Vocabulary/Ch. 3

Friedland

**ecosystem**: A particular location on Earth distinguished by its particular mix of interacting biotic and abiotic components

**producer**s or **autotroph**s: Plants, algae, and other organisms that use the Sun’s energy to produce usable forms of energy

**photosynthesis**: Through this process, producers use solar energy to convert carbon dioxide and water into glucose and oxygen

**cellular respiration**: Process that unlocks the chemical energy stored in the cells of organisms. Glucose and oxygen are converted into energy, carbon dioxide, and water

**consumers** or **heterotrophs**: An organism that must obtain its energy by consuming other organisms

**primary consumers**: Individuals incapable of photosynthesis; must obtain energy by consuming other organisms

**secondary consumers**: Carnivores that eat primary consumers

**tertiary consumers**: Carnivores that eat secondary consumers

**trophic levels**: Levels in the feeding structure of organisms

**food chain**: The sequence of consumption from producers through tertiary consumers

**food web**: A complex model of how energy and matter move between trophic levels

**scavengers**: Carnivores that consume dead animals

**detritivores**: Organisms that specialize in breaking down dead tissues and waste products into smaller particles

**decomposers**: The fungi and bacteria that complete the breakdown process by recycling the nutrients from dead tissue and wastes back into the ecosystem

**gross primary productivity**: The total amount of solar energy that the producers in an ecosystem capture via photosynthesis over a given amount of time

**net primary productivity**: The energy captured minus the energy respired by producers is the ecosystem’s net primary productivity

**biomass**: The total mass of all living matter in a specific area

**standing crop**: The amount of biomass present in an ecosystem at a particular time

**ecological efficiency**: The proportion of consumed energy that can be passed from one trophic level to another

**trophic pyramid**: Represents the distribution of biomass among trophic levels

**biosphere**: The region of our planet where life resides

**biogeochemical cycles**: The movements of matter within and between ecosystems

**hydrologic cycle**: The movement of water through the biosphere

**transpiration**: The release of water from leaves during photosynthesis

**evapotranspiration**: The combined amount of evaporation and transpiration

**runoff**: Water that moves across the land surface and into streams and rivers

**macronutrients**: The six key elements that organisms need in relatively large amounts

**limiting nutrient**: A nutrient required for the growth of an organism but available in a lower quantity that other nutrients

**nitrogen fixation**: A process which some organisms can covert nitrogen directly to ammonia

**leaching**: The transportation of dissolved molecules through the soil via groundwater

**disturbance**: An event caused by physical, chemical, or biological agents that results in changes in population size or community composition

**water shed**: All of the land in a given landscape that drains into a particular stream, river, lake, or wetland

**resistance**: A measure of how much a disturbance can affect the flows of energy and matter in an ecosystem

**resilience**: The rate at which an ecosystem returns to its original state after a disturbance

**restoration ecology**: The study and implementation of restoring damaged ecosystems

**intermediate disturbance hypothesis**: States that ecosystems experiencing intermediate levels of disturbance are more diverse than those with high or low disturbance levels

**instrumental value**: Something that has worth as an instrument or tool that can be used to accomplish a goal

**intrinsic value**: It has worth independent of any benefit it may provide to humans

**provision**: A good that humans can use directly