

Science under Sail Vocabulary Terms

Apparent Wind: the wind experienced by an observer in motion

Benthic: the bottom of a standing body of water.

Bioaccumulation: refers to the accumulation of substances, such as pesticides, or other chemicals in an organism

Buoyancy: the ability of an object to float

Carnivore: animal that feeds on other animals.

Cirrus: Detached clouds in the form of white, delicate filaments, mostly white patches or narrow bands. They may have a fibrous (hair-like) and/or silky sheen appearance. Cirrus clouds are always composed of ice crystals, and their transparent character depends upon the degree of separation of the crystals.

Climate: a description of the long-term pattern of weather in a particular area.

Community: populations of all species living and interacting in an area at a particular time. (Ex: all of the populations mentioned in the "Population" definition, along with other populations like deer, muskrat, raccoon, etc.)

Condensation: process by which water vapor changes into liquid water or solid ice crystals.

Cumulus: Detached, generally dense clouds and with sharp outlines that develop vertically in the form of rising mounds.

Deposition: the laying down of weathered and eroded materials.

Drag: the friction resistance of the water on the hull of a moving ship, one of the functions that are used to determine the ship's potential speed.

Ecosystem: a community plus all the nonliving (abiotic) components that are present also (like oxygen, carbon dioxide, water, climate, land, etc.).

Erosion: the wearing away or removal of materials from the earth's surface by running water, wind, or ice.

Evaporation: the process where a liquid is changed to vapor (gas phase).

Exotic Species: plant and animal species that are not native to an area. Human action is always involved in the appearance of an exotic species, whether it is intentional or accidental.

Food Chain: the succession of organisms in a community that constitute a feeding order in which food energy is transferred from one organism to another as each consumes a member of a lower trophic level and in turn is consumed by an organism of a higher trophic level.

Food Web: A network of food chains or feeding relationships by which energy and nutrients are passed on from one species of living organisms to another.

Groundwater: water held (stored) in porous rock below the earth's surface.

Heeling: to lean or tip under the influence of the wind on sails.

Herbivore: plant-eating organisms.

Inclined Plane: a ramp, One end is higher than the opposite end. This allows things to go from a low place to a higher place.

Infiltration: the process of water percolating into the soil and pores of the ground; the gradual downward flow of water from the surface into the soil.

Lateral Resistance: is the center of pressure of the hydrodynamic forces on the hull of a boat. The center of pressure is the point on a body where the total sum of a pressure field acts, causing a force and no moment about that point.

Lever: The lever is a long tool such as a pole or a rod put under an object to lift it.

Lift: the aerodynamic capability of a sail to propel a sailboat forward.

Limnology: the study of the physical, chemical, and biological properties and features of fresh waters.

Marine Debris: any material that was intentionally or unintentionally discarded into a marine environment

Microscopic: an organism that is too small to be seen with the naked eye.

Native Species: one that is normally found in that particular geographic location.

Nonpoint Source Pollution: pollution that comes from a large area (like a farmer's field or a parking lot), and cannot be easily traced back to a single point (was it the farmer's field or was it the parking lot, and exactly where did it come from on the field?). These are much more difficult to clean up because they are so difficult to track back to the original source of the problem.

Photosynthesis: the process by which plants make food (they need sunlight, nutrients, water, and carbon dioxide)

Plankton: microscopic organisms that generally float in aquatic ecosystems.

Point Source Pollution: pollution coming directly from an observable source (like a discharge pipe or a smokestack). Easy to "find and fix."

Population: a group of individual organisms of the same species living within a particular area. (Ex: great blue heron, mallard duck, osprey, loon, etc.)

Precipitation: water droplets or ice particles condensed from atmospheric water vapor and sufficiently massive enough to fall to the earth's surface in the form of rain, snow, sleet, or hail.

Producer: organism that uses solar energy to manufacture the organic compounds it needs as nutrients.

Pulley: The pulley is actually a version of a wheel and axle that is combined with a rope, chain or other cord to allow moving something up and down or back and forth.

Runoff: the water that flows over the land surface after rainfall or snowmelt rather than sinking in, and eventually flows into lakes, rivers, wetlands, etc.

Screw: The screw is really a twisted inclined plane. It allows movement from a lower position to a higher

position but at the same time it moves it in a circle.

Sediment: insoluble material suspended in water that consists mainly of particles derived from rocks, soil, and organic materials; a major nonpoint pollutant to which other pollutants may attach. Fine sediments in rivers and lakes make them appear cloudy or muddy when there is enough turbulence to keep them suspended.

Species: a population of similar organisms that can reproduce sexually among themselves and that cannot produce fertile offspring when mated with other species.

Stratus: A generally gray cloud layer with a uniform base which may, if thick enough, produce drizzle, ice prisms, or snow grains.

Transpiration: the evaporation of water from the breathing pores (stomata) of a plant leaf.

Trawl Net: a large wide-mouthed fishing net dragged by a vessel along the bottom or in the midwater of the sea or a lake.

Tributary: a stream that carries its water into another, larger stream/river.

True Wind: observation of wind which is not affected by the motion of the observer

Vector: a quantity having direction and magnitude

Water Cycle: the recycling of water on Earth, including atmospheric, surface, and underground water, and including the biological component as well.

Watershed: all the land drained by a main river and all its tributaries. The term Drainage Basin may be used interchangeably with Watershed. The drainage basin of the Saginaw Bay Watershed is the total land that contributes water to Saginaw Bay.

Water Table: the upper limit of groundwater; below this "line" the ground is saturated. This upper surface fluctuates based on the amount of rainfall and well use. Wells are sunk below the water table in order to produce a dependable water supply.

Weather: a description of the physical conditions of the atmosphere (moisture, temperature, pressure, and wind) at any given time

Wedge: separates objects apart

Wetland: an area of land saturated with water all or most of the year

Wheel and Axle: An axle is a rod or pole centered in the wheel that allows the wheel to turn around it.