PEER Life Science Toxic or Not: Welcome to Your World Notes Outline KEY

**Introduction**

* The environment is the sum of all outside conditions that affect the life, development, and survival of an organism.
* An environmental hazard is a substance, state, or event that has the potential to threaten the surrounding environment or adversely affect health.

**Lesson**

* An ecosystem is the interacting system of a biological community and its non-living environmental surroundings. They allow for matter to be recycled.
* Every living thing needs energy to survive, which they can get from their food. The sun is the main source of energy on Earth.
* An organism that makes its own food from an inorganic energy source, such as from the sun, is called a producer. The energy they capture is used to make all of the organic matter in the environment, which is called biomass.
* A consumer is an organism that must eat other organisms to gain energy because they cannot produce their own food. There are three types of consumers: herbivores, which eat only plants; carnivores, which eat meat/animals; and omnivores, which eat both plants and animals.
* Decomposers consume the bodies of dead organisms as well as organic waste.
* In ecology, a food chain is the sequence of transfers of matter and energy in the form of food from organism to organism.
* Many different food chains interact to form complex food webs, which may help to ensure a species’ survival in nature. Changes in one part of the food web may have effects at various trophic levels, or the feeding levels that energy passes through.
* Only about 10% of the energy transferred between each trophic level is converted to biomass.
* Detritus is the dead or waste matter that comes from organisms in a food web.
* In the water cycle, evaporation will convert liquid water into gaseous water vapor. This water vapor will then condense to form clouds. Most of this condensed water will precipitate back into the ocean as rain or snow. Transpiration is the evaporation of water from the leaves of plants.
* The Carbon cycle describes the flow of carbon between living organisms and the non-living environment.
* In the carbon cycle, plants will absorb CO2 from the environment to use in photosynthesis and organisms will release CO2 into the air during respiration.
* A large portion of Carbon on Earth is stored in rocks. The ocean also contains large amounts of CO2 because it easily dissolves in water.
* Organisms require nitrogen to produce amino acids. The nitrogen cycle produces the fixed form of nitrogen that organisms need. A special type of bacteria, called nitrogen fixing bacteria, will produce ammonia.
* Nitrates and nitrites are nitrogen and oxygen containing compounds that can be used by plants to make amino acids.
* The branch of science that is concerned with the nature, effects, and detection of poisons is called toxicology.
* Toxicity is the degree to which a chemical substance can damage an organism.
* People can be exposed to environmental hazards by absorption through the skin, inhalation, or entry through the mouth and digestive system.
* The possibility of harm arising from a hazard is referred to as risk. Risk is assessed through the combined effect of the hazard and the amount of exposure.