

**earthquake**—the result of vibrations (often due to plate movements) deep in the Earth that release energy. They often occur as two plates slide past one another at a transform boundary.

**El Niño**—a climate variation that takes place in the tropical Pacific about every three to seven years, for a duration of about one year.

**epilimnion**—the uppermost, and thus the most oxygenated, layer in a fresh body of water.

**erosion**—the process of soil particles being carried away by wind or water. Erosion moves the smaller particles first and hence degrades the soil to a coarser, sandier, stonier texture.

**estuary**—the part of the wide lower course of a river where its current is met by the tides.

**euphotic zone**—in aquatic systems, the layer or depth of water through which an adequate amount of light penetrates to support photosynthesis.

**fault**—the place where two plates abut each other.

**front**—the boundary where different air masses meet.

**Greenhouse Effect**—the phenomenon whereby the Earth's atmosphere traps solar radiation, caused by the presence in the atmosphere of gases such as carbon dioxide, water vapor, and methane that allow incoming sunlight to pass through, but absorb heat radiated back from the Earth's surface.

**Green Revolution**—the development and introduction of new varieties of (mainly) wheat and rice that has increased yields per acre dramatically in countries since the 1960s.

**Hadley cell**—a system of vertical and horizontal air circulation predominating in tropical and subtropical regions and creating major weather patterns.

**headwaters**—the water from which a river rises; a source.

**horizon**—a layer of soil.

**horizontal airflow**—when a warm air mass rises and cool air rushes in to take its place.

**Horse latitudes**—either of two belts of latitudes located over the oceans at about 30° to 35° north and south, having high barometric pressure, calms, and light, changeable winds.

**humus**—the dark, crumbly, nutrient-rich material that results from the decomposition of organic material.

**hurricane** (typhoon, cyclone)—a severe tropical cyclone originating in the equatorial regions of the Atlantic Ocean or Caribbean Sea or eastern regions of the Pacific Ocean, traveling north, northwest, or northeast from its point of origin, and usually involving heavy rains.

**hypolimnion**—the layer of water in a thermally stratified lake that lies below the thermocline, is noncirculating, and remains perpetually cold.