

ECOLOGY: FEEDING LEVELS UNIT NOTES

(DO NOT LOSE)

Name: _____

Ecology: The study of the relationship between living things and the environment.

Concept in Ecology: There is no such thing as a free lunch.

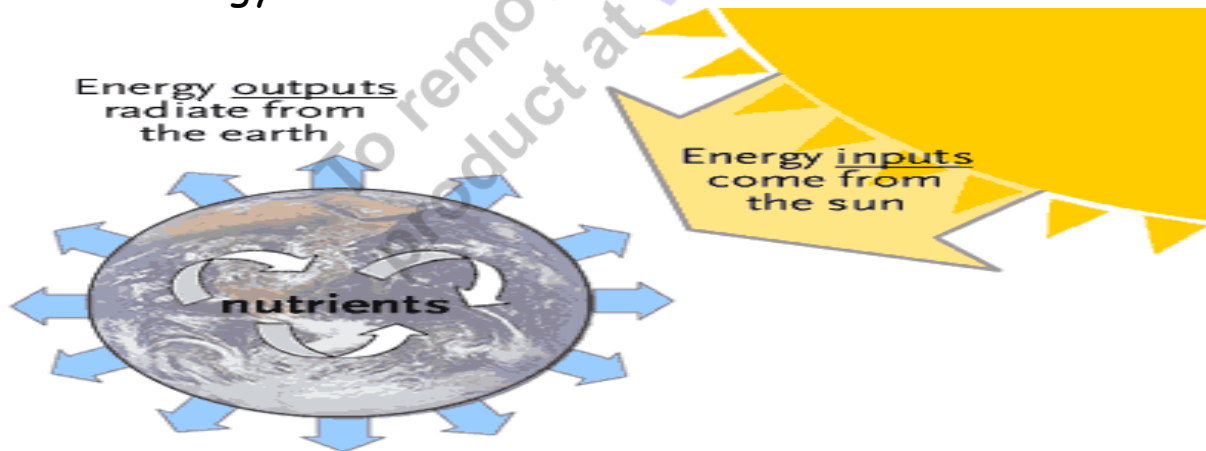
The 4 Concepts in Ecology

- Everything is Connected to Each Other
- Everything is Connected to the non-Living Environment
- Everything Is Changing
- There's No Such Thing As A Free Lunch

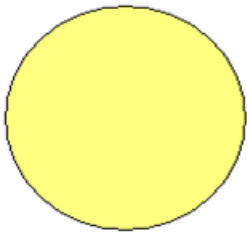
There's No Such Thing As A Free Lunch

- Law's of Thermodynamics (Heat and Energy)
 - Heat flows from warm to cold.
 - Energy cannot be created or destroyed; it can be transferred between systems and surroundings.
 - Energy goes from useful to non-useful.

Energy comes from the sun.



Food Chain: A community of organisms where each member is eaten in turn by another member.

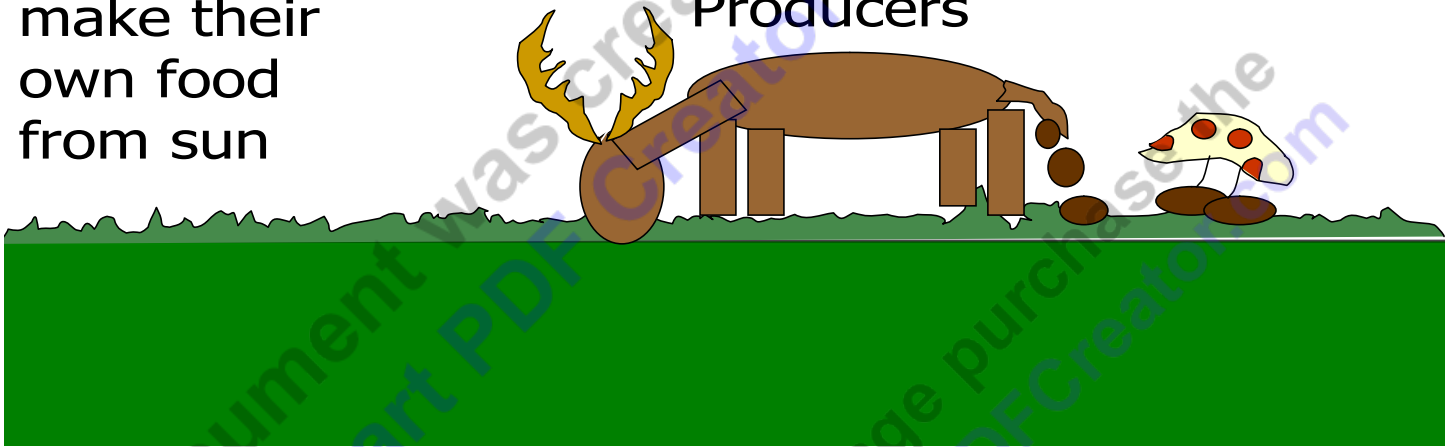


Energy comes from the Sun

Decomposers break down waste

Producers make their own food from sun

Consumers Eat Producers



Trophic Feeding Levels

1 unit of energy



top level consumer

10 units of energy



second level consumers

100 units of energy



first level consumers



producers

1000 units of energy

Producers-Organisms that make their own food.

Consumers: Feed on plants or other animals.

Herbivore: General name for an animal that only eats plants.

Carnivore: An animal that only eats other animals.

Omnivore: An organism that eats both plants and animals.

Opportunistic: Eat everything + scavenge.

Decomposer: Organisms that feed on organic matter.

- Bacteria and fungi.
- Return nutrients to soil.

Phytoplankton: Very small free floating aquatic plants that get energy from sun.



Zooplankton: Tiny animals that cannot make their own food.

- Many eat phytoplankton.



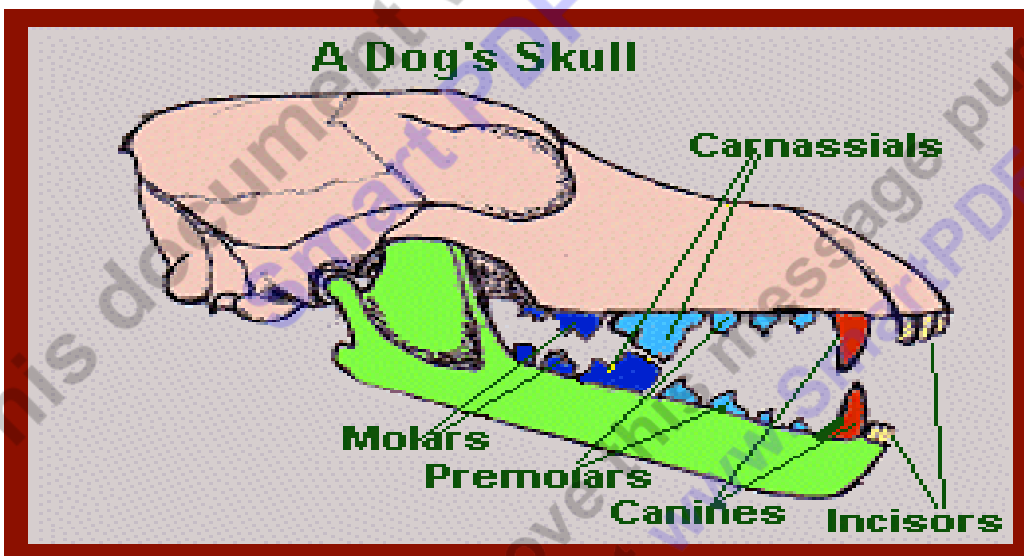
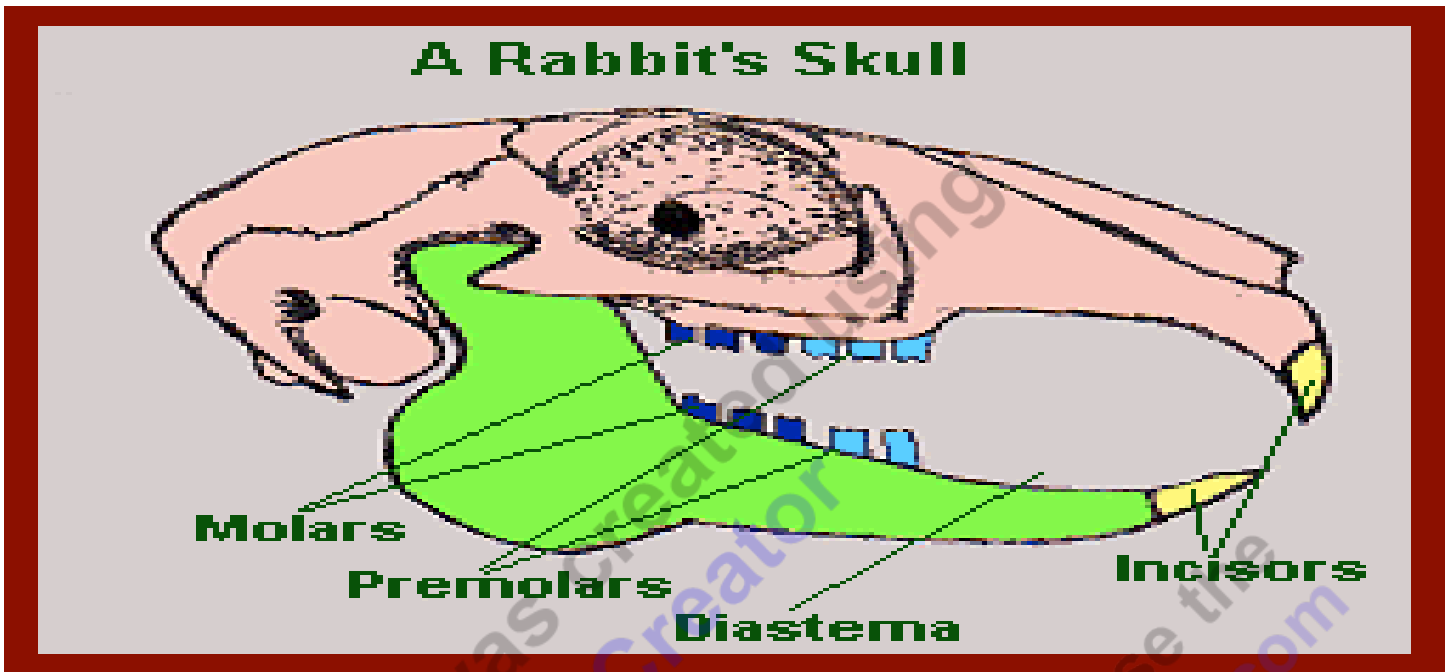
Bioaccumulation: The process whereby an increasing amount of pollutants are concentrated in the cells of plants and animals.

Biomagnification: When contaminants increase at each step of the food chain.

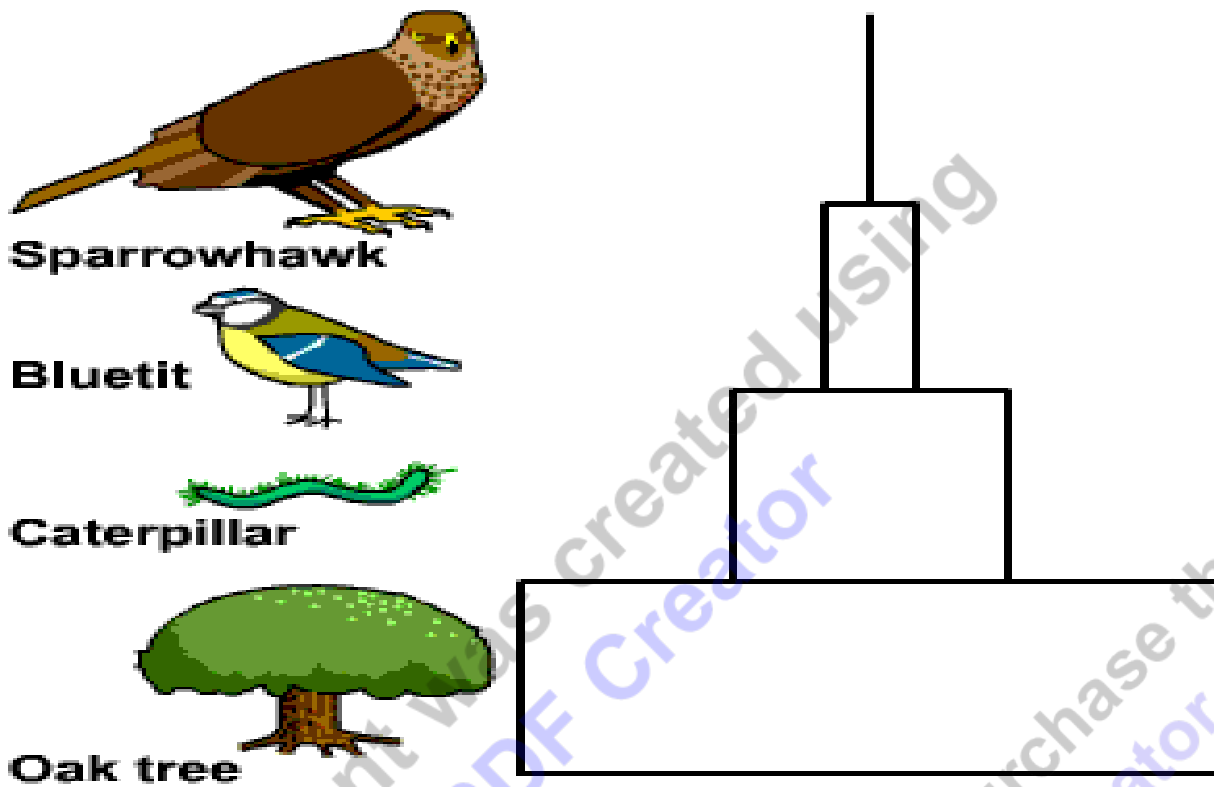


Animal Dentition

- Incisors = For cutting.
- Canines: For stabbing and killing, tearing and piercing.
- Molars: Larger, crushing and grinding food.
 - **Diastema:** A large gap between adjacent teeth, normally between the incisors and chewing teeth.



Pyramid of Biomass- the total mass (quantity) at each level trophic level.



Pyramid of numbers: The total numbers of individuals at each level.

- Available energy decreases as you move up the pyramid.
 - The tree 100,000 leaves
 - 1,000 caterpillars
 - 10 small birds
 - 1 hawk