

1. affluence	Wealth that results in high levels of consumption and unnecessary waste of resources, based mostly on the assumption that buying more and more material goods will bring fulfillment and happiness.	10. environmental degradation	Depletion or destruction of a potentially renewable resource such as soil, grassland, forest, or wildlife that is used faster than it is naturally replenished. If such use continues, the resource becomes nonrenewable (on a human time scale) or nonexistent (extinct). See also sustainable yield.
2. biodiversity	Variety of different species (species diversity), genetic variability among individuals within each species (genetic diversity), variety of ecosystems (ecological diversity), and functions such as energy flow and matter cycling needed for the survival of species and biological communities (functional diversity).	11. environmental ethics	Human beliefs about what is right or wrong with how we treat the environment
3. chemical cycling	The continual cycling of chemicals necessary for life through natural processes such as the water cycle and feeding interactions; processes that evolved due to the fact that the earth gets essentially no new inputs of these chemicals.	12. environmental science	Interdisciplinary study that uses information and ideas from the physical sciences (such as biology, chemistry, and geology) with those from the social sciences and humanities (such as economics, politics, and ethics) to learn how nature works, how we interact with the environment, and how we can to help deal with environmental problems.
4. doubling time	Time it takes (usually in years) for the quantity of something growing exponentially to double. It can be calculated by dividing the annual percentage growth rate into 70.	13. environmental wisdom worldview	Worldview holding that humans are part of and totally dependent on nature and that nature exists for all species, not just for us. Our success depends on learning how the earth sustains itself and integrating such environmental wisdom into the ways we think and act. Compare frontier worldview, planetary management worldview, stewardship worldview.
5. ecological footprint	Amount of biologically productive land and water needed to supply a population with the renewable resources it uses and to absorb or dispose of the wastes from such resource use. It is a measure of the average environmental impact of populations in different countries and areas. See per capita ecological footprint	14. environmental worldview	Set of assumptions and beliefs about how people think the world works, what they think their role in the world should be, and what they believe is right and wrong environmental behavior (environmental ethics). See environmental wisdom worldview, frontier worldview, planetary management worldview, stewardship worldview.
6. ecology	Biological science that studies the relationships between living organisms and their environment; study of the structure and functions of nature.	15. exhaustible resource	Resource that exists in a fixed amount (stock) in the earth's crust and has the potential for renewal by geological, physical, and chemical processes taking place over hundreds of millions to billions of years. Examples include copper, aluminum, coal, and oil. We classify these resources as exhaustible because we are extracting and using them at a much faster rate than they are formed. Compare renewable resource. See nonrenewable resource.
7. ecosystem	One or more communities of different species interacting with one another and with the chemical and physical factors making up their nonliving environment		
8. ecosystem services	Natural services or natural capital that support life on the earth and are essential to the quality of human life and the functioning of the world's economies. Examples are the chemical cycles, natural pest control, and natural purification of air and water. See natural resources.		
9. environment	All external conditions, factors, matter, and energy, living and nonliving, that affect any living organism or other specified system.		

16. exponential growth	Growth in which some quantity, such as population size or economic output, increases at a constant rate per unit of time. An example is the growth sequence 2, 4, 8, 16, 32, 64, and so on, which increases by 100% at each interval. When the increase in quantity over time is plotted, this type of growth yields a curve shaped like the letter J. Compare linear growth.
17. full-cost pricing	Finding ways to include the harmful environmental and health costs of producing and using goods in their market prices. See external cost, internal cost
18. hunter? gatherers	People who get their food by gathering edible wild plants and other materials and by hunting wild animals and catching fish.
19. inexhaustible resource	Essentially inexhaustible resource on a human time scale because it is renewed continuously. Solar energy is an example. Compare nonrenewable resource, renewable resource. See perpetual resource. Compare nonrenewable resource, renewable resource.
20. input pollution control	Device, process, or strategy used to prevent a potential pollutant from forming or entering the environment or to sharply reduce the amount entering the environment. Compare pollution cleanup. See pollution prevention.
21. less-developed country	Country that has low to moderate industrialization and low to moderate per capita GDP. Most are located in Africa, Asia, and Latin America. Compare more-developed country.
22. malnutrition	Faulty nutrition, caused by a diet that does not supply an individual with enough protein, essential fats, vitamins, minerals, and other nutrients needed for good health. Compare overnutrition, chronic undernutrition. See chronic malnutrition.
23. more-developed country	Country that is highly industrialized and has a high per capita GDP. Compare less-developed country.
24. natural capital	Natural resources and natural services that keep us and other species alive and support our economies. See natural resources, natural services.
25. natural capital degradation	Depletion or destruction of a potentially renewable resource such as soil, grassland, forest, or wildlife that is used faster than it is naturally replenished. If such use continues, the resource becomes nonrenewable (on a human time scale) or nonexistent (extinct). See also sustainable yield. See environmental degradation.

26. natural income	Renewable resources such as plants, animals, and soil provided by natural capital.
27. natural resources	Materials such as air, water, and soil and energy in nature that are essential or useful to humans. See natural capital.
28. natural services	Processes of nature, such as purification of air and water and pest control, which support life and human economies. See natural capital.
29. nonpoint sources	Broad and diffuse areas, rather than points, from which pollutants enter bodies of surface water or air. Examples include runoff of chemicals and sediments from cropland, livestock feedlots, logged forests, urban streets, parking lots, lawns, and golf courses. Compare point source.
30. nonrenewable resource	Resource that exists in a fixed amount (stock) in the earth's crust and has the potential for renewal by geological, physical, and chemical processes taking place over hundreds of millions to billions of years. Examples include copper, aluminum, coal, and oil. We classify these resources as exhaustible because we are extracting and using them at a much faster rate than they are formed. Compare renewable resource.
31. nutrient	Any chemical an organism must take in to live, grow, or reproduce.
32. nutrient cycling	The circulation of chemicals necessary for life, from the environment (mostly from soil and water) through organisms and back to the environment
33. open-access renewable resource	Renewable resource owned by no one and available for use by anyone at little or no charge. Examples include clean air, underground water supplies, the open ocean and its fish, and the ozone layer. Compare common-property resource.
34. organism	Any form of life.
35. output pollution control	Device or process that removes or reduces the level of a pollutant after it has been produced or has entered the environment. Examples include automobile emission control devices and sewage treatment plants. Compare pollution prevention. See pollution cleanup.

36. per capita ecological footprint	Amount of biologically productive land and water needed to supply each person or population with the renewable resources they use and to absorb or dispose of the wastes from such resource use. It measures the average environmental impact of individuals or populations in different countries and areas. Compare ecological footprint.	44. recycle	To collect and reprocess a resource so that it can be made into new products; one of the four R's of resource use. An example is collecting aluminum cans, melting them down, and using the aluminum to make new cans or other aluminum products. See primary recycling, secondary recycling. Compare reduce and reuse.
37. planetary management worldview	Worldview holding that humans are separate from nature, that nature exists mainly to meet our needs and increasing wants, and that we can use our ingenuity and technology to manage the earth's life-support systems, mostly for our benefit. It assumes that economic growth is unlimited. Compare environmental wisdom worldview, stewardship worldview.	45. renewable resource	Resource that can be replenished rapidly (hours to several decades) through natural processes as long as it is not used up faster than it is replaced. Examples include trees in forests, grasses in grasslands, wild animals, fresh surface water in lakes and streams, most groundwater, fresh air, and fertile soil. If such a resource is used faster than it is replenished, it can be depleted and converted into a nonrenewable resource. Compare nonrenewable resource and perpetual resource. See also environmental degradation.
38. point source	Single identifiable source that discharges pollutants into the environment. Examples include the smokestack of a power plant or an industrial plant, drainpipe of a meatpacking plant, chimney of a house, or exhaust pipe of an automobile. Compare nonpoint source.	46. resource	Anything obtained from the environment to meet human needs and wants. It can also be applied to other species.
39. pollutant	Particular chemical or form of energy that can adversely affect the health, survival, or activities of humans or other living organisms. See pollution.	47. reuse	To use a product over and over again in the same form. An example is collecting, washing, and refilling glass beverage bottles. One of the 4 Rs. Compare recycle, reduce, and refuse.
40. pollution	Undesirable change in the physical, chemical, or biological characteristics of air, water, soil, or food that can adversely affect the health, survival, or activities of humans or other living organisms.	48. rule of 70	Doubling time (in years) = $70/(\text{percentage growth rate})$. See doubling time, exponential growth.
41. pollution cleanup	Device or process that removes or reduces the level of a pollutant after it has been produced or has entered the environment. Examples include automobile emission control devices and sewage treatment plants. Compare pollution prevention.	49. scientific principles of sustainability	To live more sustainably we need to rely on solar energy, preserve biodiversity, and recycle the chemicals that we use. These three principles of sustainability are scientific lessons from nature based on observing how life on the earth has survived and thrived for 3.5 billion years. See biodiversity, chemical cycling, solar energy. Compare social science principles of sustainability.
42. pollution prevention	Device, process, or strategy used to prevent a potential pollutant from forming or entering the environment or to sharply reduce the amount entering the environment. Compare pollution cleanup.	50. social science principles of sustainability	To live more sustainably we (1) need to include the harmful health and environmental costs of producing the goods and services in their market prices (full-cost pricing), (2) learn to work together to focus on solutions to environmental problems that will benefit the largest number of people and the environment now and in the future (win-win solutions), and (3) accept our responsibility to future generations to leave the planet's life-support systems in at least as good a shape as what we now enjoy (responsibility to future generations).
43. poverty	Inability of people to meet their basic needs for food, clothing, and shelter.		

51. solar energy	Direct radiant energy from the sun and a number of indirect forms of energy produced by the direct input of such radiant energy. Principal indirect forms of solar energy include wind, falling and flowing water (hydropower), and biomass (solar energy converted into chemical energy stored in the chemical bonds of organic compounds in trees and other plants)?none of which would exist without direct solar energy.
52. species	Group of similar organisms, and for sexually reproducing organisms, they are a set of individuals that can mate and produce fertile offspring. Every organism is a member of a certain species.
53. stewardship worldview	Worldview holding that we can manage the earth for our benefit but that we have an ethical responsibility to be caring and responsible managers, or stewards, of the earth. It calls for encouraging environmentally beneficial forms of economic growth and discouraging environmentally harmful forms. Compare worldview, environmental wisdom worldview, planetary management worldview.
54. sustainability	Ability of earth's various systems, including human cultural systems and economies, to survive and adapt to changing environmental conditions indefinitely.
55. sustainability revolution	Major cultural change in which people learn how to reduce their ecological footprints and live more sustainably, largely by copying nature and using the six principles of sustainability to guide their lifestyles and economies. See principles of sustainability.
56. sustainable yield (sustained yield)	Highest rate at which a potentially renewable resource can be used indefinitely without reducing its available supply. See also environmental degradation.
57. tragedy of the commons	Depletion or degradation of a potentially renewable resource to which people have free and unmanaged access. An example is the depletion of commercially desirable fish species in the open ocean beyond areas controlled by coastal countries. See common-property resource, open-access renewable resource.