Name: _____

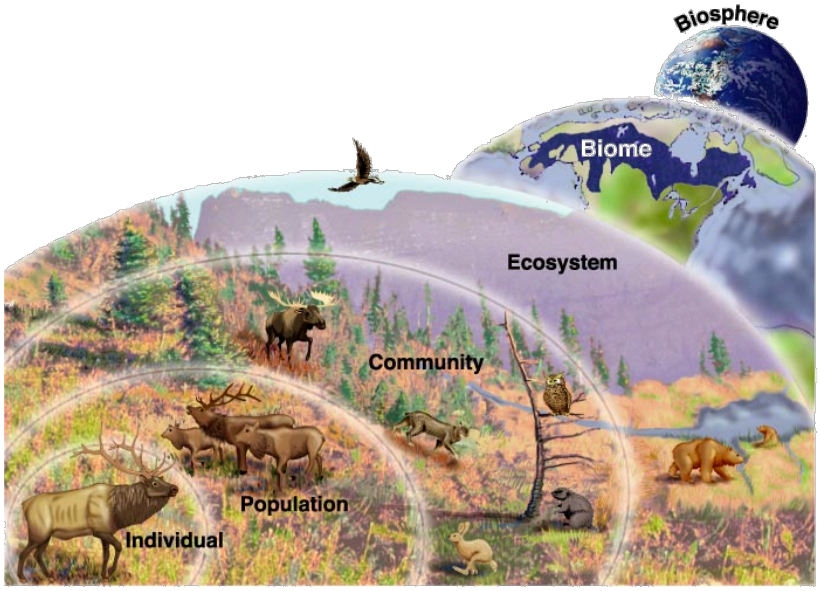
1. What is **ecology**?

_____

_____

2. **LEVELS OF ORGANIZATION**

- A single member of a species is known as an _____.
- _____ are groups of individuals.
- _____ are grouping of different populations.
- An _____ includes a community and its surroundings.
- A _____ is a group of ecosystems with the same type of climate.
- A _____ would be the entire planet.



3. **PRODUCERS**

Q: What do we call organisms that make their own food?

A: _____

Q: What process do plants undergo to make their own food?

A: _____

Q: What's the equation for photosynthesis?

A: _____

4. **CONSUMERS**

Q: What do we call an organism that consumes its food?

A: _____

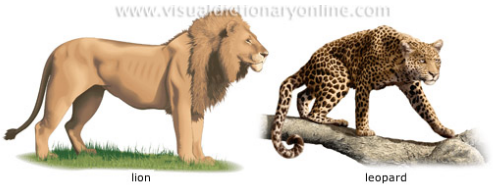
- There are four types of heterotrophs, depending on where the organism's energy (i.e. food) comes from:
    - _____
    - _____
    - _____
    - _____

Q: Where does a carnivore get its energy?

- A: From _____ only

Q: What are some examples of carnivores?

- A: _____



Q: Where does an **omnivore** get its energy?

A: From both _____ and _____/grains/fruit, etc

Q: What are some examples of omnivores?

A: _____

Q: Where does a **decomposer** get its energy?

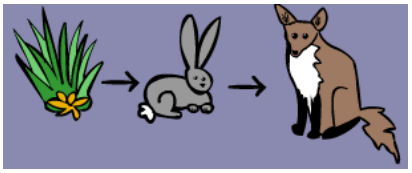
A: From breaking down _____

Q: What are some examples of decomposers?

A: _____

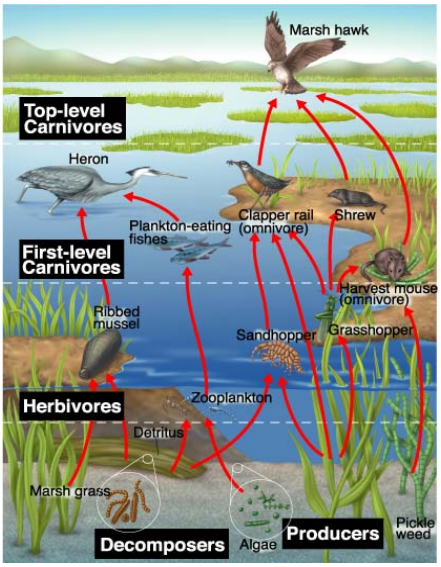
5. FOOD CHAINS

- Energy flows through an ecosystem in _____ _____, from the sun or inorganic compounds to autotrophs (producers) and then to various heterotrophs (consumers)
- Energy is transferred by organisms _____ and _____
- Energy transfer is represented by _____ going in the _____



6. FOOD WEBS

- A _____ links all the food chains in an ecosystem together
- More _____ interactions than unidirectional flow of food chains
- In reality, the interactions between _____ and _____ in an ecosystem's exists as a _____ instead of a food chain



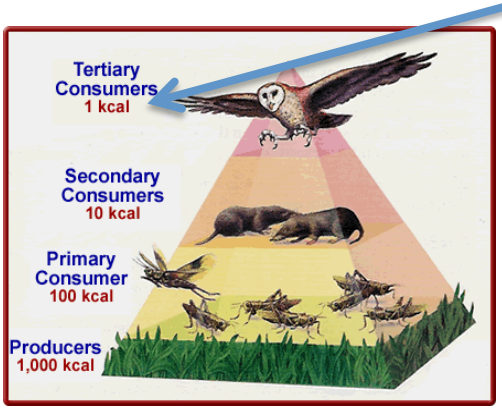
7. ENERGY PYRAMIDS

- Each step in the food chain is called a _____ _____
- _____ are the _____ trophic level
- _____ make up the second, third or higher trophic level

Amount of energy available in this tropic level

Energy pyramid – only _____ of energy is transferred from one trophic level to the next

Energy is used up by the organism's _____ and/or released as



8. BIOTIC VERSUS ABIOTIC

- _____ factor –influences/interactions of _____ organisms
- _____ factor – physical, _____ influence that affect an ecosystem

Q: What are some biotic factors that affect a forest?

A: _____

Q: What are some abiotic factors that affect a forest?

A: _____

9. COMMUNITY INTERACTIONS

- Competition
- Predation
- Symbiosis
    - Mutualism
    - Commensalism
    - Parasitism

A. Competition

- Definition – organisms of the same or different species attempt to use the _____
- _____ principle – no two species can occupy the same _____ in the same habitat at the same time; one species will _____ the other
- **Niche** – range of _____ and _____ conditions in which an organism _____ and the way in which the organism _____ those conditions

B. Predation

- Definition – one organism captures and _____ on another
- Predator _____, prey does not.
-

C. Symbiosis

- Definition _____ between two organisms
- There are 3 kinds:
  - _____
  - _____
  - _____

10. POPULATION GROWTH

Three factors affect population size

1. Number of _____

2. Number of _____

3. Number of individuals that enter or leave pop.

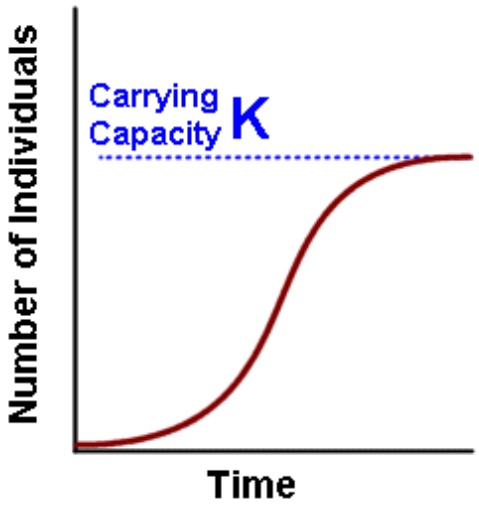
- Immigration – _____
- Emigration – _____

A. Exponential Growth

- Under ideal conditions with unlimited resources, a population will grow _____.

B. Logistic Growth

- As resources become _____, the growth of a population slows or stops
- _____(K) – largest number of _____ a given environment can support
- Once the population reaches its carrying capacity, the population size _____



11. Coevolution

Definition- a long term change that takes place in two species because of their _____with one another.