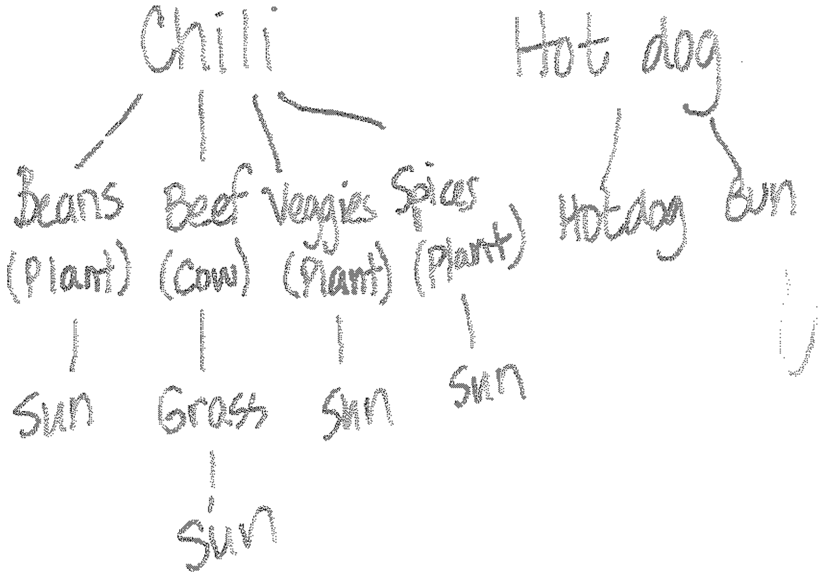
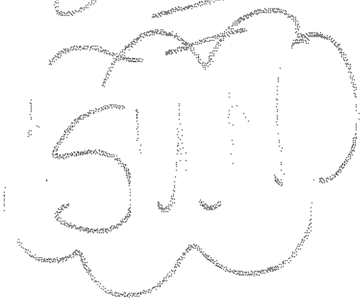
Chapter 2 Notes



Ultimate Energy Source



- Energy Roles -- how an organism (gets) obtains its energy and interacts w/ others
  1. Producer - gets energy through photosynthesis (makes its own food)
  2. Consumer - anything that eats something to get energy
  3. Decomposer - breaks down things to get energy

CONSUMER TYPES:

○ **HERBIVORE** - eats only plants

○ **CARNIVORE** - eats only meat

○ **OMNIVORE** - eats both plants and meat

○ **SCAVENGER** - eats already dead organisms (ex: roadkill)

- CONSUMER - eats things to get energy

Trophic Levels

(1st Level Consumer)

  - PRIMARY CONSUMER- eats plants or other type of producer

(2nd Level Consumer)

  - SECONDARY CONSUMER - eats primary consumer

(3rd Level Consumer)

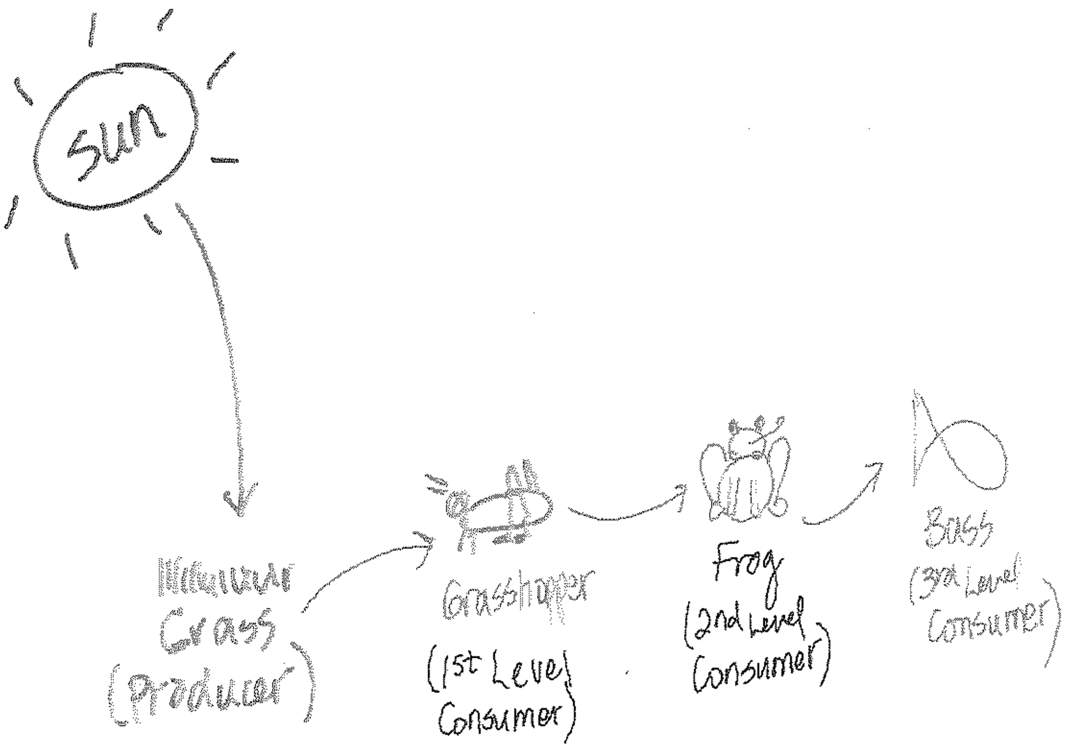
  - TERTIARY CONSUMER - eats secondary consumer

DECOMPOSER - break down the remains of living things and return them to the earth (ex: worms, bacteria, mushrooms)

- **The SUN is the ultimate energy source for everything in the world**
- **starts out every food chain**
- **Sun gives its energy to PRODUCERS**

(Producers = make their own food through photosynthesis)

Blue Book - p.198



How to make a food chain or web:

- All energy starts with the SUN
- Energy moves from the sun to the PRODUCER
- The arrows move FROM the energy source TO the organism the energy goes to
- Organisms can eat more than one thing (food web)

LEVELS:

- ○ SUN - ultimate energy source
- ○ Producer - plant
- ○ 1st Level Consumer (primary level) - eats plants
- ○ 2nd Level Consumer (secondary level) - eats an 1st level plant eater
- ○ 3rd Level Consumer (tertiary level) - eats the 2nd level

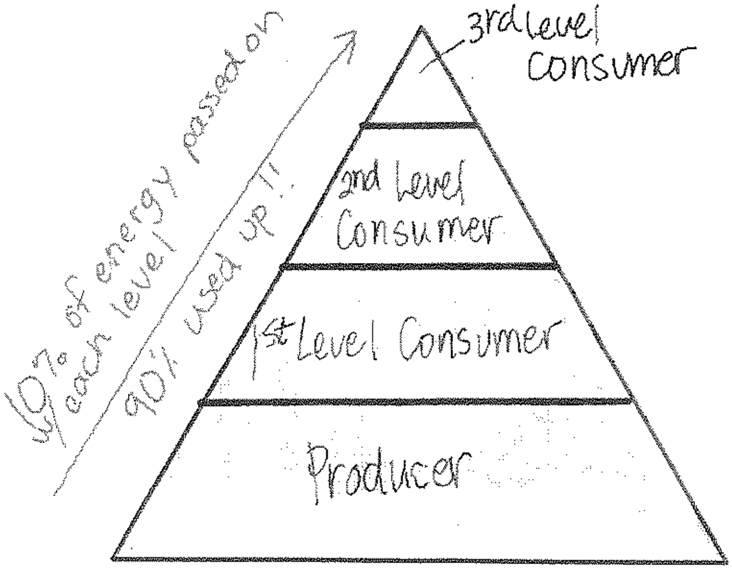
- ○ A decomposer breaks ANY of those things down

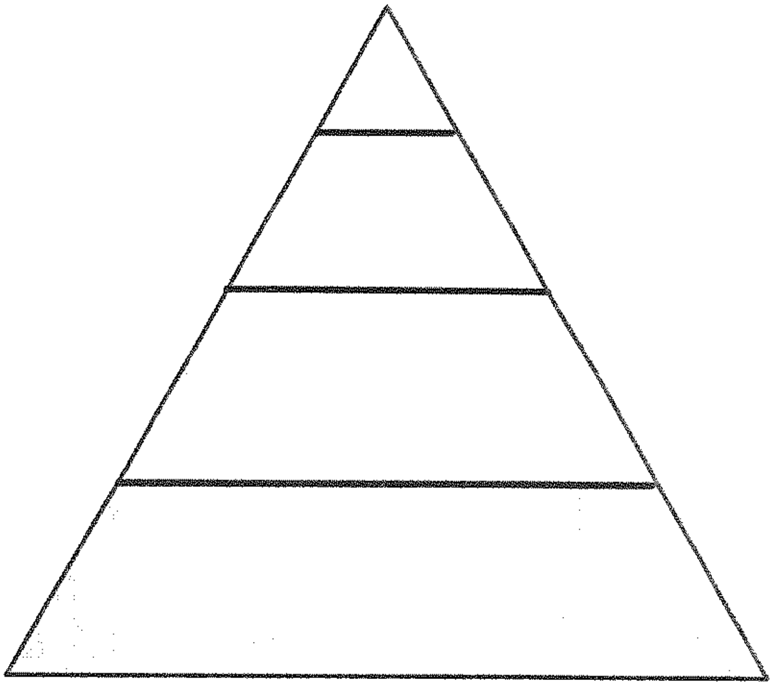
FOOD CHAIN - shows the path of energy throughout an ecosystem - shows one possible diet of organisms

FOOD WEB - overlapping food chains (because an organism doesn't eat the same thing every single time)

Energy Pyramid = shows how energy moves through a food chain

* most energy available at producer level!





CLIMATE = the average weather patterns in an area over time ---- Determined by temperature and precipitation

BIOME - region that has a particular climate that contains certain types of plants and animals

BIOMES:

- Desert
- Deciduous Forest (leaves that fall)
- Grasslands
- Tundra
- Tropical Rainforest
- Taiga / Coniferous Forest (pines)

- **Freshwater**
- **Marine (salt water)**

Threatened = without help, or something changing, the species could become endangered

Endangered = the population is so low, that if nothing is done to help it, it could become extinct

Extinct = the organism no longer exists in the wild or captivity

Reasons for organisms being threatened / endangered:

- Loss of habitat = #1
- Hunting
- Disease
- Harsh weather
- Competition with other species
- Natural disasters
- Pollution

By having one organism taken out of the big picture of things, it affects ALL organisms (all food webs will eventually be affected)

this affects:

BIODIVERSITY = the wide variety of life on Earth