

Instructional Vocabulary

Environmental Systems

Unit 1: Earth's Systems

- **Environmental science** – the branch of science that deals with the physical, chemical, and biological components of the environment and their effects on [organisms](#)
- **Native species** – [species](#) is defined as native (or indigenous) to a given region or [ecosystem](#) if its presence in that region is the result of only natural processes, with no human intervention
- **Ecological niche** – the ecological niche involves both the place where an organism lives and the roles that an organism does in its [habitat](#)
- **Sustainability** – ability of a system to remain in existence- maintain; environmental sustainability can be defined as a healthy ecosystem that is productive and renewable

Unit 2: Resources within Earth's Systems

- **Energy transformation** – process of energy changing from one form to another
- **Conduction** – transfer of energy between substances that are in contact with each other
- **Convection** – transfer of energy through moving material such as gas or water
- **Radiation** – transfer of energy through the emission of electromagnetic waves

Unit 3: Managing Resources

- **Land use** – land use involves the management and modification of [natural environment](#) or [wilderness](#) into [built environment](#) such as fields, pastures, and settlements; land use is considered to be sustainable when it is both socially and environmentally compatible, desired by the society, technically viable and economically feasible
- **Land cover** – the physical material at the surface of the Earth; includes grass, trees, concrete and water
- **Conservation** – using natural areas and wildlife in ways that sustain them for current and future generations of humans and other forms of life
- **Preservation** – setting aside or protecting undisturbed natural areas from human activities
- **Sustainable living** – taking no more potentially renewable resources from the natural world than can be replenished naturally, and not overloading the capacity of the environment to cleanse and renew itself through natural processes

Unit 4: Population Dynamics

- **Population density** – a measurement of individuals of a [population](#) per unit area or unit volume; frequently applied to [living organisms](#), including humans
- **Population distribution** – the arrangement or spread of individuals living in a given area; how the population of an area is arranged according to variables, such as age, race, or sex
- **Carrying capacity** – the maximum, equilibrium number of organisms of a particular species that can be supported indefinitely in a given environment
- **Limiting factor** – an environmental factor that tends to limit population size

Unit 5: Environmental Impact

- **Succession** – process by which an ecological community undergoes more or less orderly and predictable changes following disturbance or initial colonization of new habitat
- **Feedback loop** – circuit of sensing, evaluating, and reacting to changes in environmental conditions as a result of information fed back into a system; occurs when one change leads to some other change, which eventually reinforces or slows the original change

Unit 6: Environmental Ethics, Research, and Law

- **Restoration** – actions taken to modify existing material and structure of an object in order to return the object to a known earlier condition
- **Conservation** – actions taken to prolong the existence of material or objects
- **Preservation** – actions taken to maintain material or an object in its existing condition, minimize the rate of change, and slow down further deterioration and/or prevent damage