



Key Words & Concepts

Water Cycle

Water Cycle – The continual process of water moving in various forms (liquid, vapor and solid) over and through earth's surface, ground, and atmosphere.

Precipitation – Water moving from the air to the ground, such as rain snow hail or sleet

Evaporation – Process of water changing from liquid into vapor by application of heat

Transpiration – Process of water entering the atmosphere from plants.

condensation – Process of water changing from vapor into liquid droplets.

Surface Water – Water that flows or resides above ground in streams, lakes, rivers, and wetlands.

Ground Water – Water that flows or resides underground, including in water-rich layers called aquifers.

River – A large natural stream of moving water that flows to a lake or ocean.

Wetland – Area usually covered by shallow water, or containing waterlogged soil.

Glacier – Water in the form of a large mass of slowly moving ice.

Ocean – Very large body of salt water.

Watershed – Land area from which water drains to a particular water body.

Geology

Geology - the study of the origin and history of the earth; the study of rocks.

Fossil - Any remnant or evidence of life form from a past geological age, embedded in rocks.

Strata - Layers of rock.

Erosion - Breakdown or weathering of rocks, sediment or soil by wind, water, etc.

Sedimentary - A classification of rocks created by deposits of sediment (particles of silt, sand, clay, etc.).

Ice Age - Common name for the time during which glaciers were abundant

Glacier - A large mass of slowly moving ice.

Geological Era - A basic division of geological time, composed of one or more periods.

Geological Period - A portion of a geological era.

Geological Epoch - A portion of a geological period.

Aquatic Invertebrates

Aquatic – Water-related; living all or nearly all of the life cycle in water.

Macroinvertebrate – An animal that lacks an internal skeleton and is big enough to be seen with the naked eye (examples: insects, worms).

Tolerant – Able to live in poor quality water; not sensitive.

Sensitive – Not able to survive in poor quality water.

High Water Quality – Usually defined by cool water temperature, little suspended sediment, high level of oxygen, lack of pollutants, and presence of sensitive macroinvertebrate species.

Herbivore – An animal that feeds primarily on plants.

Nymph – Immature phase of development in insects, often somewhat similar in appearance to the adult form, but with no developed wings and smaller in size (example: mayfly nymph→mayfly).

Larvae – Immature phase of development in insects, usually very different in appearance from the adult form (example: caterpillar→butterfly).

Filter Feeder – An animal that catches food drifting in the water.

Decomposers – Organisms that break down dead organic material and make the nutrients available again to the ecosystem.

Birds

Adaptation – A modification in behavior, physical feature, or other characteristic that helps a living thing survive in its environment.

Migrate – To travel from one region to another, usually seasonally.

Flyway – Broad geographical route commonly used by birds in migration.

Habitat - The surroundings where a plant or animal lives and finds the resources it needs for life, including food, water, shelter, and space.

Fresh Water Marsh – A wetland where fresh (non-salty) water normally exists all year.

Pond - A still body of water smaller than a lake, often shallow enough for rooted plants to grow throughout.

Forest – An ecosystem in which trees are the most dominant member.

Prairie – A grassland community; ecosystem in which grasses are dominant.

Wetland – A wet land with specialized soil and plants, regularly or always flooded, found on edges of rivers, creeks, ponds, lakes, depressions, bays or oceans.

Raptor – A bird with sharp talons and hooked beak that catches other birds and animals to eat, and often carries them off.

Fledgling – A young bird that has gotten its feathers for flying.

Ecosystems

Ecosystem – A group of plants and animals that interact and adapt to a physical environment, including climate, water, air, and soil.

Predator - An animal that eats other animals.

Prey - An animal that is eaten by another animal.

Niche - The role or function a plant or animal has in a community.

Population - All of one kind of plants or animals in a specified area.

Food Chain - A series of plants and animals within an environment of which each kind serves as a source of nourishment (food) for the next in the series.

Food Web - A complex, interlocking series of individual food chains.

Native Species - A species originally living in and adapted to a given place.

Exotic Species - A plant or animal introduced from a different area that competes with the native species.

Endangered Species - A species in danger of extinction (dying out).

Boats & buoyancy

Vessel – A craft designed to navigate on water; a boat, especially a large boat.

Hull – The framework or body of a boat.

Bow – The front of a boat.

Stern – The rear of a boat.

Canoe – A slender boat with pointed ends, propelled by paddles.

Paddleboat – Vessel for carrying passengers and cargo, propelled by a paddlewheel.

Barge – A large, unpowered, flat-bottomed boat for transporting freight.

Tow – A group of barges tied together, usually with heavy steel cables towboat – a powerful vessel used to push a tow of barges.

Buoyancy – Capacity to remain afloat in liquid; upward force of a fluid on an object less dense than itself.

Displacement – The weight or volume of fluid displaced (pushed out of place) by a vessel (boat or barge).

Grain Elevator – Storage silos or tall bins equipped with devices for hoisting and discharging grain into barges, trucks or train cars.

Terminal – End point of a transportation system; loading station on a transportation line.

Urban watersheds & stewardship

Watershed – The area of land from which water flows to a given stream, river or lake.

Stewardship – The act of caring for our environment.

Water Pollution – Any substance that contaminates water making it unfit or unhealthy for use.

Point Source Pollution – Water pollution that comes from a single point such as a pipe.

Non-point Source Pollution – Water pollution that comes from a large general area such as a farm field, construction site, yard, streets or parking lots (also known as “*runoff pollution*”).

Sediment – Particles of soil and solid material that can be carried by water or wind.

Erosion – Process by which soil, sediment or other materials are worn away and moved by water or wind.

Nutrient – Element or substance (such as fertilizer or decayed leaves and grass) that supplies food for plant growth, but which in large concentrations can cause pollution.

Runoff – water from snowmelt or rain that flows over land to a river or other water body.

Storm Drain – opening in streets and parking lots through which runoff flows into underground pipes that lead to rivers, ponds or lakes (storm drains do *not* lead to a water treatment plant).

Storm Drain Outfall – The end of a pipe leading into a river or other water body from a storm drain.

Impervious Surface – Land covering, such as concrete or asphalt, that does not allow water to pass through it into the ground.

Best Management Practices (BMPs) – Preferred actions to prevent pollution.