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| Burning a rainforest is chemical energy to thermal energy.  Snails release the gas CO2 (carbon dioxide).  All living organisms perform cellular respiration.  Plants use pigments primarily to absorb light energy from the sun.  Photosynthesis: **Reactants:** CO2 (carbon dioxide) + H20 (water) + sunlight (energy) **Products:** C6H12O6 (glucose) + O2 (oxygen)  Cellular Respirations: **Reactants:** C6H12O6 (glucose) + O2 (oxygen) **Products:** CO2 (carbon dioxide) + H2O (water) + ATP (energy)  Mitochondria produce energy for muscle cells.  Leaves of plants look green because most of the blue and red light is absorbed by chlorophyll and most green light is reflected.  Photosynthesis occurs in the chloroplast.  When a plant absorbs sunlight, light energy is converted to chemical energy.  Yeast and some bacteria can perform alcoholic fermentation.  Glucose is an energy rich compound needed by all organisms. | In an energy pyramid, energy moves from the bottom of the pyramid to the top (A🡺B🡺C🡺D)  Producers get their energy from an outside source.  Biotic factor is any living thing in an ecosystem (plants, animals, bacteria, etc.)  Herbivores are primary consumers.  10% of energy is passed from one trophic level to the next; the other 90% is lost.  The first species in a food chain is autotrophic.  The top consumer (carnivore) has the smallest biomass.  Flowers and Insects have a mutualistic relationship - the flower provides the insect with food, and the insect pollinates the flower.  Secondary succession begins on soil, and primary succession begins on newly exposed surfaces.  Birthrate higher than the death rate can cause a population to grow.  Early hunter and gatherers are responsible for a major extinction event of large animals.  **Mutualism**: both species benefit. (flower & insect) **Parasitism**: one benefits, the other is harmed. (tapeworm & animal) **Commensalism**: one benefits, the other is not affected. (shark & remora)  The logistic model considers the environment’s carrying capacity; exponential growth just continues to grow.  Deceased birthrate, increased death rate, and emigration can cause a population to decrease.  Biodiversity is the variety of life in the world or in a particular habitat or ecosystem. (Specie preservation can HELP biodiversity!)  **Density dependent** only affects when a population reaches a certain size. (Ex: competition, disease) **Density independent** can affect any population, regardless of size. (Ex: natural disasters, climate change)  If a population grows larger than its carrying capacity, the death rate may rise.  A niche is the role or function of an organism in an ecosystem. No two organisms can share the same niche.  An abiotic factor is any nonliving component of an ecosystem (Ex: soil, rainfall, sunlight, temperature)  Heterotroph is an organism that eats other organisms (Ex: consumer – herbivore, omnivore, carnivore).  Decomposers are necessary in an ecosystem because they provide energy for plants by the process of decay (Ex: fungi, bacteria)  Immigration is the movement of organisms **i**nto an area.  Tundra biome has cold temperatures and very little precipitation. | |
| Greenhouse gas is a substance that captures heat in the atmosphere.  The carbon cycle is a series of processes by which carbon compounds are converted in the environment.  Carbon footprint is the amount of CO2 (carbon dioxide) each person is responsible for producing.  Carbon moves from the atmosphere to a flower by carbon being absorbed by the flower/plant through photosynthesis.  A meal with a lot of meat or a fast food meal has the highest carbon food-print.  You can reduce your carbon footprint by turning off the TV/Xbox/Lights when you are not using them, turning off the water when you brush your teeth, etc. | | Homeostasis is maintaining a near-constant internal environment.  Negative feedback is when the response eliminates the original stimulus.  Positive feedback is when the response strengthens the original stimulus.  The endocrine system has two hormones with opposite effects to regulate certain things, which helps it maintain homeostasis.  Feedback inhibition is an increase in a substance will decrease production of that substance.  The receptor is the part of a feedback mechanism that senses the stimulus.  When you need food, your body maintains homeostasis by having the brain send signals to make you feel hungry.  Sweating is a way to cool the body to maintain homeostasis.  If you lose the ability to sweat, you would overheat. |