

TROPHIC LEVELS

The position that an organism occupies in a FOOD CHAIN

Each trophic level depends on the level below it for ENERGY.

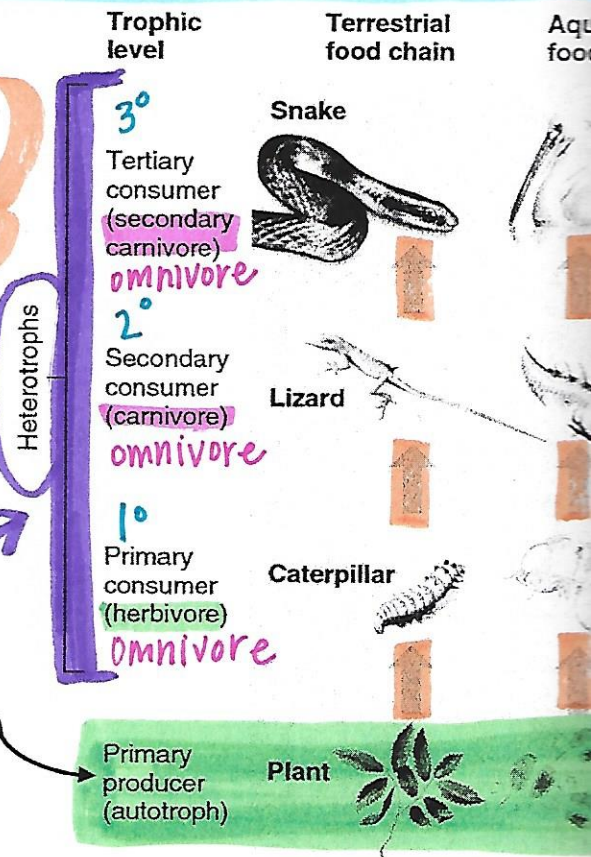
Arrows show the direction of the FLOW of ENERGY.

2nd & Beyond will always be the CONSUMERS!

1st Trophic Level

How energy enters ecosystems

Producers are ALWAYS first!



- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

FOOD CHAINS

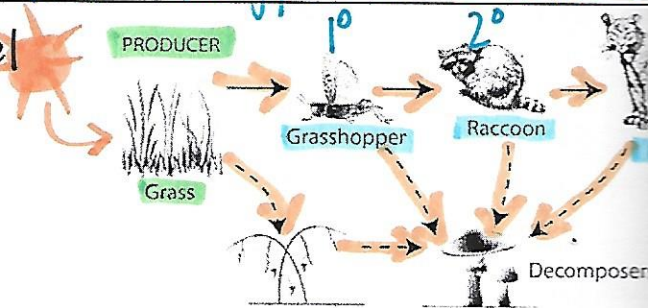
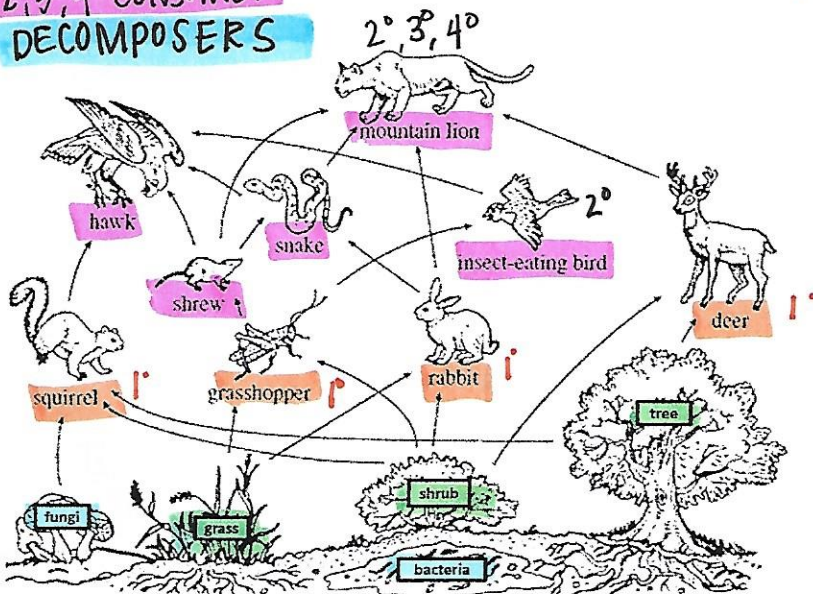
A series of steps showing the flow of energy as one consumes another.

PRODUCERS grass, shrub, tree

1° CONSUMERS deer, rabbit, grasshopper, squirrel

2°, 3°, 4° CONSUMERS

DECOMPOSERS



FOOD WEBS

A chart that links all food chains in a particular area.

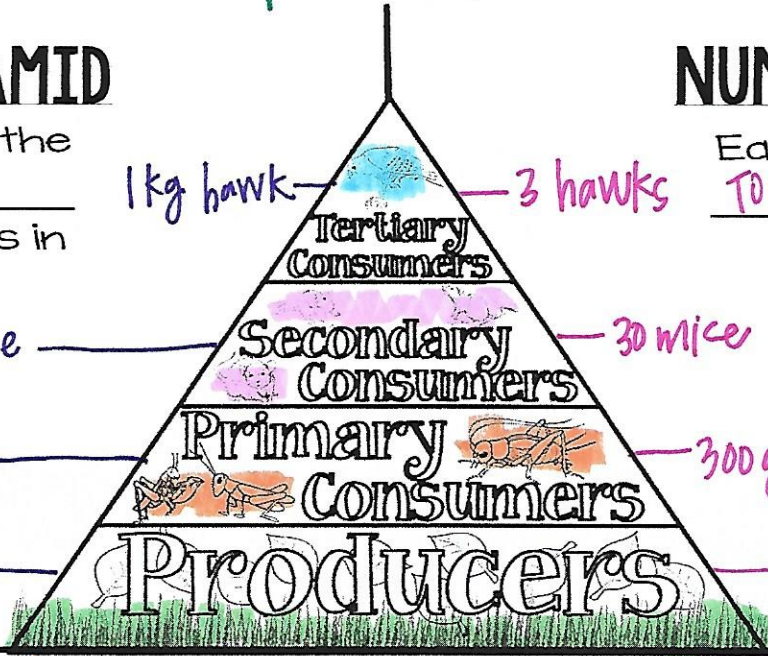
Ecological Pyramids

A graphic representation showing the feeding relationship of groups of organisms and the flow of energy or biomass through the different trophic levels.

BIOMASS PYRAMID

Each level shows the TOTAL MASS (kg) of organisms in that trophic level.

10 kg mice
100 kg grasshoppers
1000 kg grass



1 kg hawk

Tertiary Consumers

Secondary Consumers

Primary Consumers

Producers

NUMBERS PYRAMID

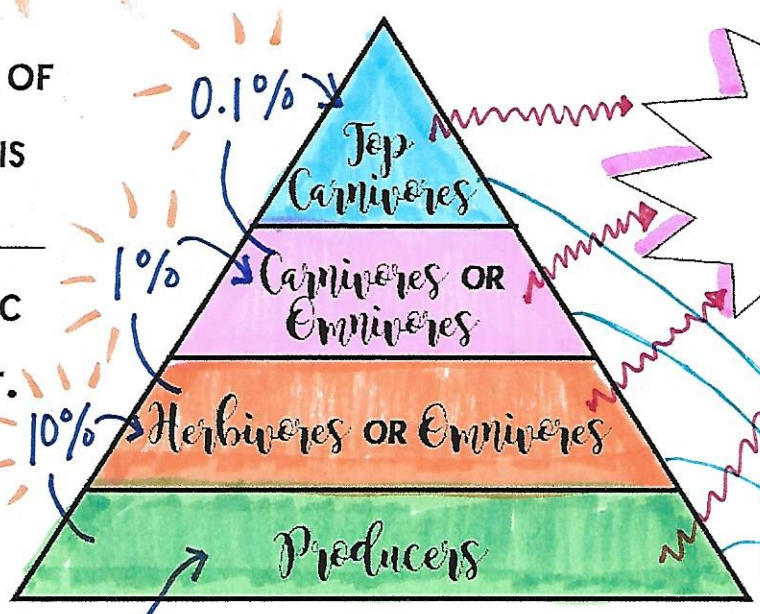
Each level shows the TOTAL NUMBER of individuals of a species in that ecosystem.

3 hawks
30 mice
300 grasshoppers
3000 grasses

ENERGY PYRAMID

Each level shows the amount of energy retained.

10% RULE
Only ten percent OF available energy IS retained FROM ONE TROPHIC LEVEL TO THE NEXT.



0.1%

Top Carnivores

Carnivores OR Omnivores

Herbivores OR Omnivores

Producers

90% Energy given off as heat

DECOMPOSERS & DETRITIVORES

fungi

bacteria

eat thworm



100%