

# What is an Ecosystem?



illustration by Jeff Grader / property of Delta Education

Abiotic  
factors

Biotic  
factors

# Energy flow in an Ecosystem

Energy Flow starts at the SUN!!!



# Autotrophs (Producers)



- Make their own energy from either the sun (photosynthetic) or inorganic molecules (chemosynthetic)
- Includes plants, blue-green algae, and some bacteria, some single celled chlorophyll containing organisms
- Ex: trees, grass, flowers, phytoplankton

# Heterotroph (Consumers)

- Cannot make own food
- Consumes autotrophs or other heterotrophs for energy
- Some eat plants
- Some eat animals
- Some eat plants AND animals

# Herbivore (1<sup>st</sup> order consumer)

- Consumer that eats only plants or other autotrophs



# Omnivore

- Consumer that eats plants (1<sup>st</sup> order) or animals (2<sup>nd</sup> order)



# Carnivore

(2<sup>nd</sup> order consumer)

- Consumer that eats only animals
- Kills live animals to eat (in nature)





# Scavenger (Detritivore)

- Eats only dead animals that something else killed

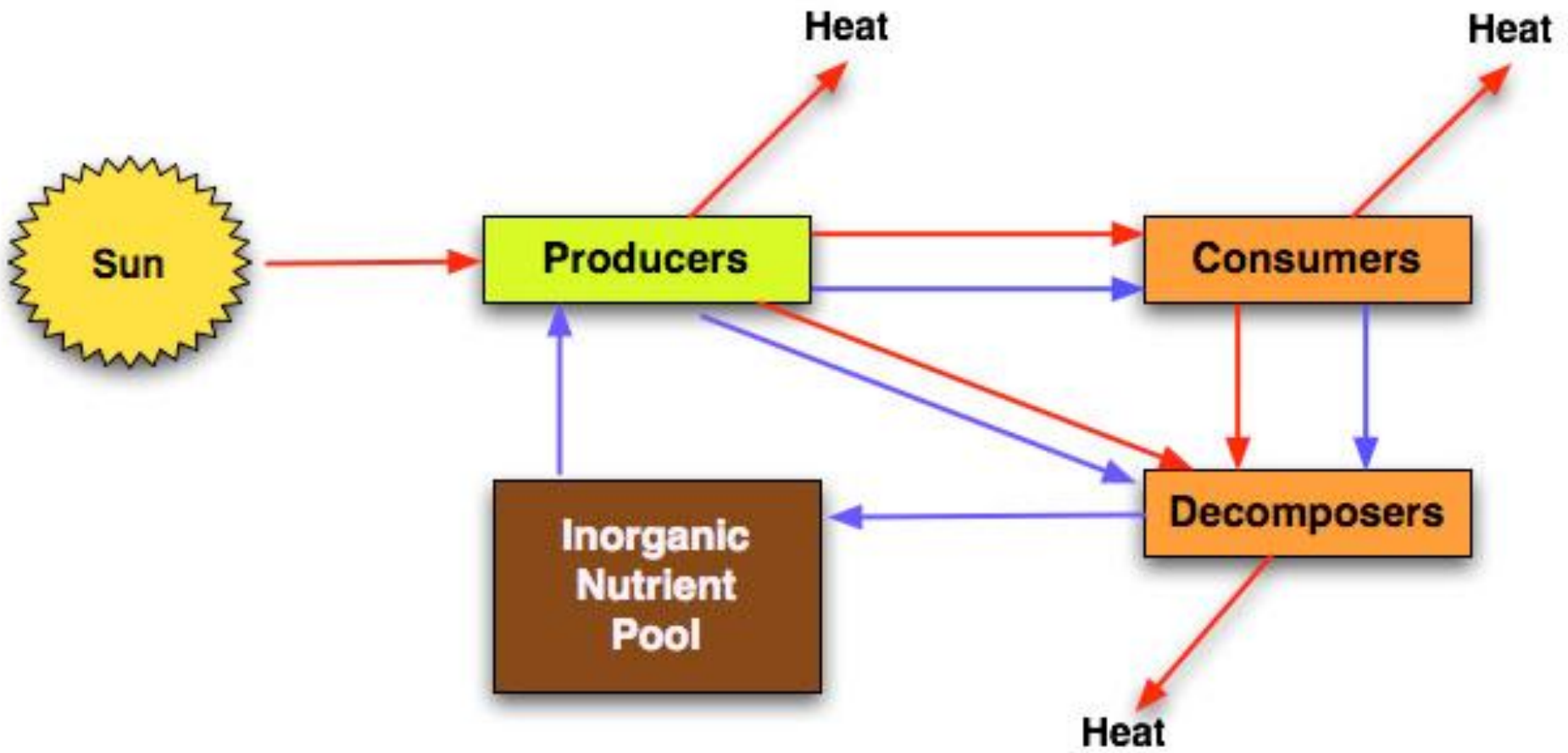




# Decomposers (Detritivore)

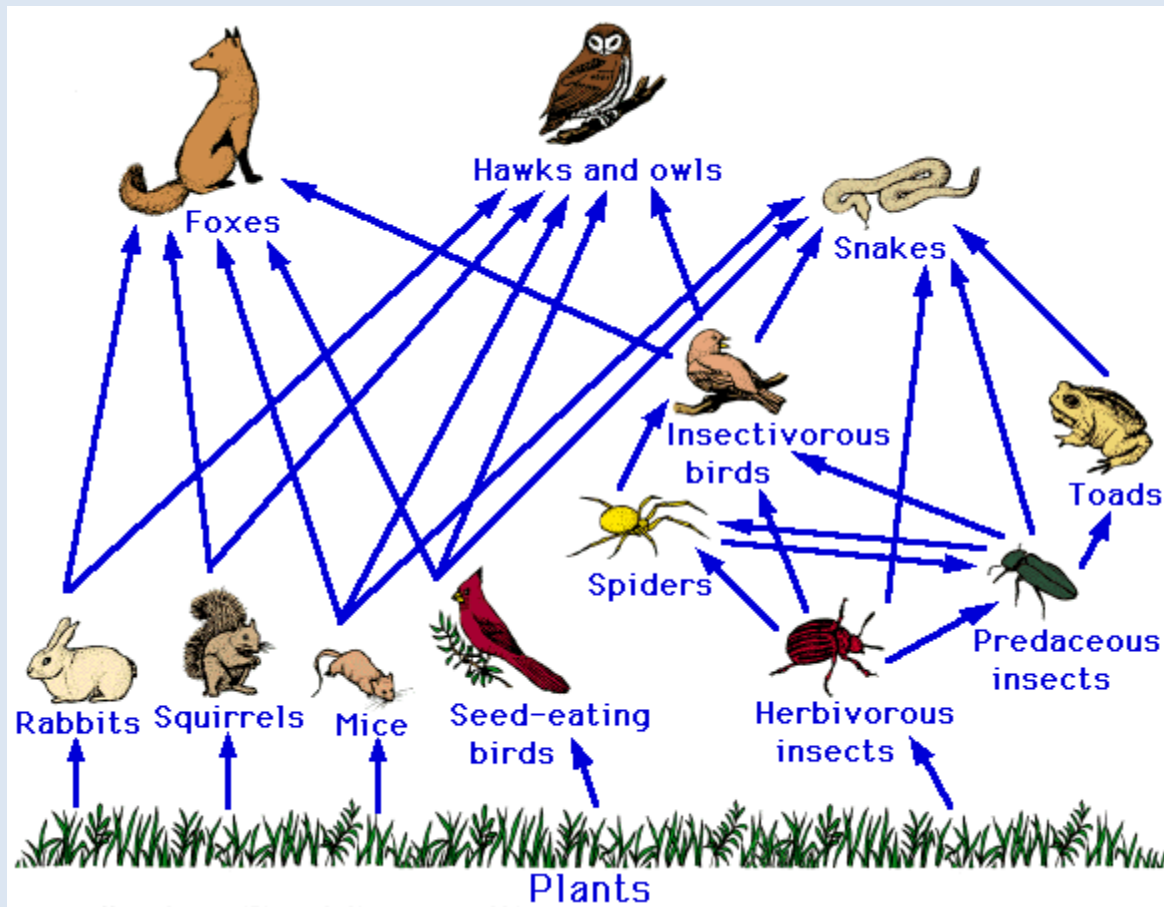
- Eat dead and decaying matter
- Bacteria, fungi





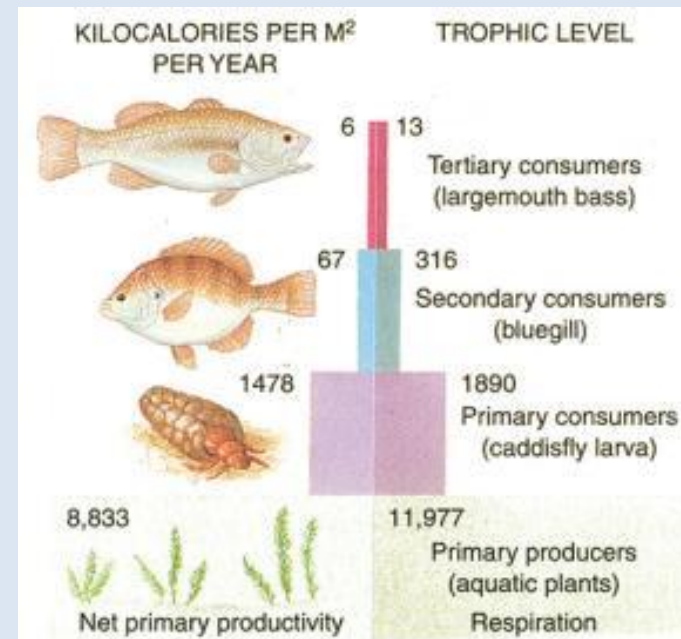
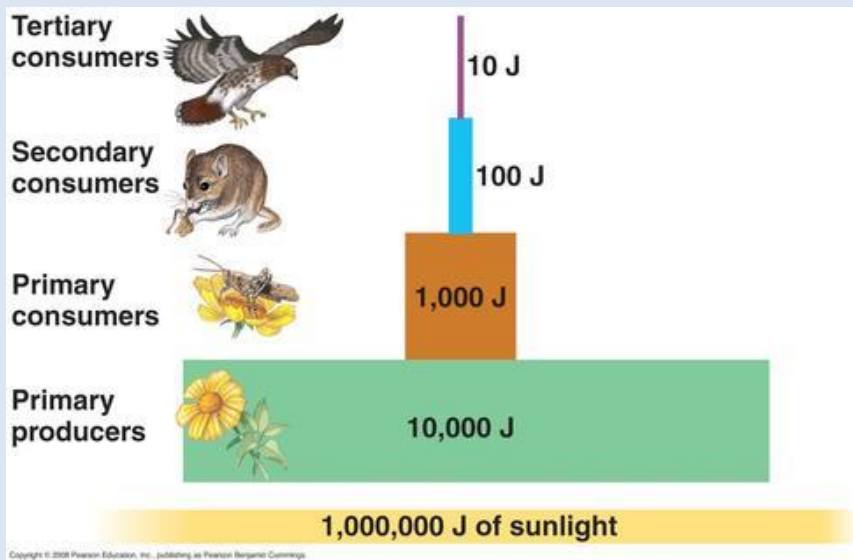
# Food chains and food webs

- Describe the flow of energy from one organism to another
- Food chains show only a linear relationship
- Food webs show all possible feeding relationships



# Energy pyramid

- Illustrates flow of energy through ecosystems
- Each level only has 10% of the energy of the level below it—90% is lost at each trophic level(feeding level)





# Energy Flow Through an Ecosystem

