

## **REVIEW:** Ecology

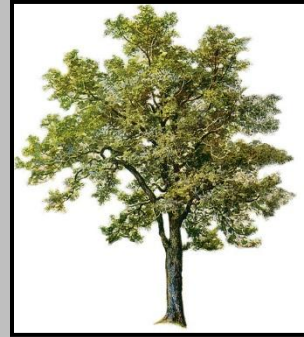
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Ecology = study of how organisms INTERACT with their ENVIRONMENT

Abiotic Factors are *non-living*



Biotic Factors are *living*



### **Population**

ALL individuals of a particular SPECIES within a certain area



## Community

DIFFERENT populations in an area.



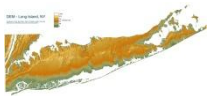
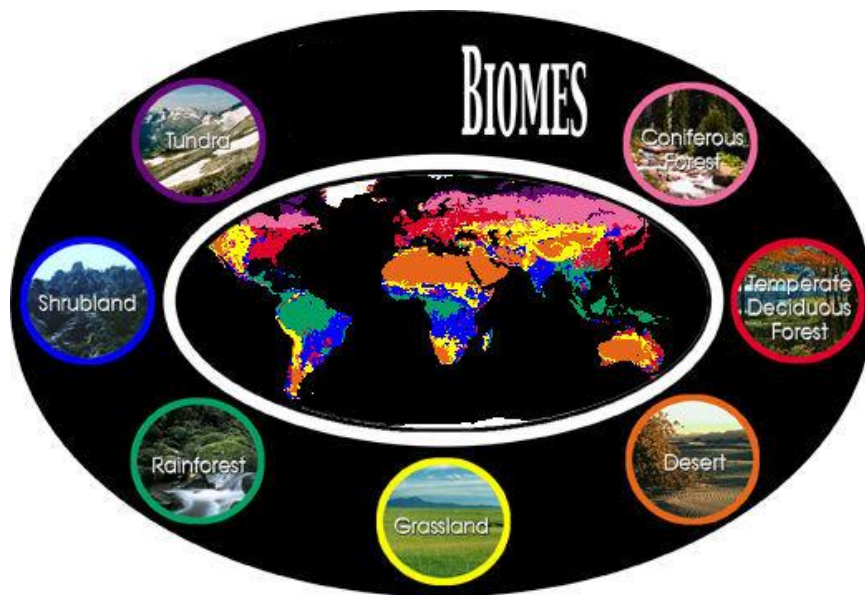
## Ecosystem

a COMMUNITY and ABIOTIC FACTORS



## Biomes

➔ Defined by the type of VEGETATION (plants)



Here on Long Island, we live in a Temperate Deciduous Forest!



Rainforests have the GREATEST AMOUNT of Biodiversity

Autotrophs = Producers

*Make their own food*





## Heterotrophs & Consumers

*Obtain nutrients from environment*



### Types of CONSUMERS

#### Carnivore

*Eat other animals*



#### Omnivore

*eat EVERYTHING*



#### Herbivore

*eat plants*



### Decomposers are *NATURE'S RECYCLERS!*

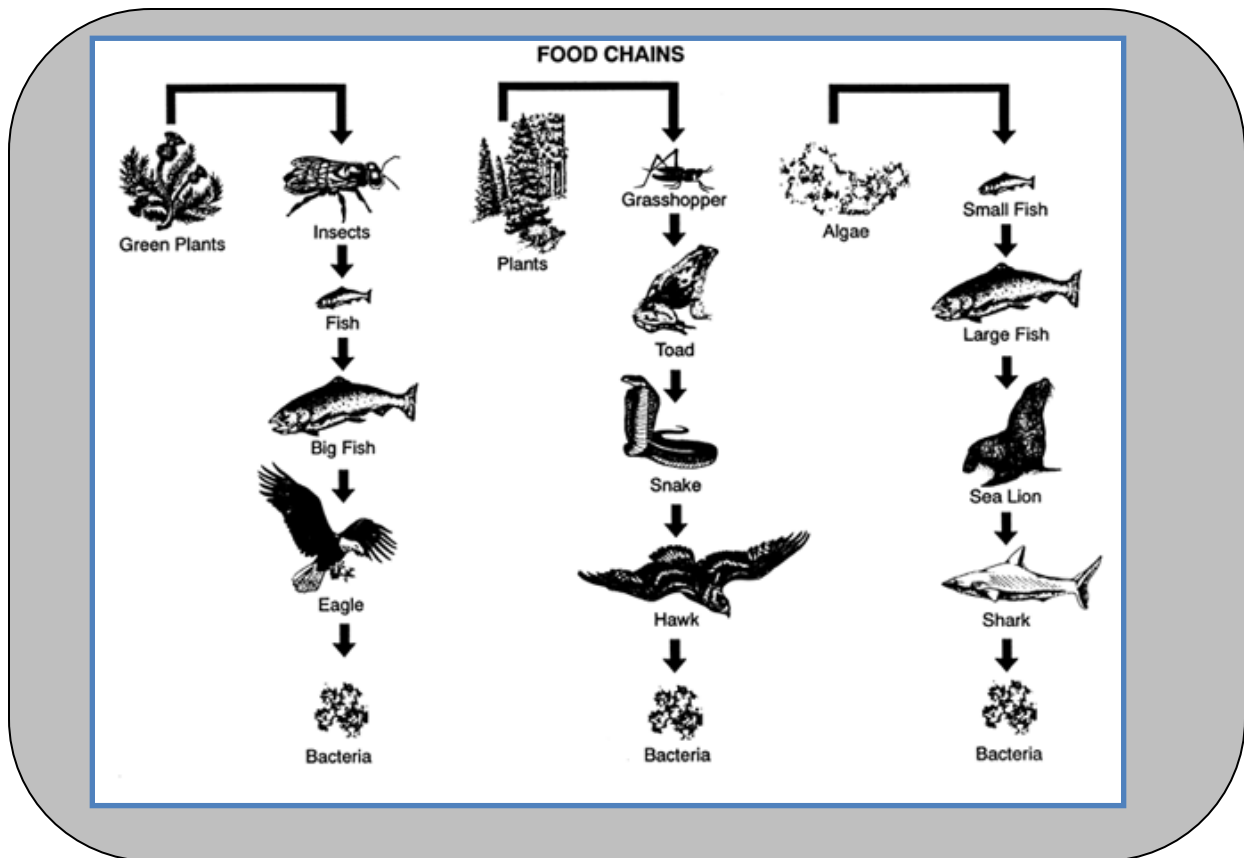
Break-down organic matter and dead organisms



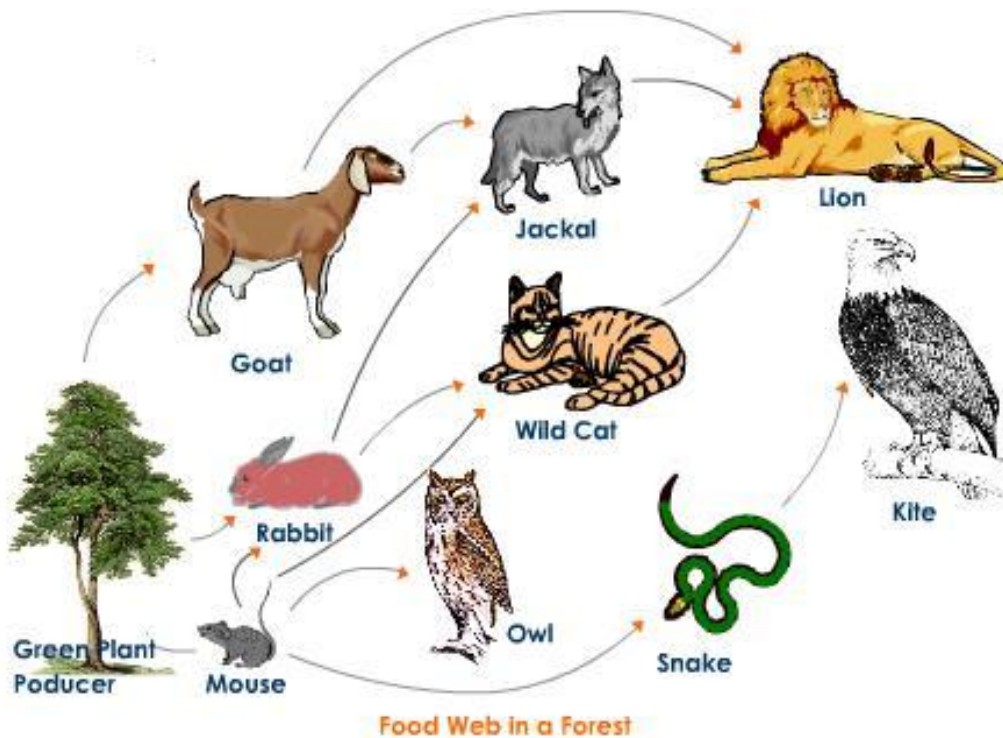
**Remember:** FUNGI are CONSUMERS



A Food Chain shows WHO EATS WHO



Food Web uses ARROWS to show FLOW of ENERGY

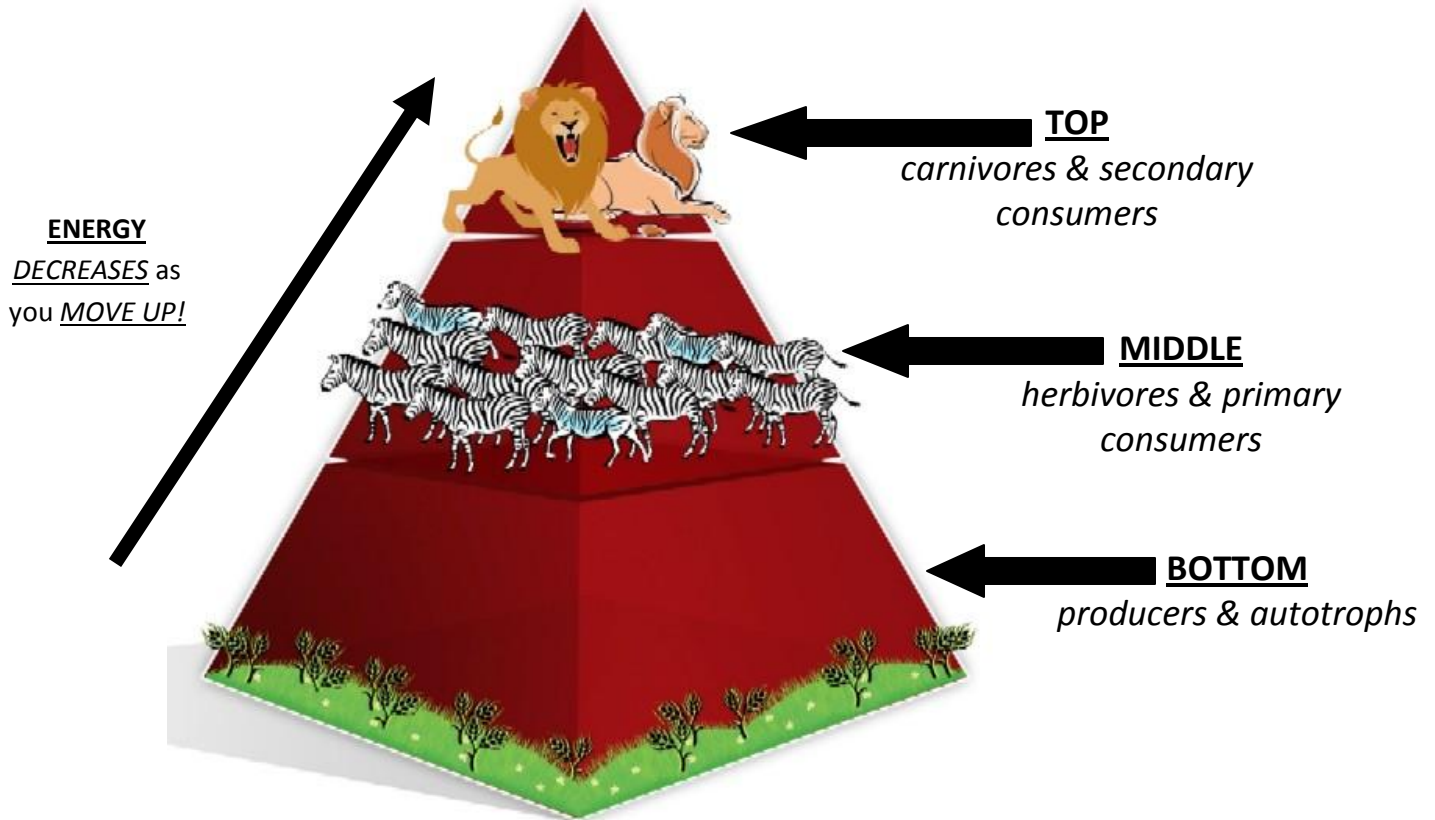


**Remember:** The SUN is the original

**SOURCE of all ENERGY**

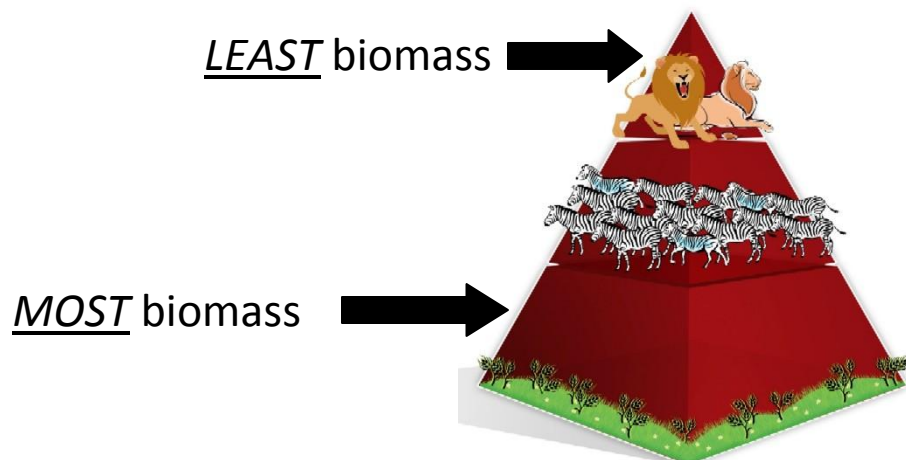


## Energy Pyramid



## Biomass:

The amount of LIVING ORGANISMS.





**Habitat** = the *part of the ENVIRONMENT where an organism LIVES.*



**Niche** = an *ORGANISM'S role in the ENVIRONMENT.*

*What it eats....*



*Who eats it.....*



*Where it lives....*



### **Limiting Factors**

**ANYTHING that LIMITS SURVIVAL** in an environment.

*For example: Temperature, sunlight, water*

## Carrying Capacity

➡ MAXIMUM number of organisms the environment can hold.

★ Remember....DYNAMIC EQUILIBRIUM ★

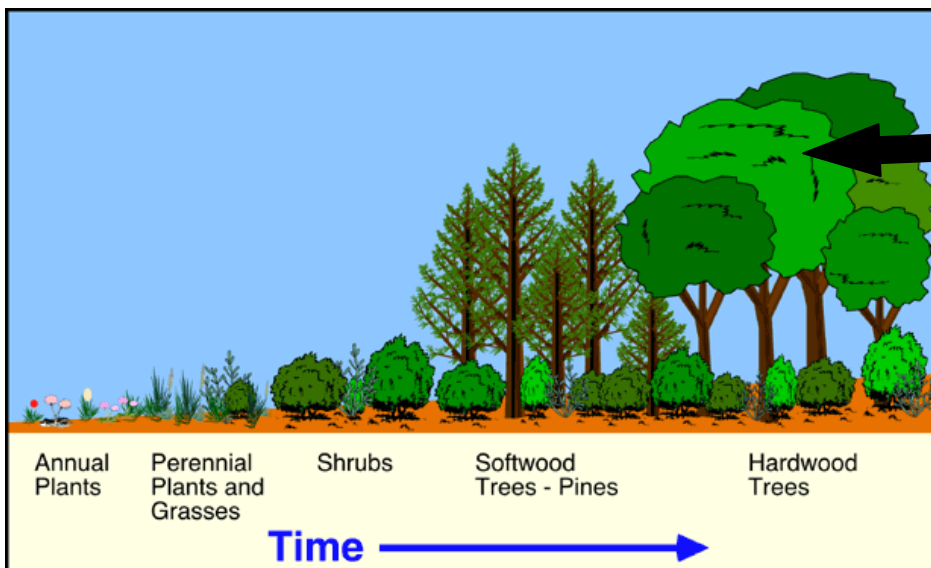
Pioneer Organisms are the FIRST ORGANISMS

- They can GROW on ROCK!



## Ecological Succession

- Existing community is SLOWLY REPLACED by new community.



➡ Climax Community =  
MATURE, STABLE,  
LONG LASTING



**Biodiversity** = Variation among LIFE

It INCREASES the CHANCES of SURVIVAL!



**Symbiotic Relationship** → Different *SPECIES* living *TOGETHER*



Sometimes it's GOOD



Sometimes it's BAD

### **Parasitic**

ONE organism BENEFITS,  
the OTHER is HARMED

Parasite +      Host –

*PARASITES*  
exist as a  
POPULATION  
CHECK



### Mutualism

BOTH organisms BENEFIT → + +



### Commensalism

ONE organism BENEFITS,  
the OTHER is NOT AFFECTED

