

# Glossary

**acid** - any compound that reacts with a base to form a salt; reddens litmus paper; tastes sour

**adaptation** - the behavior, or the part, of a living thing that helps it live in a certain environment

**aerate** - to expose to the circulation of air

**aerobic** - requires oxygen to live

**air pollutant** - anything that makes the air impure

**Alabama Valley and Ridge** - rich in iron ore, coal, and limestone. The mountains are part of the Appalachian Mountain range, contains limestone valleys and sandstone mountain ridges

**aluminum** - a silvery, lightweight, metallic, chemical element

**anal fin** - grows on the underside near the tail and is responsible for keeping the fish erect

**aquifer** - underground body of porous sand, gravel, and fractured rock filled with water and capable of supplying useful quantities of water to a well or spring

**arachnid** - classification for spiders, mites, ticks, harvest men, scorpions, and king crabs, all of which have four pairs of walking legs

**arid** - very dry, not having adequate rainfall for a particular area

**arthropods** - invertebrate organisms that include insects, spiders, and crustaceans

**bacteria** - living organisms so small they need magnification to be observed

**barbs** - strands attached to the shaft of a feather

**base** - a chemical compound, like ammonia, that reacts with an acid to form a salt; turns litmus blue; tastes salty

**barren** - land not producing plant life

**bauxite** - a claylike ore, the source of aluminum

**bioconversion** - changing matter from once-living things into a source of energy

**biodegradable** - a compound that can be broken down into simpler compounds by microorganisms

**biome** - community of plants and animals that covers a wide geographical area

**boom** - long, floating, tube-like barriers

**bubble** - a round space filled with air retained by a non-rigid membrane

**camouflage** - the ability to blend in with the surroundings

**carbon** - a substance that occurs in any living organism

**carbon monoxide** - toxic, invisible, odorless gas resulting from incomplete fuel combustion

**carcinogen** - an agent causing or inciting cancer

**carnivore** - an animal that eats only other animals

**caudal fin** - located at the end of the tail, swings back and forth, thus propelling the fish forward

**Cenozoic Era** - the time in the history of the Earth, about 65 million year ago to the present, when recent life evolved on the Earth

**chemical** - a substance used in factories, farms, and homes for a variety of purposes such as cleaning, painting, killing pests, and helping maintain vehicles

**chemical reaction** - chemicals are changed into different substances

**coliform bacteria** - a group of bacteria predominantly living in the intestines and present in fecal waste materials; may also be found in soil; often are also indicators of other pathogenic organisms (disease-causing organisms)

**colony** - a community of social insects

**community** - all the populations living together in the same place

**compost** - a mixture of decayed organic matter; to decay organic wastes partially decomposed by aerobic bacteria

**composting** - collecting and layering organic material, such as lawn clippings, leaves, kitchen scraps, and manure, in order to decompose into fertile humus

**compound** - made up of two or more independent elements

**concrete** - a mixture of cement, sand, or gravel with water that hardens as it dries

**coniferous** - cone bearing trees

**consumer** - an organism that obtains energy by eating other living things

**contaminated** - impure and corrupt

**contour farming** - plowing perpendicular to the slope or at a constant elevation

**couching** - taking a new sheet of paper from a mold and allowing it to adhere to a blotter

**corrosive toxic waste** - waste that can eat away or chemically react to corrode and dissolve other substances

**Cumberland Plateau** - sometimes called Appalachian Plateau, has tree-covered mountains

**dam** - a structure built across a waterway to block the flow of the waterway

**data** - facts or figures from which conclusions can be drawn

**decay** - rot

**deciduous** - trees that shed leaves during a particular season

**deckle** - a frame that fits over the mold

**decomposer** - an agent that breaks down the bodies of dead organisms

**degrade** - to lower in quality

**desert** - dry land with few plants and little rainfall

**dissolve** - to cause to pass into solution, reduce to liquid form, melt

**dome** - a large rounded roof on a circular, or many-sided, base

**dorsal fin** - grows along the back of the fish and is responsible for keeping the fish erect

**East Gulf Coastal Plain** - largest land region in Alabama, with most of its land less than 500 feet above sea level. It covers most of the central and most of the southern parts of the state and contains pine forests and rich, brown soil

**ecology** - the relationships living things have with each other and their environment

**ecosystem** - all the communities that live together in an area including the water, soil, and climate

**elevation** - the height above sea level

**embryo** - an animal in the earliest stage of development

**endanger** - to put into danger

**endangered** - a species faced with danger of extinction

**endemic** - regularly found in a particular locality; restricted or indigenous to a certain locality

**environment** - all the surrounding living and nonliving things that affect another living thing

**environmental impact** - the effect left on the environment

**Environmental Protection Agency** - the federal agency charged with the enforcement of all federal regulations having to do with environmental pollutants

**erode** - wear away

**exotic** - a species not native to the place where it is found

**extinct** - animals or plants no longer in existence

**fertilizer** - natural (manure) or chemical (synthetic) materials used for enriching soil

**food chain** - the sequence in which energy is transferred from one organism to the next as each organism eats and is eaten by another

**food web** - two or more food chains that overlap, connecting plants and animals through the plants and animals they eat

**fossil** - trace or remains of an organism that was once alive

**freshwater** - water that is not salty

**fungi** - large group of organisms not containing chlorophyll, roots, stems, or leaves; important as decomposers; includes molds, mildews, mushrooms, and bacteria

**gabions** - rock-filled wire baskets that are placed along stream banks to prevent erosion

**garbage** - the organic or inorganic food waste thrown away

**generation** - the average time between the birth of parents and the birth of their offspring

**generator** - a machine that changes mechanical energy into electrical energy

**geophysical regions** - the Coastal Plain, the Piedmont, the Ridge and Valley, the Cumberland Plateau, and the Highland Rim

**geotropism** - a bending movement of living things due to gravity

**groundwater** - water found in the porous spaces of soil and rock

**habitat** - the area in which an animal resides

**herbicide** - a plant killer

**herbivore** - a plant-eating animal

**Highland Rim** - located just north of the Tennessee River and is sometimes called the Interior Low Plateau

**hue** - shade or tone, often refers to color

**humankind** - people

**humus** - decayed organic material used to improve gardening or soil

**hydroelectricity** - electricity produced using the energy of flowing water

**illegal dumping** - disposing of waste in an unofficial location

**incinerate** - to burn ashes

**insecticide** - an insect killer

**lake** - a large standing body of freshwater

**landfill** - an area set aside for burying waste under layers of dirt

**leach** - to pass a liquid (as water) through to carry off the soluble components

**legacy** - something left for the next generation

**legume** - growing in a pod, such as a bean

**lichen** - formed by two different organisms; fungus and alga living and growing together on a solid surface

**life cycle** - the stages of growth and change in an organism

**Mesozoic Era** - the time in the history of the Earth, about 65 to 250 million years ago, during which reptiles were the major life form; the Age of Dinosaurs

**metamorphosis** - series of changes that occur as an egg develops into an adult including the four stages of egg, larva, pupa, and adult

**methane** - an odorless, flammable gas produced by decaying organic matter

**microorganisms** - a living organism, such as bacteria, that cannot be seen by the unaided eye

**microscopic** - exceedingly small, minute; too small to be seen with the naked eye

**mineral** - an inorganic substance found in nature such as gold, silver, or iron ore

**mold** - a frame covered with screening

**monitoring wells** - pipes in a landfill as a means of controlling and measuring methane escape

**municipal solid waste** - garbage produced in homes and the workplace

**mussel** - an ocean or freshwater animal covered by a hinged shell

**native** - originating, grown, or produced in a particular region

**natural gas** - gas from the Earth's crust; a fossil fuel

**natural resource** - the actual and potential forms of useful wealth supplied by nature; valuable, naturally occurring items such as plants, animals, minerals, water, and air, which are used by people to help make things such as electricity, food, clothes, and buildings

**neutral** - neither acid nor base

**neutralization** - the process in which toxic wastes react with another chemical to produce a harmless substance

**nitrate** - a form of salt that enhances plant growth (found in animal wastes)

**nitrogen** - a substance plants need to survive

**nocturnal** - active at night

**nonbiodegradable** - a compound that cannot be broken down into simpler compounds by microorganisms

**nonrenewable resource** - a natural resource that, in terms of human time scales, is contained within the Earth in a fixed quantity and cannot be replaced

**nutrients** - substances that provide nourishment and promote growth

**oil slick** - a floating oil film on the water

**oil skimmer** - a container that oil flows into, then is towed through the water, and is finally pumped or vacuumed with a hose into a storage container

**omnivores** - animals that eat both plants and animals

**ore** - a natural combination of minerals from which metals or other valuable substances can be mined

**organic** - relating to living or once-living material

**ozone** - a form of oxygen containing three oxygen atoms (The ozone layer is a protective shield high in the atmosphere that filters out the sun's harmful ultraviolet radiation)

**Paleozoic Era** - the time in the history of the Earth, about 250 to 570 million years ago, when many new life forms appeared, the Age of Invertebrates

**particulate matter** - very small particles of soot, dust, or other matter including tiny liquid droplets

**pathogenic** - a specific agent (as a bacterium) causing disease

**pectoral fins** - these are paired fins on either side of a fish, help to stop and turn

**permeate** - to penetrate or diffuse through something

**pheromone** - chemical secreted by an animal to communicate

**phosphate** - a chemical salt usually obtained from rocks and bones and used in fertilizers

**Piedmont Upland** - made up of low hills and sandy valleys

**pollination** - when an insect or other agent pollinates plants by carrying pollen from one plant to another plant

**pollutant** - a substance that can harm air, water, soil, and living organisms

**population** - a group of the same species living in a certain place

**prism** - triangular shape that when light passes through it, the light is broken into the spectrum

**producer** - an organism that makes its own food and is the beginning of a food chain

**pulp** - the ground-up material, moistened with water, from which paper is made

**reclaimed** - returned to original condition

**recyclable** - a material that can be recycled

**recycle** - to separate a given waste material from other wastes and to process it so that it can be used again

**recycling** - the collection and reprocessing of manufactured materials for reuse either in the same form or as part of a different product

**reduce** - decreasing the amount of waste generated

**relationship** - how one thing or things interact with another thing or things

**renewable resource** - a natural resource in great abundance that is continually produced such as sun, wind, trees (through forestry) and fish (through aquaculture)

**reuse** - to extend the life of an item by repairing, modifying or creating new uses for it

**Ridge and Valley** - area in Alabama rich in iron ore, coal, and limestone

**river** - a large natural stream of freshwater that flows across land in a definite channel

**river mouth** - the place where a river empties into a large body of water such as a lake or ocean

**river system** - a river and all of its tributaries

**runoff** - water, including rain and snow melt, that runs into a larger body of water such as a river or a lake

**sand filtration** - the process of straining out solid particles through sand

**scrap** - the old steel that will be recycled into new steel

**secretion** - substance produced by some part of a plant or animal

**sedimentation** - when wastewater is allowed to stand in pools so that particles will settle

**sizing** - a substance added to give paper a certain surface or finish

**sludge** - a heavy, slimy deposit of mud and mire covering the ground or forming a deposit at the bottom of bodies of water

**slurry** - pulp mixed with enough water to make a liquid

**smog** - a thick haze caused by the action of sunlight on air polluted by smoke and automobile exhaust fumes

**solar energy** - the energy of heat or light received from the sun

**solid waste** - any of a wide variety of solid materials that are discarded or rejected

**solid waste stream** - the variety of solid materials that are discarded or rejected from homes and businesses

**species** - a group of organisms that have the same characteristics and are able to reproduce

**spectrum** - a series of colors formed when a beam of white light is dispersed so that its parts are arranged in order of their wavelengths

**speleothem** - an unusually shaped rock formation formed over thousands of years from built-up layers of a mineral called calcite

**spelunking** - the sport of exploring caves and underground caverns

**stalactite** - a speleothem that hangs from the ceiling of a cave

**stalagmite** - a speleothem that builds up from the floor of a cave

**stevedore** - one whose work is loading and unloading a ship

**stomata** - tiny openings in the underside of leaves on a plant that control the amount of water in a plant's tissues by releasing water vapor in the air

**strip mining** - mining from an open mineral mine (coal, copper, zinc) where the topsoil is removed to expose and extract the mineral

**succession** - the process of continuous change

**surface water** - water on the Earth's surface such as rivers, streams, and oceans

**suspended solids** - particles floating in a liquid

**taiga** - a swampy, coniferous, subarctic forest extending south from the tundra

**threatened species** - a species abundant in parts of its range but severely depleted in others

**toxic waste** - poisonous waste

**transpiration** - the loss of water through openings in a leaf (stomata) through which gases and water enter and leave

**tributary** - a stream or river that flows into a larger body of flowing water

**tundra** - a cold, windy, dry area just south of the polar ice caps in Alaska, Canada, Greenland, Iceland, Norway, and Asia

**turbine** - a device in which a bladed wheel is turned by the force of jets of water (or steam); connected by a shaft to a generator

**ugly jars** - containers that stored toxic wastes during Colonial times

**vermi** - indicates a worm or worms

**visibility** - the clarity of the air, how far one can see

**volume** - the space occupied as measured by cubic units (length by width by height)

**water cycle** - the natural cycle in which water evaporates from the surface of the Earth, rises through the atmosphere, condenses, and returns as precipitation

**watershed** - an area of land from which rainfall and melted snow drain into nearby streams and rivers

**water wheel (turbine)** - a wheel having blades or buckets and mounted on an axle; water striking the blades or buckets causes the wheel to turn and powers the machinery attached to the axle

**well** - a hole sunk into the Earth to get water

**wet leaf** - the newly formed sheet of paper (before it is dried)

**withered** - dried out and lifeless