

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Chapter 3 Notes – Ecology – “The Biosphere”

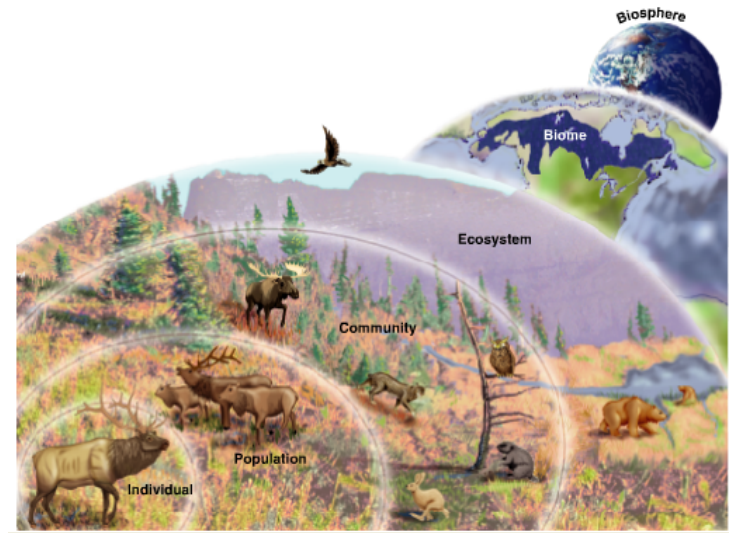
- Biotic vs. abiotic? Examples?

### 3-1 What is Ecology?

- What is ecology?
- What/Where is the biosphere?
- What are the 6 levels of organization?

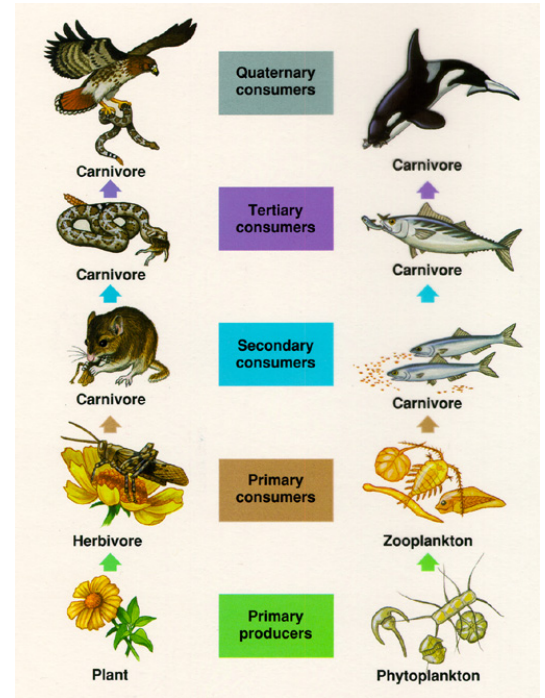
### 3-2 Energy Flow

- What is an autotroph? What’s the difference between the two types? Examples?
- What is a heterotroph?
- Types of consumers: (explain and give example)
  - Herbivores
  - Carnivores
  - Omnivores
  - Detritivores
  - Decomposers



### Feeding Relationships

- from the sun or \_\_\_\_\_ compounds → \_\_\_\_\_ (producers) → various \_\_\_\_\_ (consumers)
- What is a food chain? What is a food web? How are they different?



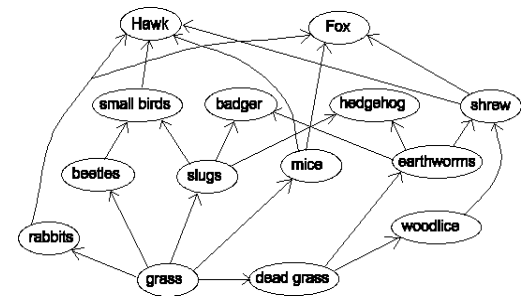
Trophic Levels:

### Ecological Pyramids

- a diagram that shows the relative amounts of energy or matter contained within each trophic level in a food chain or food web
- There are 3 different kinds of pyramids:
  1. Energy Pyramids
  2. Biomass Pyramids
  3. Pyramids of Numbers

### Energy Pyramid

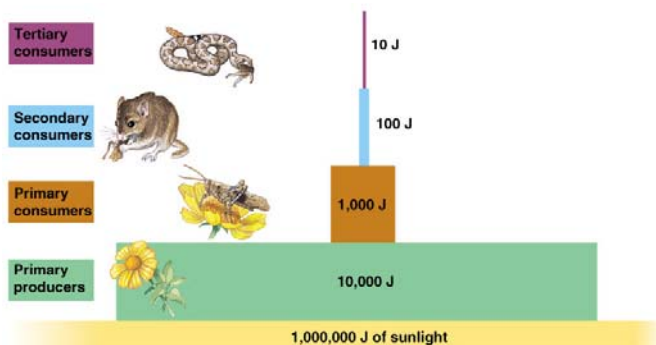
- Shows the relative \_\_\_\_\_ available at each trophic level.
- What is the 10% rule? Where does the energy go?



- WHY are there usually only 4-6 levels?

### Biomass Pyramid

- Represents the amount of \_\_\_\_\_ at each trophic level.
- grams of organic matter per unit area
- represents \_\_\_\_\_

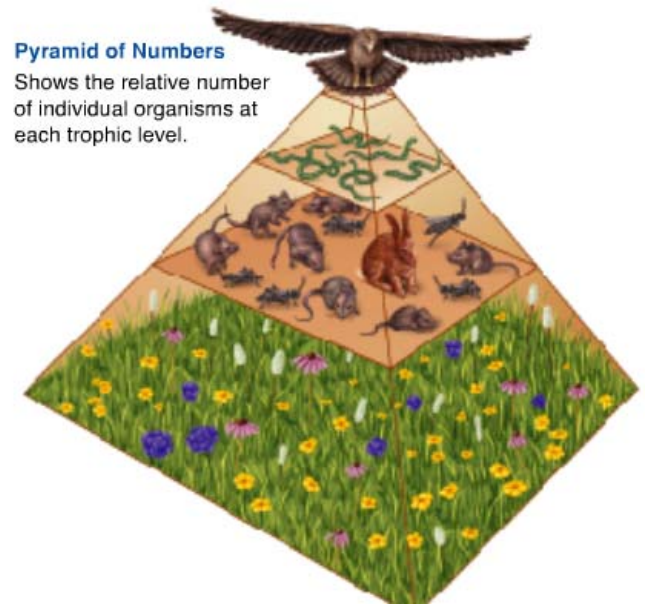


### Pyramid of Biomass

Biomass (g/m <sup>2</sup> )	Trophic level
10	Tertiary consumers (herons)
100	Secondary consumers (frogs)
1000	Primary consumers (crickets)
10,000	Producers (grass)

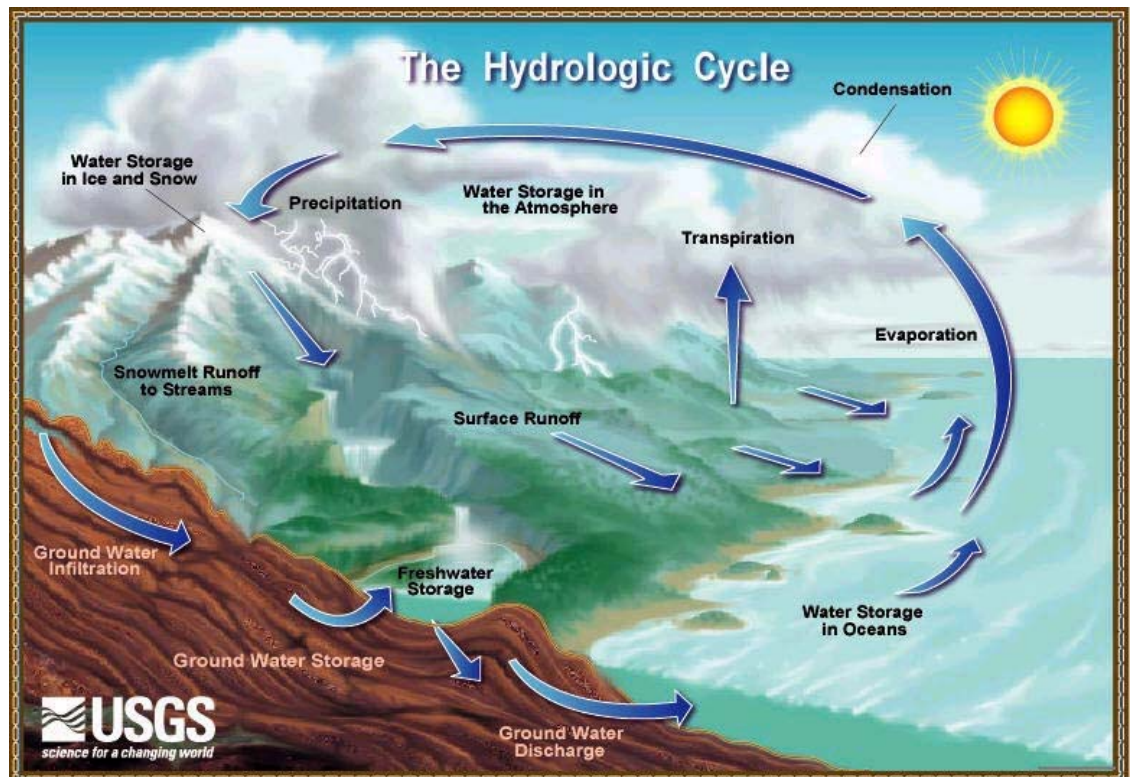
### Pyramid of Numbers

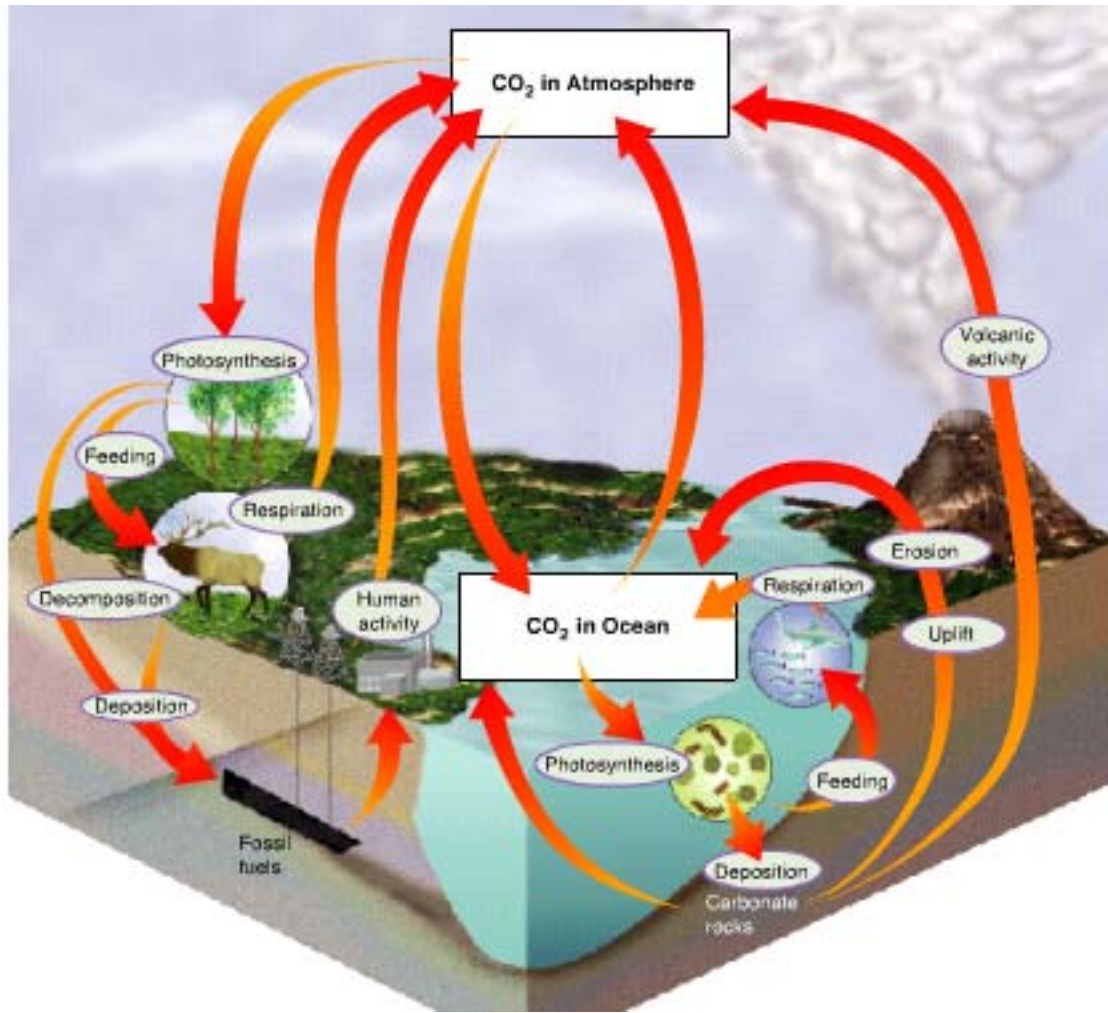
➤ Shows the \_\_\_\_\_ organisms at each trophic level.



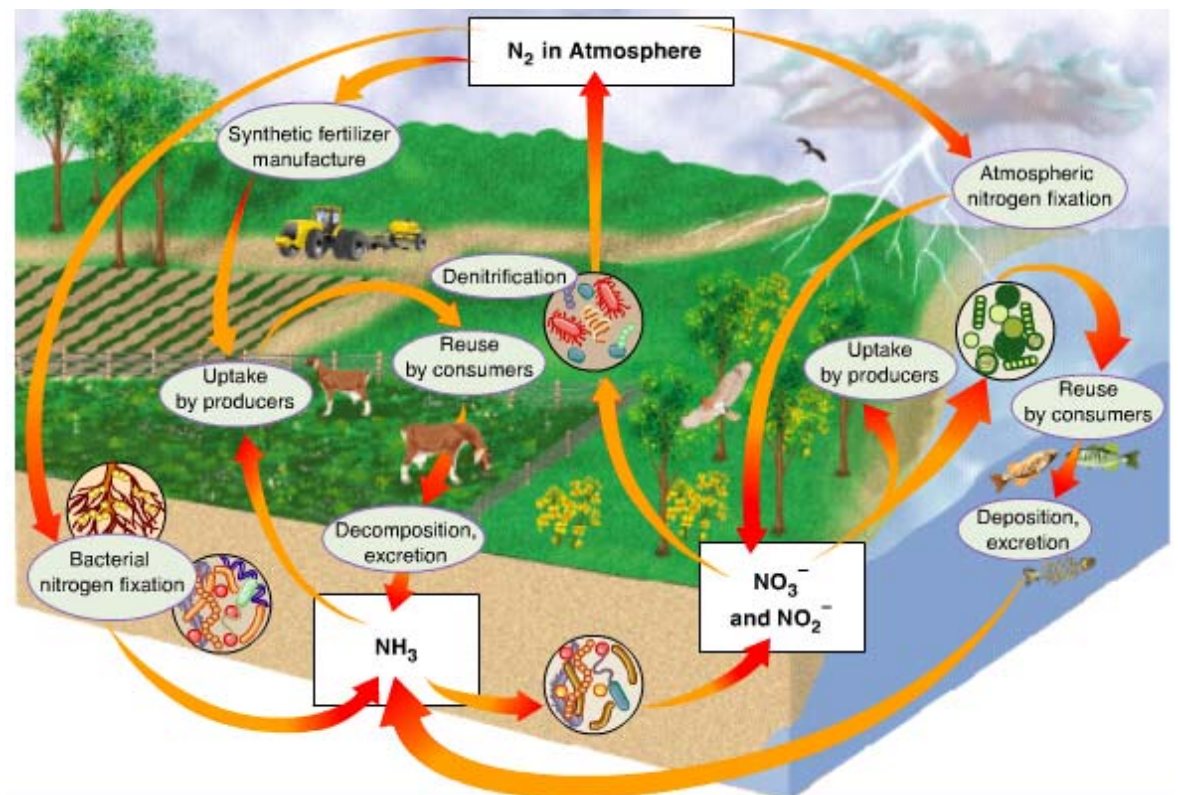
The Phosphorus Cycle

The Water Cycle





The Carbon Cycle



The Nitrogen Cycle