Quizlet Environmental Science Mid-Term Vocabulary

Study online at quizlet.com/_5qqicp

1. **abiotic factor:** Non-living components of an ecosystem
2. **adaptation:** Any heritable trait that gives an individual some advantage over other individuals in a given population.
3. **aerobic respiration:** Process that uses oxygen and glucose to produce energy and occurs in the cells of most living organisms. Carbon dioxide and water are the byproducts of this reaction.
4. **anerobic respiration:** Form of cellular respiration in which some decomposers get the energy they need through the breakdown of glucose (or other nutrients) in the absence of oxygen.
5. **Anthropocene:** New epoch in which humans have become major agents of change in the functioning of Earth's lifesupport system as their ecological footprints have spread over Earth.
6. **aquifer:** A body of rock or sediment that stores groundwater and allows the flow of groundwater.
7. **artificial selection/selective breeding:** Process by which humans breed animals and plants for a desired set of particular traits
8. **atmosphere:** The envelope of gases surrounding the earth or another planet
9. **autotroph:** An organism that makes its own food from inorganic molecules
10. **background extinction rate:** Naturally low rate at which species have disappeared throughout most of Earth's history.
11. **biodiversity:** The variety of life in the world or in a particular habitat or ecosystem.
12. **biological extinction:** Complete disappearance of a species from Earth. It happens when a species cannot adapt to survive and reproduce in response to changes in their environment and cannot move to a new environment with more favorable conditions.
13. **biome:** Geographical area composed of different ecosystems and characterized by a distinct climate and certain species (particularly vegetation) that are able to survive there.
14. **biosphere:** Zone of Earth where life is found. It consists of parts of the atmosphere (the troposphere), hydrosphere (mostly surface water and groundwater), and lithosphere (mostly soil and surface rocks and sediments on the bottoms of oceans and other bodies of water).
15. **biotic factors:** All the living organisms that inhabit an environment
16. **carbon cycle:** Cyclic movement of carbon in different chemical forms from the environment to organisms and then back to the environment
17. **carnivore:** A consumer that eats only other animals.
18. **community:** A group of interdependent organisms inhabiting the same region and interacting with each other
19. **consumer:** An organism that obtains energy by feeding on other organisms
20. **decomposer:** Consumers that get their nutrients by breaking down nonliving organic matter such as leaf litter, fallen trees, and dead animals. In the process of obtaining their own food, these organisms release nutrients from their waste that return nutrients to the soil and water.
21. **detritivore:** Organism that feeds on freshly dead plant and animal remains and other dead matter. examples include earthworms, some insects, hyenas, and vultures.
22. **Earth-centered worldview:** People are part of, and dependent on, nature; that Earth's natural capital exists for all species, not just for humans; that economic success and the long-term survival of cultures and species depend on learning how Earth has sustained itself for billions of years; and lessons from nature should influence how people think and act
23. **ecological footprint:** Amount of land and water needed to supply a population with renewable resources and to absorb and recycle the waste and pollution such resource use produces.
24. **ecological niche:** Specific role that a species plays in an ecosystem, encompassing everything that affects its survival and reproduction.
25. **ecology:** Biological science that studies how living things interact with the living and nonliving parts of their environment
26. **ecosystem:** One or more communities of different species interacting with one another and with the chemical and physical factors of their nonliving environment
27. **ecosystem service:** A function performed by an ecosystem that supports life and human economies at no monetary cost Examples are nutrient cycling, natural pest control, and natural purification of air and water. that directly or indirectly benefits humans.
28. **endemic species:** Species that is found in only one area. Such species are especially vulnerable to extinction.
29. **environment:** All external conditions, factors, matter, and energy, living and nonliving, that affect any living organism or other specified system.
30. **environmental degradation:** Depletion, deterioration, or waste of Earth's natural capital.
31. **environmental ethics:** Study of varying beliefs about what is right or wrong with how people treat the environment
32. **environmentalism:** a social movement dedicated to protecting the natural world
33. **environmentally sustainable society:** When a population has the ability to meet the current and future needs of its people for basic resources in a just and equitable manner without compromising the ability of future generations of humans and other species from meeting their basic needs.

34. **environmental Science:** The study of the natural processes that occur in the environment and how humans can affect them. . It includes information and ideas from engineering, natural sciences, and social sciences. The fundamental goals of are to learn how life on Earth has survived and thrived, understand how humans interact with the environment, and find ways to deal with environmental problems and live more sustainably.
35. **environmental worldview:** An individual's set of assumptions and values concerning the natural world and what they think their role in managing it should be
36. **evolution:** Process by which species change genetically over time.
37. **exponential growth:** Increase in which some quantity, such as population size or economic output, expands at a fixed percentage per unit of time. It starts slowly but the quantity soon becomes enormous. When the increase in quantity over time is plotted on a graph, this type of increase yields a curve shaped like the letter J.
38. **food chain:** Sequence of organisms in which each organism is a source of nutrients or energy for the next level of organisms.
39. **food web:** Network of complex interactions formed by the feeding relationships among the various organisms in an ecosystem
40. **fossil:** Preserved remains or traces of prehistoric organisms. Includes mineralized or petrified skeletons, bones, teeth, shells, leaves, seeds, or impressions of such items, as well as impressions of animal activity such as tracks, trails, and burrows.
41. **functional diversity:** Variety of processes that occur with ecosystems. Examples include energy flow and cycles of matter.
42. **generalist:** Species with a broad niche. They can live in many different places, eat a variety of foods, and tolerate a wide range of environmental conditions. Examples include flies, cockroaches, mice, rats, and humans.
43. **genetic diversity:** Variety of genes found in a population or in a species.
44. **genetic engineering:** Scientific manipulation of genes in order to select desirable traits or eliminate undesirable ones. It allows scientists to alter an organism's genetic material by adding, deleting, or changing segments of its DNA in a process called gene splicing.
45. **genetic variability:** Variety in the genetic makeup of individuals in a population.
46. **geographic isolation:** Separation of populations of a species into different areas. It may occur because of a search for food, a natural or human related event or a physical barrier. This separation may, over time, lead to speciation.
47. **geosphere:** Earth's core, mantle, and crust—all the material above and below the surface of Earth that forms the planet's mass.
48. **greenhouse effect:** Process in which solar energy warms the troposphere as it reflects from Earth's surface (geosphere) and interacts with carbon dioxide, methane, water vapor (from the hydrosphere and biosphere), and other gases (atmosphere). This warms Earth and supports life.
49. **gross primary productivity:** Total rate at which an ecosystem's producers convert radiant energy into chemical energy.
50. **groundwater:** Water that fills the cracks and spaces in underground soil and is held in rock layers
51. **habitat:** Area that provides the abiotic and biotic factors a species needs to survive.
52. **herbivore:** Organism that eats mostly green plants or algae. Examples include deer, sheep, grasshoppers, and zooplankton
53. **heterotroph:** Organism that obtains energy from the foods it consumes.
54. **Holocene:** Period of relatively stable climate and other environmental conditions; it has allowed the human population to grow, develop agriculture, and take over a large and growing share of Earth's land and other resources.
55. **human centered worldview:** The idea that the natural world is a support system for human life. It is divided into the planetary management worldview and the stewardship worldview.
56. **hydrologic cycle:** Movement that collects, purifies, and distributes Earth's fixed supply of water.
57. **hydrosphere:** All of the gaseous, liquid, and solid water on or near Earth's surface.
58. **indicator species:** An organism or group of organisms whose presence or absence indicates the quality or characteristics of certain environmental conditions.
59. **inexhaustible resource:** Energy source available in continuous supply for the conceivable future. Examples include sunlight and the wind and flowing waters that sunlight powers.
60. **insurance hypothesis:** Biodiversity ensures ecosystems against a decline in their functioning because many species provide greater guarantees of functioning even if others fail.
61. **keystone species:** Species of organism that preserves an ecosystem by controlling the populations of prey animals which could otherwise consume enough plant matter to devastate the ecosystem. Examples include wolves, sea otters, alligators, and sharks.
62. **life centered worldview:** Idea that all species have value in fulfilling their particular role within the biosphere, regardless of their potential or actual use to society; includes the belief that people have a responsibility to be caring and responsible stewards of the planet
63. **mass extinction:** Event in which many types of living things become extinct in a relatively short period of time
64. **mutation:** Permanent change in the DNA sequence within a gene in any cell.
65. **native species:** Group of organisms that naturally originated in a given ecosystem and have become suited to the environmental conditions there.

66. **natural capital:** Natural resources and ecosystem services that keep humans and other species alive and support human economies.
67. **natural income:** Portion of renewable resource that can be used sustainably.
68. **natural resource:** Material or energy source found in nature that is essential or useful to humans.
69. **natural selection:** Process by which individuals with certain genetic traits are more likely to survive and reproduce under a specific set of environmental conditions, thereby passing these traits on to their offspring.
70. **net primary productivity:** Rate at which producers use photosynthesis to produce and store chemical energy minus the rate at which they use some of this stored chemical energy through cellular respiration. It is used to measure the rate at which producers make chemical energy potentially available to the consumers in an ecosystem.
71. **nitrogen cycle:** Movement of nitrogen in different chemical forms from the environment to organisms and then back to the environment.
72. **nonnative species:** Species that migrate into an ecosystem or are deliberately or accidentally introduced into an ecosystem by humans and may become invasive.
73. **nonpoint source pollution:** Situation in which pollutants come from many diffuse sources that are hard to pinpoint. Sources include runoff of water and pollutants from cropland, residential areas, clear-cut forests, and construction sites.
74. **nonrenewable resource:** Energy source that exists in a fixed amount and takes millions to billions of years to form, so it will be used more quickly than it can be replaced. Examples include copper, aluminum, coal, oil, salt, and sand.
75. **nutrient cycle:** The movement and exchange of organic and inorganic matter back into the production of living matter
76. **omnivore:** Consumer that can use both plants and other animals as food sources.
77. **organism:** An individual living thing
78. **ozone layer:** Stratospheric layer containing much of the atmosphere's ozone. It makes life on land possible by filtering out 95% of the harmful ultraviolet radiation emitted by the sun.
79. **phosphorus cycle:** Movement of phosphorus through water, Earth's crust, and living organisms.
80. **photosynthesis:** Process in which producers change radiant energy (sunlight) into chemical energy. Harnessing the energy of light allows producers to convert inorganic molecules of carbon dioxide and water into organic molecules such as glucose.
81. **planetary boundary:** Limits between which global systems must operate to prevent abrupt and irreversible environmental change
82. **point source pollution:** Single identifiable source that discharges pollutants into the environment. Examples include the smokestack of a power plant, drainpipe of a meatpacking plant, chimney of a house, or exhaust pipe of an automobile.
83. **population:** Group of interbreeding individuals of the same species, usually living together in a group.
84. **primary consumer:** Organism that eats mostly green plants or algae.
85. **producer:** Organism that makes the food it needs from compounds in soil, carbon dioxide, air, and water by using the energy of sunlight.
86. **renewable resource:** Energy source that can be replenished rapidly (in hours to centuries) through natural processes as long as it is not used up faster than it is replaced. Examples include forests, grasslands, wildlife, fertile topsoil, clean air, and fresh water.
87. **reproductive isolation:** Halt in the exchange of genes due to the separation of populations. Eventually, members of isolated populations may have very different genetic makeup and no longer be able to interbreed, meaning they have become two distinct species.
88. **secondary consumer:** Organism that feeds on primary consumers.
89. **specialist:** Species with a narrow ecological niche. They may be able to live in only one type of habitat, tolerate only a narrow range of climatic and other environmental conditions, or eat only one type or a few types of food.
90. **speciation:** Formation of a new species from a branch of an existing species through reproductive or geographic isolation.
91. **species diversity:** Variety of species present in a specific ecosystem and their abundance within that ecosystem.
92. **stratosphere:** Layer of the atmosphere between the troposphere and the more distant mesosphere, thermosphere, and exosphere; contains the ozone layer.
93. **surface runoff:** Precipitation that falls on land and flows over land surfaces into streams, rivers, lakes, wetlands, and the ocean, where it can evaporate and return to the hydrologic cycle.
94. **sustainability:** Capacity of Earth's natural systems that support life (including human social systems) to maintain stability or to adapt to changing environmental conditions indefinitely.
95. **synthetic biology:** Technology that enables scientists to make new sequences of DNA and to use such genetic information to design and create new cells, tissues, organisms, and devices, and to redesign existing natural biological systems.
96. **tertiary consumer:** Consumer that feeds on both primary and secondary consumers
97. **transpiration:** Loss of water from a plant through its leaves
98. **trophic level:** each of several hierarchical levels in an ecosystem, comprising organisms that share the same function in the food chain and the same nutritional relationship to the primary sources of energy.
99. **troposhere:** Lowest layer of the atmosphere and the only layer suitable for terrestrial life. Weather occurs in this layer.