SCIENCE GLOSSARY

Abiotic:	**A nonliving factor or element (e.g., light, water, heat, rock, energy, mineral).**
Acid deposition:	**Precipitation with a pH less than 5.6 that forms in the atmosphere when certain pollutants mix with water vapor.**
Allele:	**Any of a set of possible forms of a gene.**
Biochemical conversion:	**The changing of organic matter into other chemical forms.**
Biological diversity:	**The variety and complexity of species present and interacting in an ecosystem and the relative abundance of each.**
Biomass conversion:	**The changing of organic matter that has been produced by photosynthesis into useful liquid, gas or fuel.**
Biomedical technology:	**The application of health care theories to develop methods, products and tools to maintain or improve homeostasis.**
Biomes:	**A community of living organisms of a single major ecological region.**
Biotechnology:	**The ways that humans apply biological concepts to produce products and provide services.**
Biotic:	**An environmental factor related to or produced by living organisms.**
Carbon chemistry:	**The science of the composition, structure, properties and reactions of carbon based matter, especially of atomic and molecular systems; sometimes referred to as organic chemistry.**
Closing the loop:	**A link in the circular chain of recycling events that promotes the use of products made with recycled materials.**
Commodities:	**Economic goods or products before they are processed and/or given a brand name, such as a product of agriculture.**

Composting:	**The process of mixing decaying leaves, manure and other nutritive matter to improve and fertilize soil.**
Construction technology:	**The ways that humans build structures on sites.**
Consumer:	**1) Those organisms that obtain energy by feeding on other organisms and their remains. 2) A person buying goods or services for personal needs or to use in the production of other goods for resale.**
Decomposer:	**An organism, often microscopic in size, that obtains nutrients by consuming dead organic matter, thereby making nutrients accessible to other organisms; examples of decomposers include fungi, scavengers, rodents and other animals.**
Delineate:	**To trace the outline; to draw; to sketch; to depict or picture.**
Desalinization:	**To remove salts and other chemicals from sea or saline water.**
Dichotomous:	**Divided or dividing into two parts or classifications.**
Ecosystem:	**A community of living organisms and their interrelated physical and chemical environment.**
Electronic communication:	**System for the transmission of information using electronic technology (e.g., digital cameras, cellular telephones, Internet, television, fiber optics).**
Embryology:	**The branch of biology dealing with the development of living things from fertilized egg to its developed state.**
Endangered species:	**A species that is in danger of extinction throughout all or a significant portion of its range.**
Engineering:	**The application of scientific, physical, mechanical and mathematical principles to design processes, products and structures that improve the quality of life.**
Environment:	**The total of the surroundings (air, water, soil, vegetation, people, wildlife) influencing each living being's existence, including physical, biological and all other factors; the surroundings of a plant or animals including other plants or animals, climate and location.**

Enzyme:	**A protein that increases the rate of a chemical reaction without being changed by the reaction; an organic catalyst.**
Equilibrium:	**The ability of an ecosystem to maintain stability among its biological resources (e.g., forest, fisheries, crops) so that there is a steady optimum yield.**
Ergonomical:	**Of or relating to the design of equipment or devices to fit the human body's control, position, movement and environment.**
Evolution:	**A process of change that explains why what we see today is different from what existed in the past; it includes changes in the galaxies, stars, solar system, earth and life on earth. Biological evolution is a change in hereditary characteristics of groups of organisms over the course of generations.**
Extinction:	**The complete elimination of a species from the earth.**
Fact:	**Information that has been objectively verified.**
Geologic hazard:	**A naturally occurring or man-made condition or phenomenon that presents a risk or is a potential danger to life and property (e.g., landslides, floods, earthquakes, ground subsidence, coastal and beach erosion, faulting, dam leakage and failure, mining disasters, pollution and waste disposal, sinkholes).**
Geologic map:	**A representation of a region on which is recorded earth information (e.g., the distribution, nature and age relationships of rock units and the occurrences of structural features, mineral deposits and fossil localities).**
Groundwater:	**Water that infiltrates the soil and is located in underground reservoirs called aquifers.**
Hazardous waste:	**A solid that, because of its quantity or concentration or its physical, chemical or infectious characteristics, may cause or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.**
Homeostasis:	**The tendency for a system to remain in a state of equilibrium by resisting change.**

Hydrology:	**The scientific study of the properties, distribution and effects of water on the earth's surface, in the soil and underlying rocks and in the atmosphere.**
Hypothesis:	**An assertion subject to verification or proof as a premise from which a conclusion is drawn.**
Incinerating:	**Burning to ashes; reducing to ashes.**
Information technology:	**The technical means that humans create to store and transmit information.**
Inquiry:	**A systematic process for using knowledge and skills to acquire and apply new knowledge.**
Instructional technology:	**Any mechanical aid (including computer technology) used to assist in or enhance the process of teaching and learning.**
Integrated pest management:	**A variety of pest control methods that include repairs, traps, bait, poison, etc. to eliminate pests.**
Law:	**Summarizing statement of observed experimental facts that has been tested many times and is generally accepted as true.**
Lentic:	**Relating to or living in still water.**
Lotic:	**Relating to or living in actively moving water.**
Manufacturing technology:	**The ways that humans produce goods and products.**
Mitigation:	**The policy of constructing or creating man-made habitats, such as wetlands, to replace those lost to development.**
Mitosis:	**The sequential differentiation and segregation of replicated chromosomes in a cell's nucleus that precedes complete cell division.**
Model:	**A description, analogy or a representation of something that helps us understand it better (e.g., a physical model, a conceptual model, a mathematical model).**

Niche (ecological):	**The role played by an organism in an ecosystem; its food preferences, requirements for shelter, special behaviors and the timing of its activities (e.g., nocturnal, diurnal), interaction with other organisms and its habitat.**
Nonpoint source pollution:	**Contamination that originates from many locations that all discharge into a location (e.g., a lake, stream, land area).**
Nonrenewable resources:	**Substances (e.g., oil, gas, coal, copper, gold) that, once used, cannot be replaced in this geological age.**
Nova:	**A variable star that suddenly increases in brightness to several times its normal magnitude and returns to its original appearance in a few weeks to several months or years.**
Patterns:	**Repeated processes that are exhibited in a wide variety of ways; identifiable recurrences of the element and/or the form.**
Pest:	**A label applied to an organism when it is in competition with humans for some resource.**
Physical technology:	**The ways that humans construct, manufacture and transport products.**
Point source pollution:	**Pollutants discharged from a single identifiable location (e.g., pipes, ditches, channels, sewers, tunnels, containers of various types).**
Radioactive isotope:	**An atom that gives off nuclear radiation and has the same number of protons (atomic number) as another atom but a different number of neutrons.**
Recycling:	**Collecting and reprocessing a resource or product to make into new products.**
Regulation:	**A rule or order issued by an executive authority or regulatory agency of a government and having the force of law.**
Renewable:	**A naturally occurring raw material or form of energy that will be replenished through natural ecological cycles or sound management practices (e.g., the sun, wind, water, trees).**
Risk management:	**A strategy developed to reduce or control the chance of harm or loss to one's health or life; the process of identifying, evaluating, selecting and implementing actions to reduce risk to human health and to ecosystems.**

Scale: Relates concepts and ideas to one another by some measurement (e.g., quantitative, numeral, abstract, ideological); provides a measure of size and/or incremental change.

Science: Search for understanding the natural world using inquiry and experimentation.

Shredder: Through chewing and/or grinding, microorganisms feed on non-woody coarse particulate matter, primarily leaves.

Stream order: Energy and nutrient flow that increases as water moves toward the oceans (e.g., the smallest stream (primary) that ends when rivers flow into oceans).

Succession: The series of changes that occur in an ecosystem with the passing of time.

Sustainability: The ability to keep in existence or maintain. A sustainable ecosystem is one that can be maintained.

System: A group of related objects that work together to achieve a desired result.

Closed Loop system: A group of related objects that have feedback and can modify themselves.

Open Loop system: A group of related objects that do not have feedback and cannot modify themselves.

Subsystem: A group of related objects that make up a larger system (e.g., automobiles have electrical systems, fuel systems).

Technological design process: Recognizing the problem, proposing a solution, implementing the solution, evaluating the solution and communicating the problem, design and solution.

Technology education: The application of tools, materials, processes and systems to solve problems and extend human capabilities.

Theory of evolution: A theory that the various types of animals and plants have their origin in other preexisting types and that the distinguishable differences are due to modification in successive generations.

Theory:	**Systematically organized knowledge applicable in a relatively wide variety of circumstances; especially, a system of assumptions, accepted principles and rules of procedure devised to analyze, predict or otherwise explain the nature or behavior of a specified set of phenomena.**
Tool:	**Any device used to extend human capability including computer-based tools.**
Topographic map:	**A representation of a region on a sufficient scale to show detail, selected man-made and natural features of a portion of the land surface including its relief and certain physical and cultural features; the portrayal of the position, relation, size, shape and elevation of the area.**
Transportation systems:	**A group of related parts that function together to perform a major task in any form of transportation.**
Transportation technology:	**The physical ways humans move materials, goods and people.**
Trophic levels:	**The role of an organism in nutrient and energy flow within an ecosystem (e.g., herbivore, carnivore, decomposer).**
Waste Stream:	**The flow of (waste) materials from generation, collection and separation to disposal.**
Watershed:	**The land area from which surface runoff drains into a stream, channel, lake, reservoir or other body of water; also called a drainage basin.**
Wetlands:	**Lands where water saturation is the dominant factor determining the nature of the soil development and the plant and animal communities (e.g., sloughs, estuaries, marshes).**