

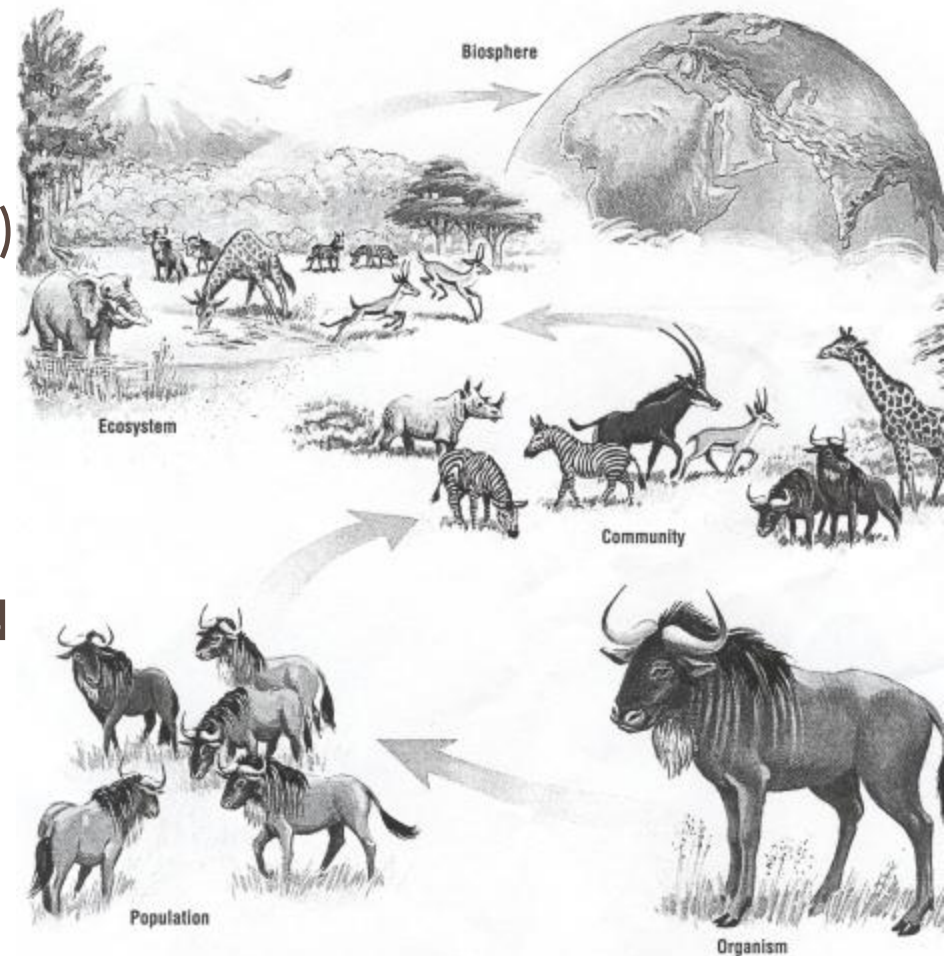
INTRO TO ECOLOGY

Just the Basics to Start

Groups of Organisms

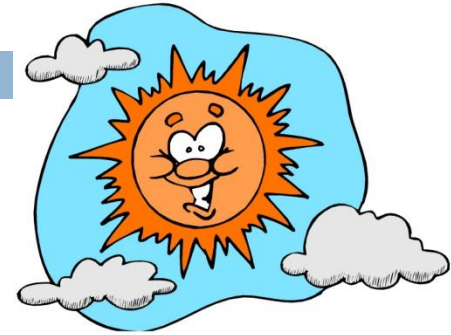
From smallest to largest:

- ▣ Individual
- ▣ Population (made of individuals)
- ▣ Community (made of populations)
- ▣ Ecosystem (made of community and non living)
- ▣ Biome (made of ecosystems and weather)
- ▣ Biosphere (everything in the Earth where life is)



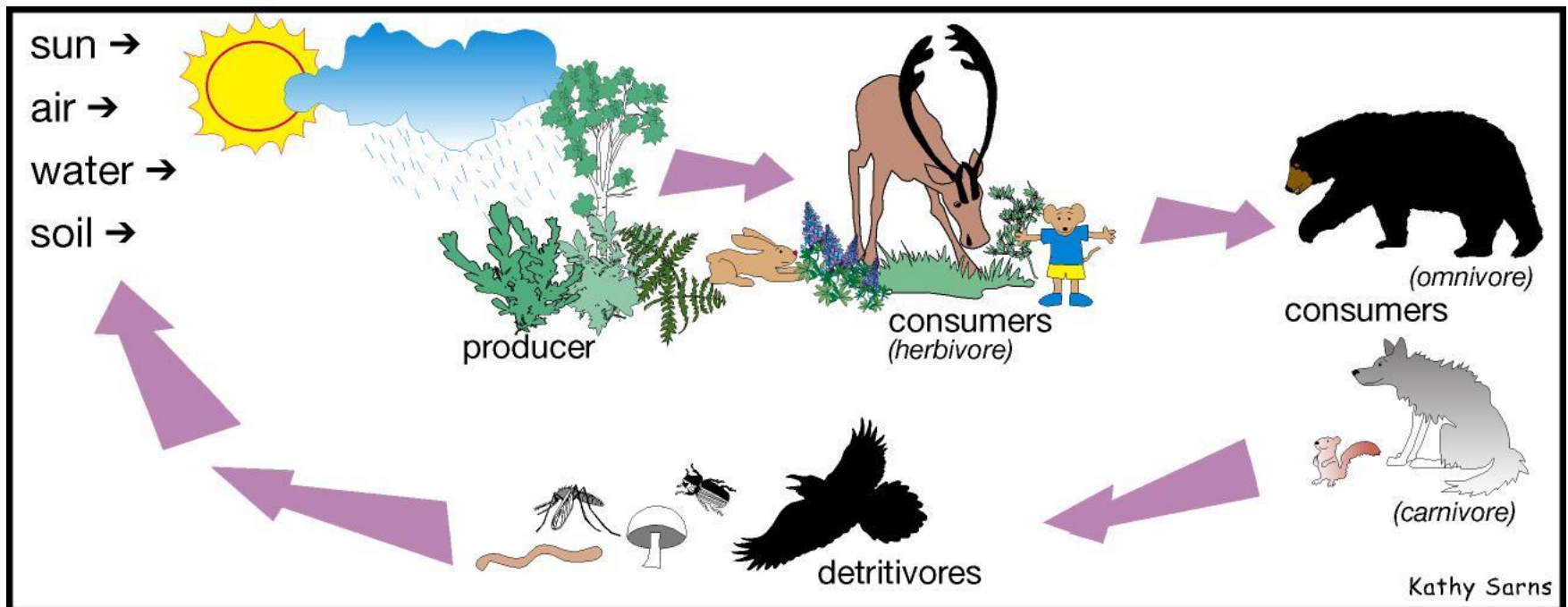
Energy! (trust me you have this...)

- Starts at the sun!
- Then moves to a producer/autotroph
 - ▣ They make their own food
 - Photosynthesis – food from light energy
 - Chemosynthesis – food from chemical bond energy
- Then it moves to a heterotroph
 - ▣ Herbivores (plants only)
 - ▣ Carnivores (meat only)
 - ▣ Omnivores (both)
 - ▣ Detritivores (scavengers)
 - ▣ Decomposers (decay)



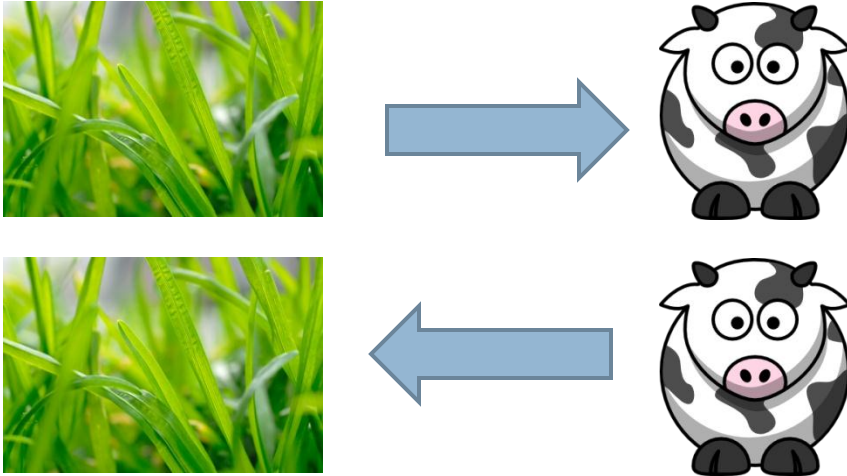
Food Chain

- Charts one possible flow of energy
 - ▣ Start with?
 - ▣ End with?



Food Chain

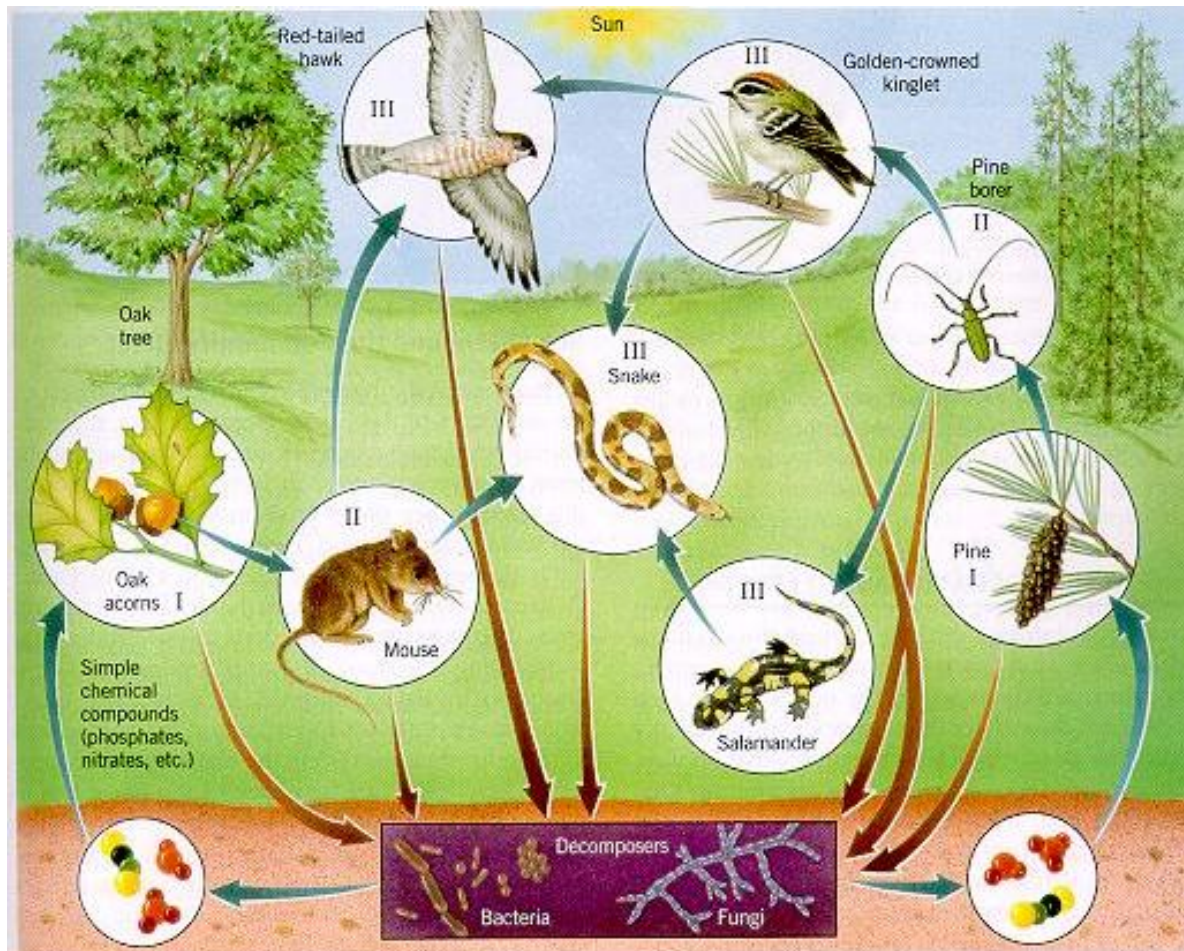
- Charts one possible flow of energy
- Arrows show the direction that energy flows



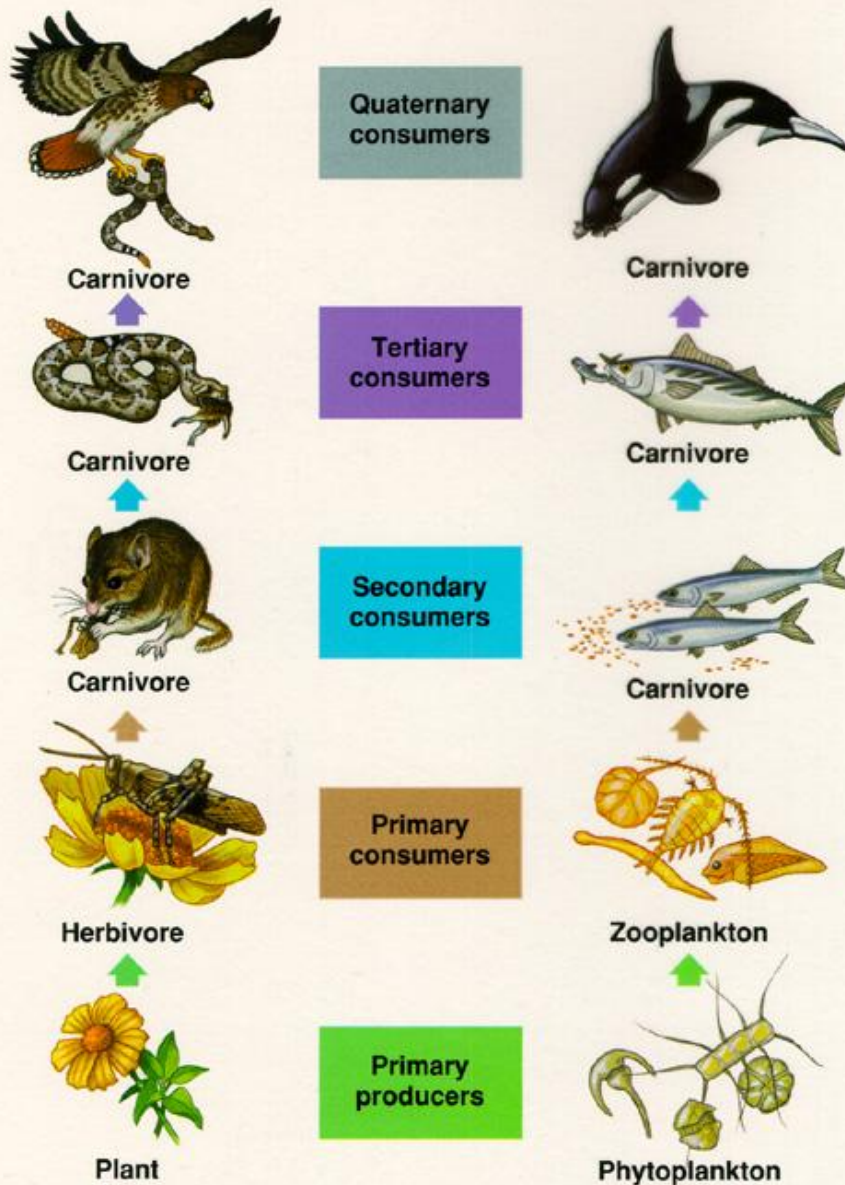
- Start: Producer
- End: Decomposer
- Only 5-6 steps INCLUDING decomposer

Food Web

Multiple Food Chains



Trophic Levels



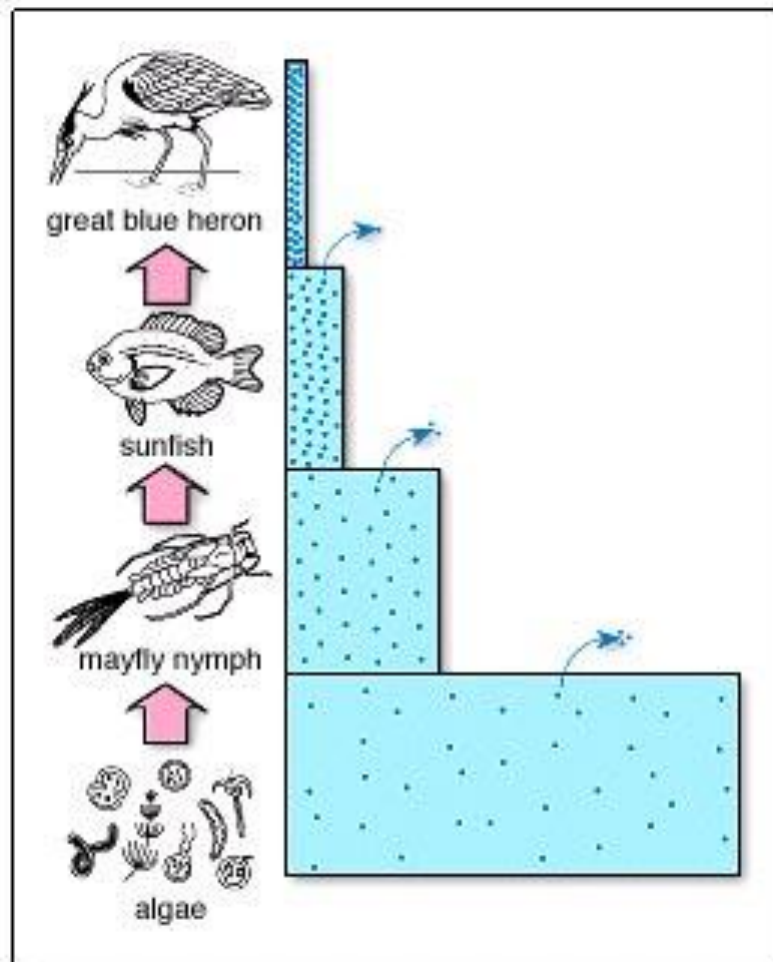
- How many steps away from the sun...
- Limited number
- #1 always equals?

Also know

- Producer
- Primary Consumer
- Secondary Consumer
- Tertiary Consumer

Biomagnification

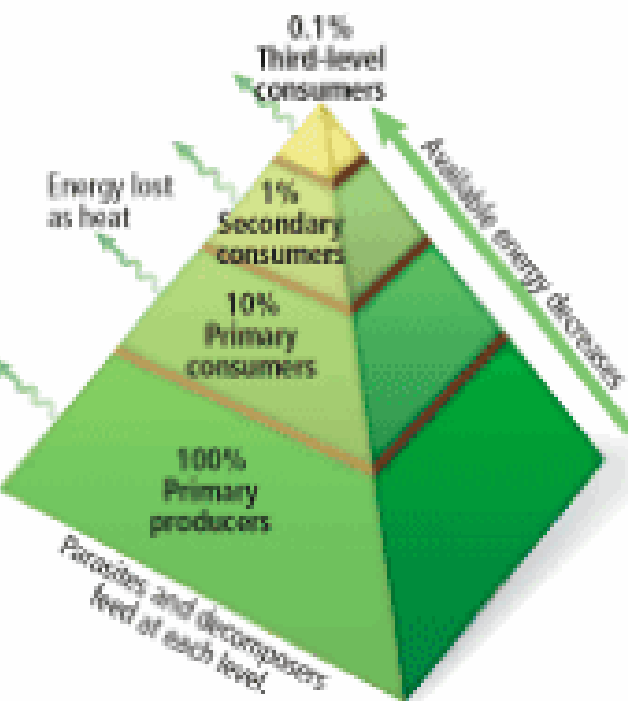
- As the pesticides move up the food chain, the concentration of pesticides increases



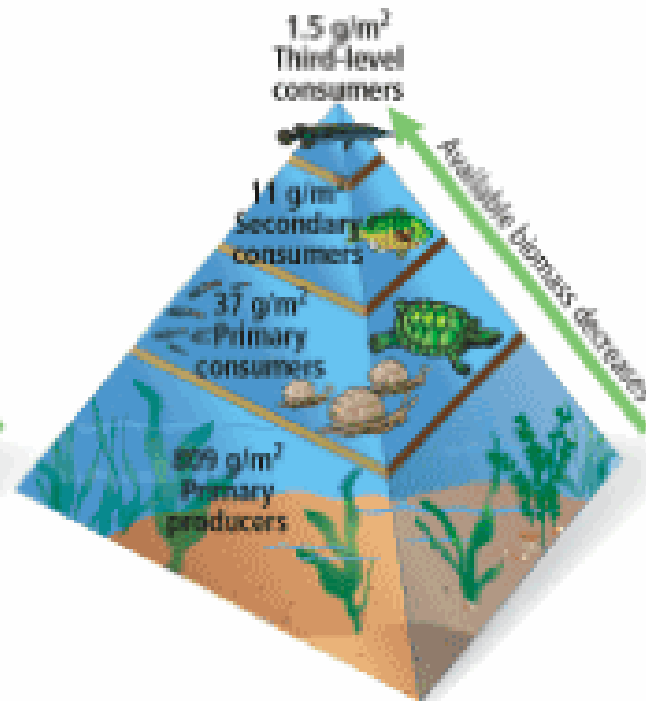
Pyramids

- Energy: How much energy there is at each level
 - ▣ Only 10% is passed on!
 - ▣ If you start with 1000 J of energy how much is left after 1 step? What about 2 steps?
- Biomass: How much organic (living) material is available at every level
- Numbers: How many living organisms are at each level
 - ▣ Must have more at the bottom to support the upper levels...think energy!

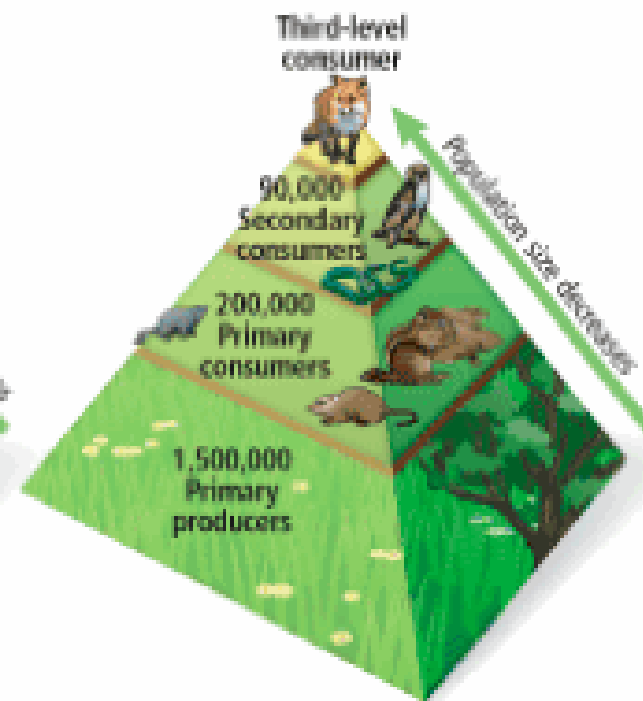
Ecological Pyramids



Pyramid of Energy



Pyramid of Biomass



Pyramid of Numbers