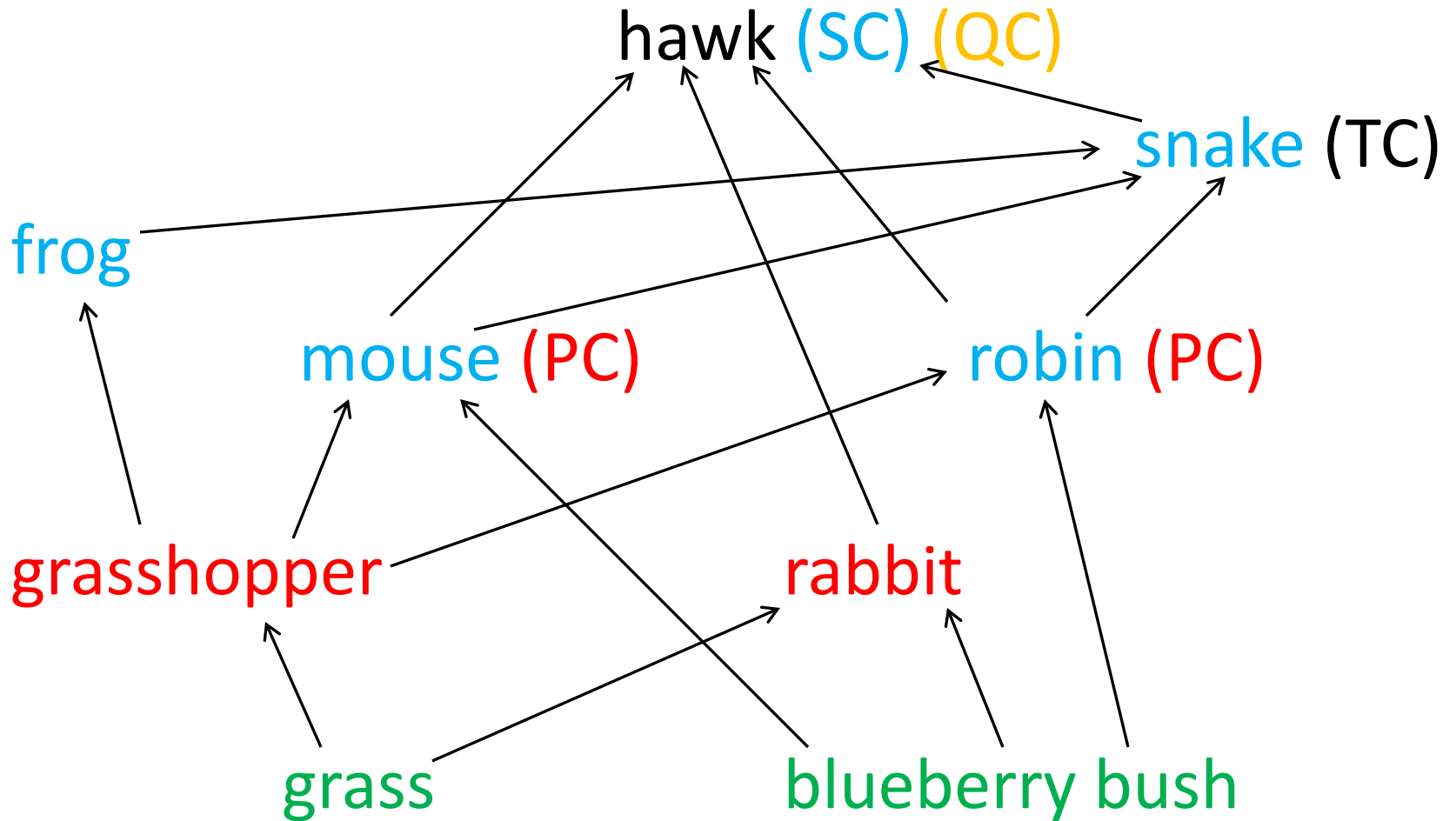
# Ecological Pyramids

- Energy pyramid = A triangular diagram that shows an ecosystems loss of energy, as energy passes through each trophic level



- Complete the practice food web and energy pyramid

# Meadow Food Web



# Meadow Energy Pyramid

