

## Symbiosis / Food web + Pyramid

- Relationship between organisms to survive.
- 4 Types - Commensalism, Parasitism, Mutualism, Predation

Population - A group of the same species living in the same area, potentially interacting. Ex: Hispanic population - Everyone is hispanic

Community - A group of populations of different species living in the same area potentially interacting.  
Ex: El Paso Community - different races together.

Commensalism: One species benefits, and the other is neither helped or harmed. (Neutral) = 1 benefits, 1 is Neutral.

Ex: Clownfish is protected from predators by anemone, and the anemone is neither helped, nor harmed.

Parasitism: One species benefits, while the other one is harmed.

Ex: Ticks and fleas benefit by sucking blood from animals + humans, the animals and humans are harmed by getting blood taken out and being caused pain.

Mutualism: Both species benefit from the interaction.

Ex: Bees and Flowers - Bees get pollen to make honey, and flowers get pollinated thanks to the bees.

Predation: One species consumes/kills (Benefits), while the other is eaten.

• One benefits, and the other dies.

Ex: A Lion eating a Rabbit. Lion benefits, Rabbit dies.

## Energy/Food Pyramid

- As species eat species under them, in food chain, 10% of energy is lost. \* 10% Rule\*
- Producers, Herbivores (primary consumers), Carnivores (secondary), Tertiary.

Producers: Have the most amount of energy, because they get their energy from the sun. Ex: Grass, bushes, Trees, Cacti, Plants.

Primary Consumers: They eat the producers, and receive 10% of what they eat. Ex: Rabbit, Deer, Squirrel, Chicken, Herbivores.

Secondary Consumers: They eat the primary + producers, and will receive 10% of what they eat. Ex: Snake, Badger, Bear, Frogs.

Tertiary Consumer: They eat primary + secondary consumers, and receive 10% of what they eat, and are at the top of the food chain. Ex: Cheetah, Shark, Lion, Hawk, Humans, Hyena, Tiger.

