

Biology Notes 2

Herbivore – eats herbs - plants: a cow, gazelle, etc.

Carnivore – carne – meat; meat eaters; lions, tigers

Omnivore – eats plants and meat: bears, raccoons.

Producer – produces food for the world - plants

Consumer – eats producers – animals

Decomposer – recyclers of the ecosystem; eat dead organisms: mushrooms, fungi.

Autotroph— “Auto”matically “trophs” (eats) - makes their own food (plants).

Heterotroph— “Other” eats. Consumers.

Symbiosis Two different species living together.

Types:

Predation: One eats the other (predator eats prey); prey does not need to die.

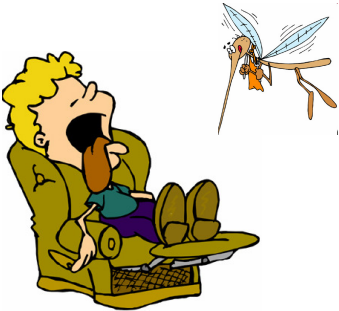
Parasitism: One eats the other gradually,
but hopes it doesn't die. (It wants to keep eating.)

Mutualism: Both are benefited.

Commensalism: One benefits, the other is neither helped nor harmed.



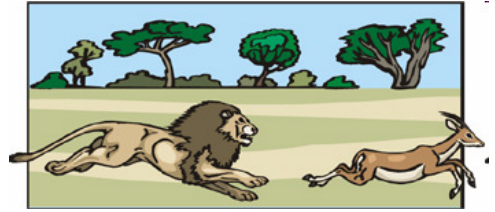
Commensalism—
tree doesn't care.



Parasitism: wants to suck
the juices from its host.



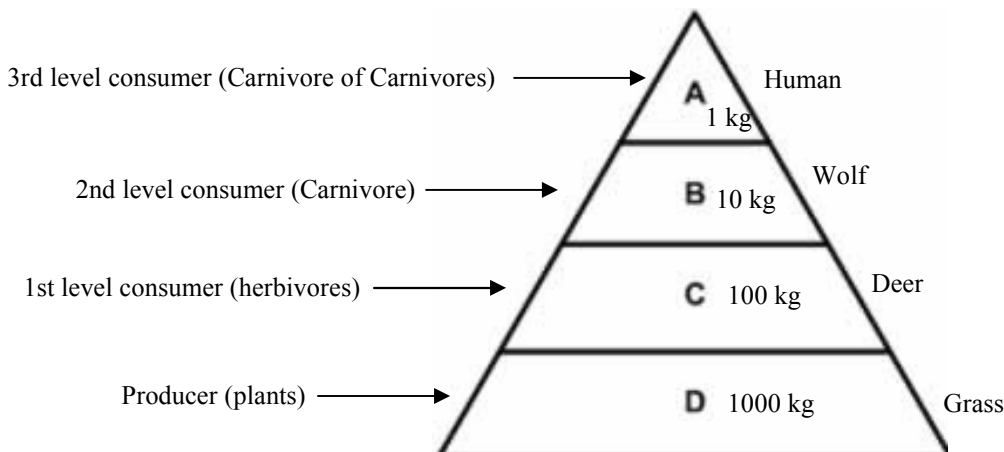
Mutualism—
good for both.



Predation—not so good for gazelle. :(

Biomass Pyramid

The biomass pyramid demonstrates the distribution of organisms in a given ecosystem. Larger levels contain more biomass (amount of living organisms by mass) because an herbivore has to eat a lot of plants to survive and each level has to eat a lot of the lower level to survive.



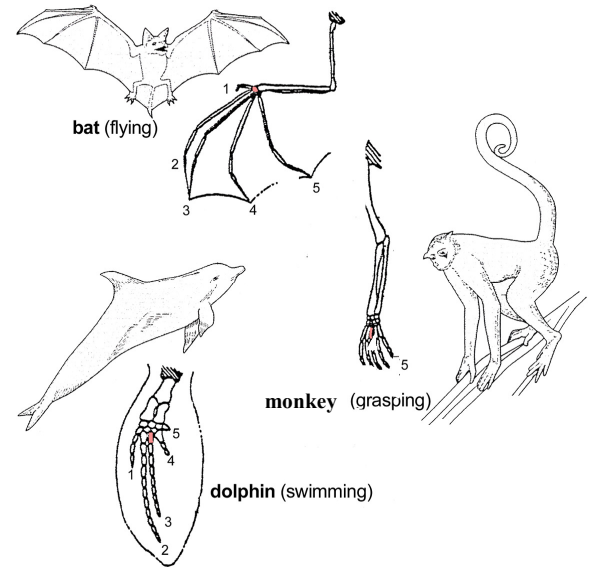
Evidence of Evolution—

Homo—the same; *Analogous*—like an analogy (it's "like", but not the same); *Embryo*—of the egg or the fetus; *Vestigial*—little or no function.

Genetic Evidence—the human genome has some of the same genes that are found in bacteria.

Homologous structures: Two structures that perform similar or same functions and developed from same ancestry. Femur (leg bone) of a cat and a human; Bat wing and a bird wing are homologous because they are both forelimbs (front limbs) and developed from the fins of fish. (See diagram at right)

Analogous structure: Two structures that perform similar or same functions but evolved differently. Ex: bat wings, insect wings, and the wings of a maple seed (see picture below) are analogous because they all allow these organisms to "fly", but are evolved differently. Bat and bird wings are also analogous because they developed independently.



THE VERTEBRATE BODY

Vestigial Structures: Little or no function. Ex: our appendix and tale bones. Both come from ancestral species, but have no function now.

Embryological structures: male testicles and female ovaries. Both came from the same tissue while in the embryo, but developed differently. In the diagram at the right, notice that all of the organisms are embryologically related at first. Notice that the salamander is embryologically related only for the first three steps, then diverges. The more closely related the organism (like pigs and monkeys) the farther along in development they look similar to humans.

