

FOOD CHAINS, FOOD WEBS, ENERGY PYRAMIDS

UNIT I: ECOLOGY

Notesheet I

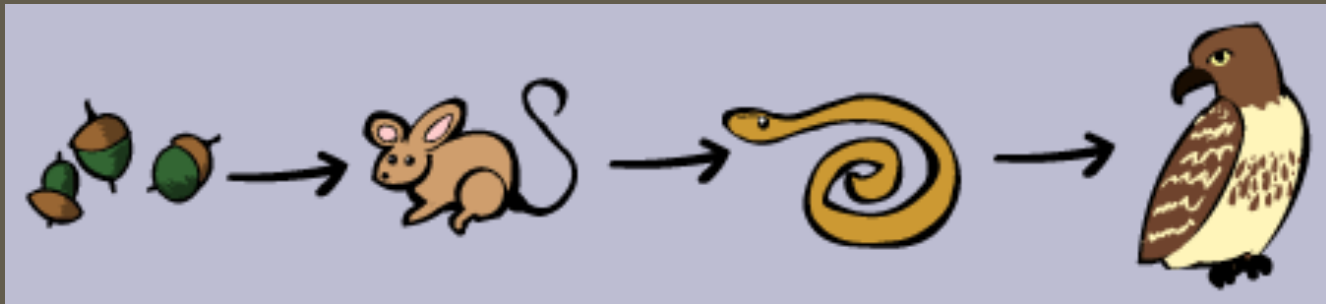




<https://www.youtube.com/watch?v=LU8DDYz68kM>

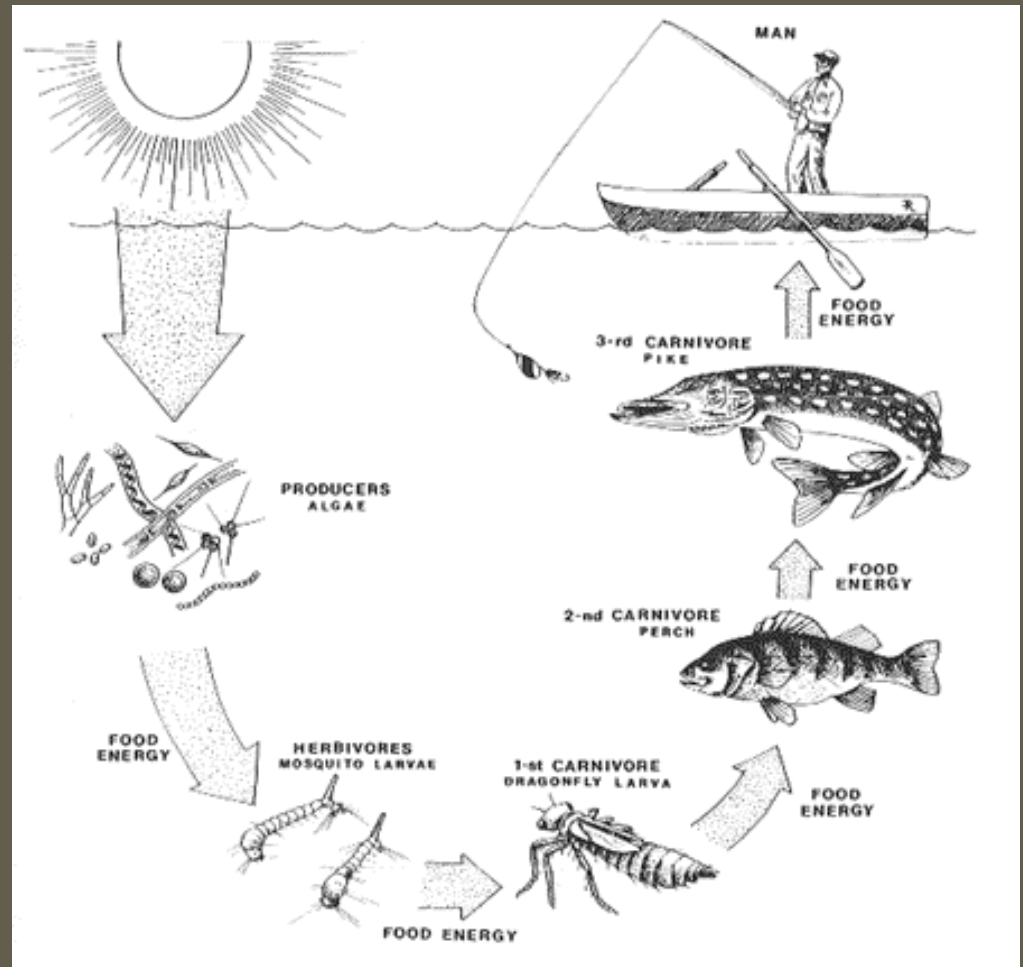
FOOD CHAIN

1. Sequence in which energy is transferred from one organism to the next.
2. Shows only one possible relationship
3. Arrows show transfer of energy



FOOD CHAINS CONT...

4. As energy moves thru food chain, 90% is used to perform life functions and is lost as heat. Only 10% available to next trophic (feeding) level.



Notice how arrows get smaller, showing decrease in energy availability.



Sun is beginning energy for food chains.

What are the feeding relationships in a food chain?



Producers receive energy from the sun. Use energy to make food.



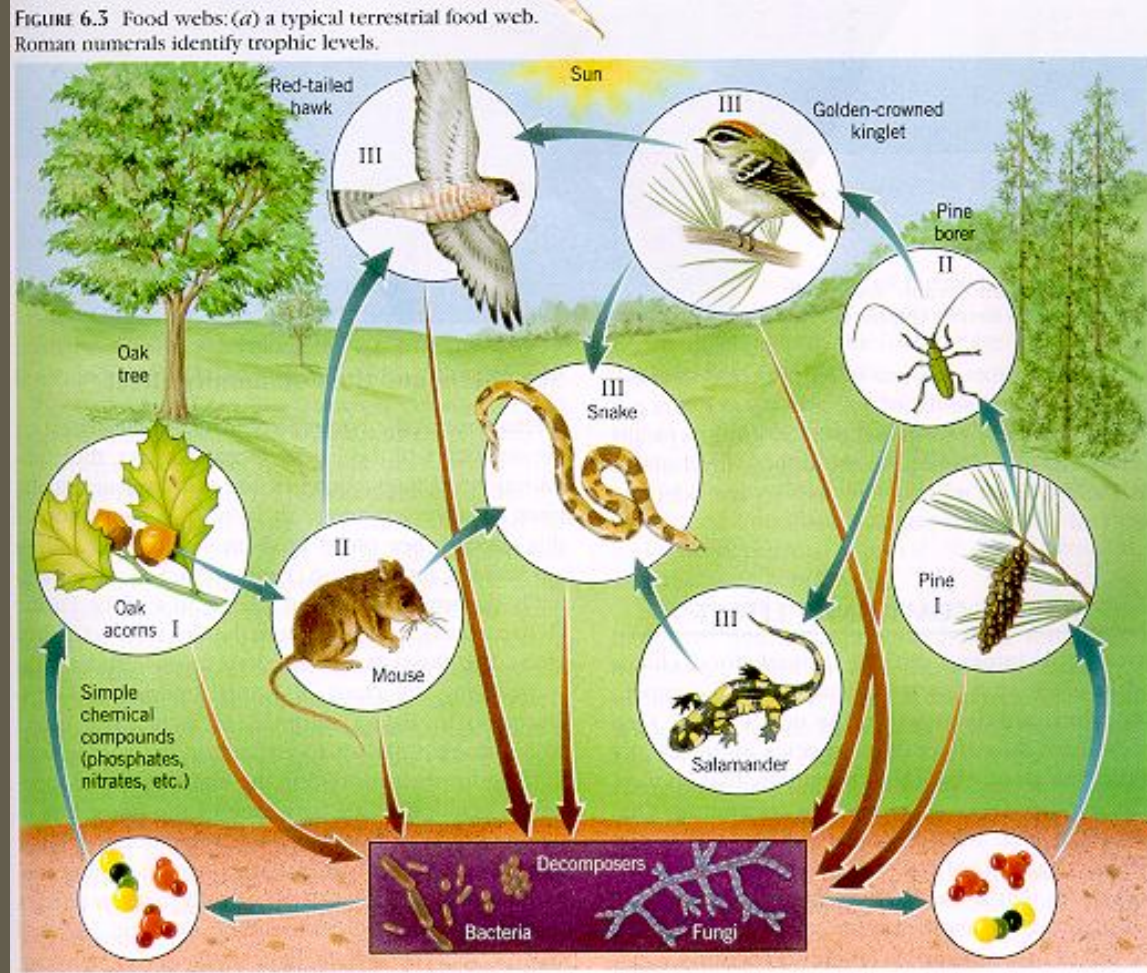
Primary consumers (Herbivores) receive energy from producers. They are the first to get the energy from the plant, hence the term “primary”.



Secondary consumers (carnivores) receive energy from primary consumers. They are the second to get the energy from the plant.

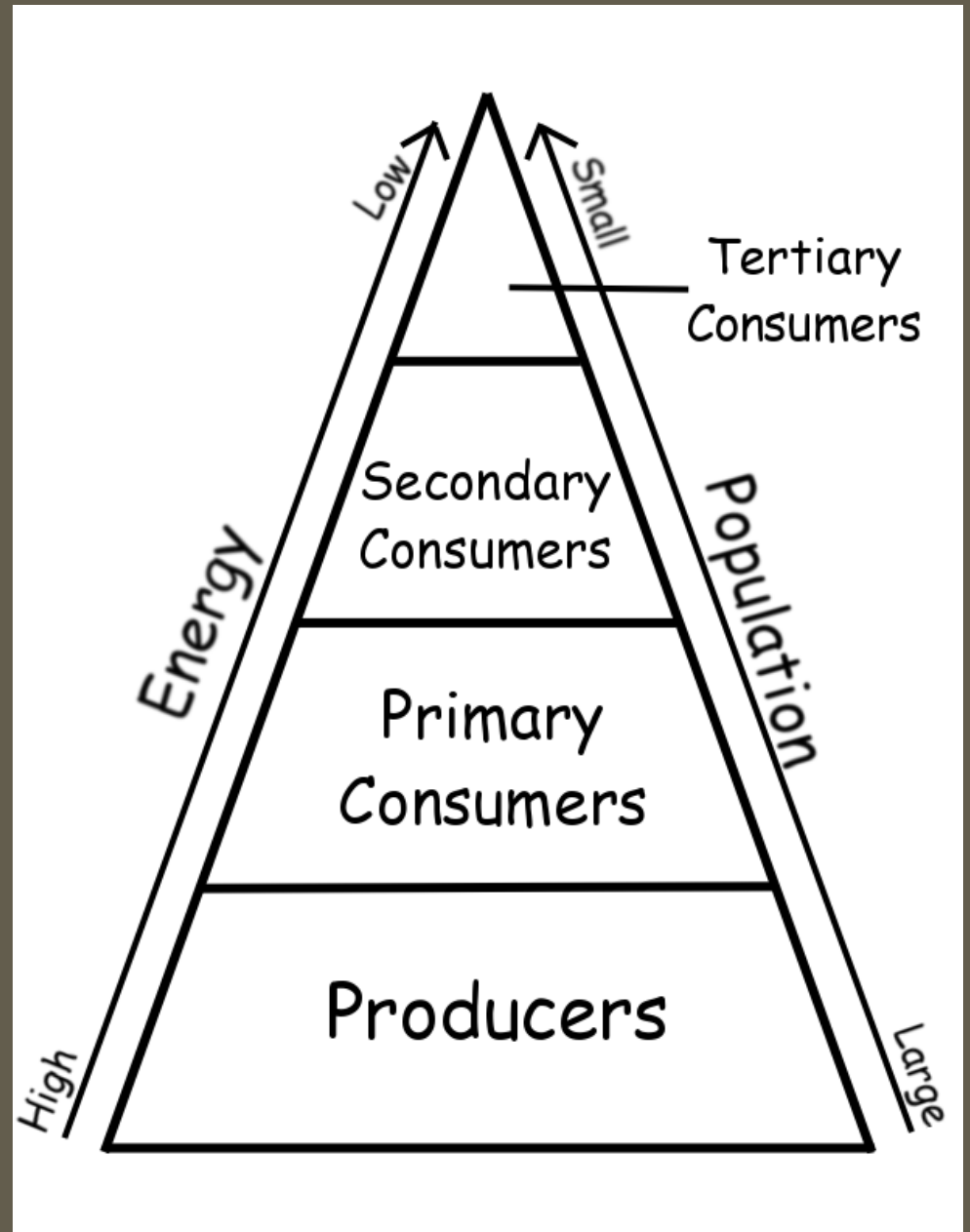
FOOD WEBS

1. Show all possible feeding relationships in ecosystem.
2. Very complex
3. More realistic



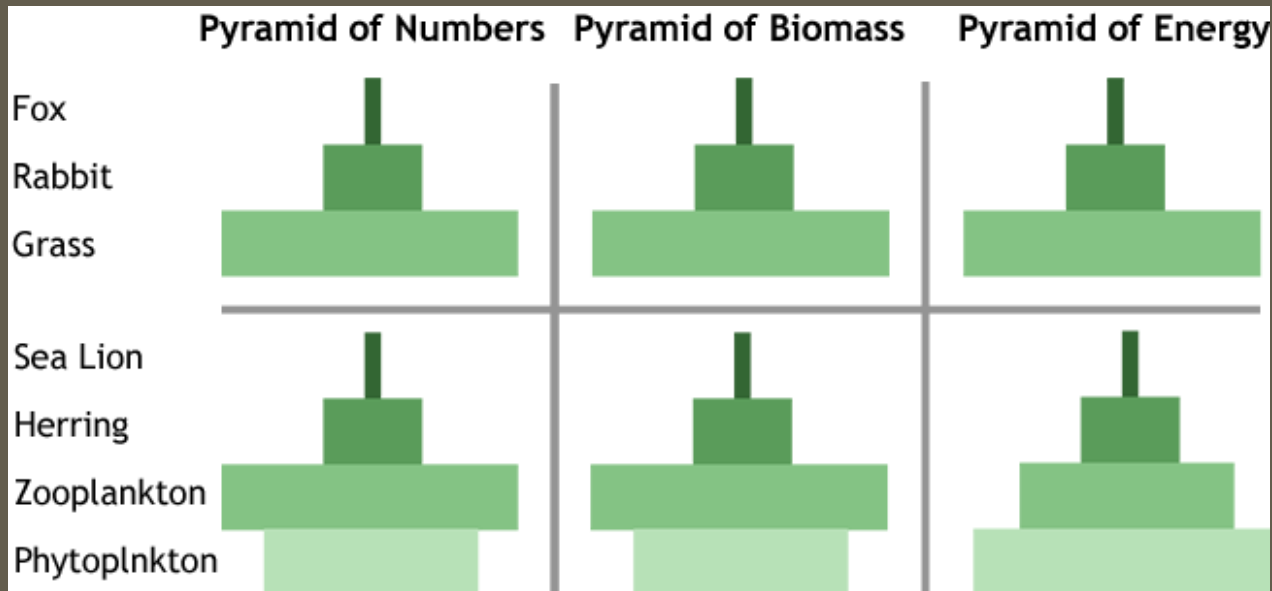
ENERGY PYRAMID

1. Pictorial model that shows how energy decreases as you move up a food chain.
2. Represents a stable community



PYRAMID OF NUMBERS OR BIOMASS

- Pyramid of numbers shows the actual number of individuals
- Pyramid of biomass shows the amount of living material at each level



Tertiary Consumers

Predators



**Kilocalories available in the bodies of tertiary consumers
6 Kilocalories per square meter per year**

Secondary Consumers

Predators



**Kilocalories available in the bodies of secondary consumers
60 Kilocalories per square meter per year**

Primary Consumers

Herbivores



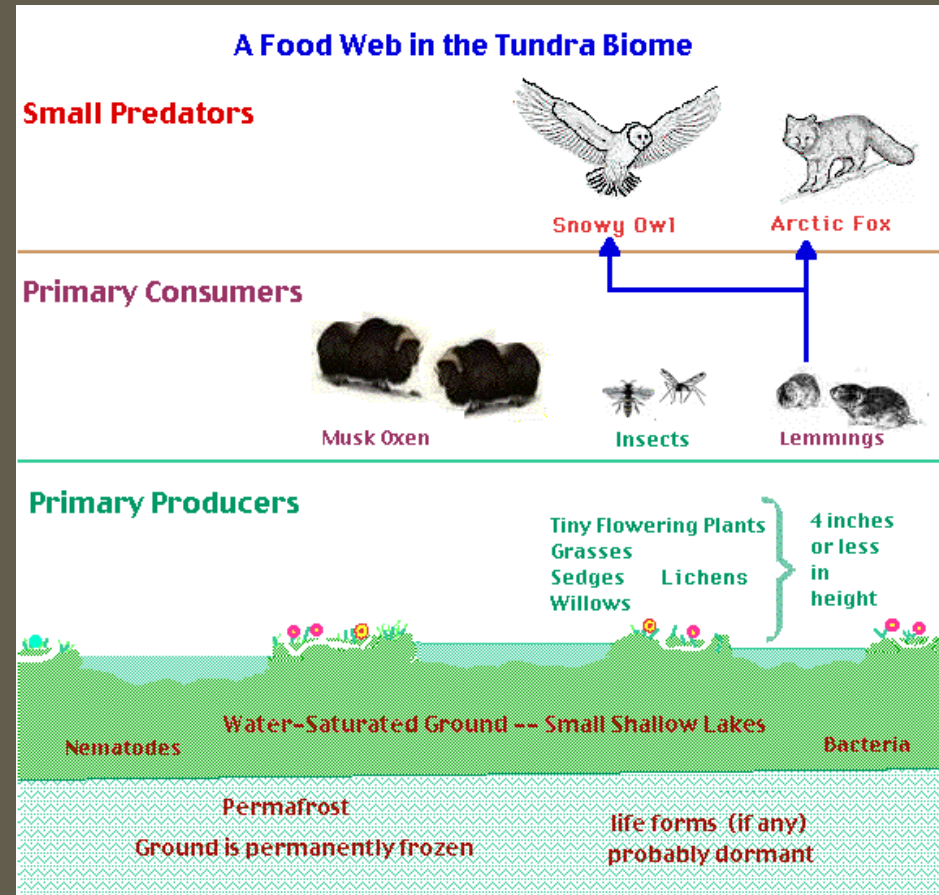
**Kilocalories available in the bodies of Primary Consumers
600 Kilocalories per square meter per year**

Primary producers: Plants: deciduous trees, shrubs, grasses

6000 Kilocalories per square meter per year

DIVERSITY & STABILITY IN THE ECOSYSTEM

1. The more diverse an ecosystem is the more stable it is. There are more organisms so more to potentially eat.
2. Simple food webs have fewer food sources to rely on therefore they are more unstable (Tundra). Small disturbances can greatly affect all organisms.



OTHER IMPORTANT VOCAB:

AUTOTROPH

- Auto= self
- Self feeders/ make their own food
- Ex. Plants, algae



HETEROTROPH

- Hetero= different
- Depend on others (DIFFERENT organisms) for food



QUIZ OVER ALL OF THIS FIRST
THING MONDAY MORN!!!

