

CHAPTER 7 VOCABULARY - Climate and Biodiversity

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albedo	Ability of a surface to reflect light.
altitude	Height above sea level. Compare <i>latitude</i> .
arid	Dry. A desert or other area with an arid climate has little precipitation.
biome	Terrestrial regions inhabited by certain types of life, especially vegetation. Examples include various types of deserts, grasslands, and forests.
broadleaf deciduous plants	Plants such as oak and maple trees that survive drought and cold by shedding their leaves and becoming dormant. Compare <i>broadleaf evergreen plants</i> , <i>coniferous evergreen plants</i> .
broadleaf evergreen plants	Plants that keep most of their broad leaves year-round. An example is the trees found in the canopies of tropical rain forests. Compare <i>broadleaf deciduous plants</i> , <i>coniferous evergreen plants</i> .
climate	Physical properties of the troposphere of an area based on analysis of its weather records over a long period (at least 30 years). The two main factors determining an area's climate are its average <i>temperature</i> , with its seasonal variations, and the average amount and distribution of <i>precipitation</i> . Compare <i>weather</i> .
cold front	Leading edge of an advancing mass of cold air. Compare <i>warm front</i> .
coniferous evergreen plants	Cone-bearing plants (such as spruces, pines, and firs) that keep some of their narrow, pointed leaves (needles) all year. Compare <i>broadleaf deciduous plants</i> , <i>broad-leaf evergreen plants</i> .
coniferous trees	Cone-bearing trees, mostly evergreens, that have needle-shaped or scalelike leaves. They produce wood known commercially as softwood. Compare <i>deciduous plants</i> .
currents	See <i>ocean currents</i> .
deciduous plants	Trees, such as oaks and maples, and other plants that survive during dry or cold seasons by shedding their leaves. Compare <i>coniferous trees</i> , <i>succulent plants</i> .
desert	Biome in which evaporation exceeds precipitation and the average amount of precipitation is less than 25 centimeters (10 inches) per year. Such areas have little vegetation or have widely spaced, mostly low vegetation. Compare <i>forest</i> , <i>grassland</i> .
elevation	Distance above sea level.

evergreen plants	Plants that keep some of their leaves or needles throughout the year. Examples include cone-bearing trees (conifers) such as firs, spruces, pines, redwoods, and sequoias. Compare <i>deciduous plants</i> , <i>succulent plants</i> .
front	The boundary between two air masses with different temperatures and densities. See <i>cold front</i> , <i>warm front</i> .
global climate change	Broad term referring to long-term changes in any aspects of the earth's climate, especially temperature and precipitation. Compare <i>weather</i> .
grassland	Biome found in regions where enough annual average precipitation to support the growth of grass and small plants but not enough to support large stands of trees. Compare <i>desert</i> , <i>forest</i> .
greenhouse effect	Natural effect that releases heat in the atmosphere near the earth's surface. Water vapor, carbon dioxide, ozone, and other gases in the lower atmosphere (troposphere) absorb some of the infrared radiation (heat) radiated by the earth's surface. Their molecules vibrate and transform the absorbed energy into longer-wavelength infrared radiation in the troposphere. If the atmospheric concentrations of these greenhouse gases increase and other natural processes do not remove them, the average temperature of the lower atmosphere will increase. Compare <i>global warming</i> .
greenhouse gases	Gases in the earth's lower atmosphere (troposphere) that cause the greenhouse effect. Examples include carbon dioxide, chlorofluorocarbons, ozone, methane, water vapor, and nitrous oxide.
latitude	Distance from the equator. Compare <i>altitude</i> .
natural greenhouse effect	See <i>greenhouse effect</i> .
ocean currents	Mass movements of surface water produced by prevailing winds blowing over the oceans.
permafrost	Perennially frozen layer of the soil that forms when the water there freezes. It is found in arctic tundra.
prairie	See <i>grassland</i> .
rain shadow effect	Low precipitation on the leeward side of a mountain when prevailing winds flow up and over a high mountain or range of high mountains, creating semiarid and arid conditions on the leeward side of a high mountain range.

- succulent plants** Plants, such as desert cacti, that survive in dry climates by having no leaves, thus reducing the loss of scarce water through *transpiration*. They store water and use sunlight to produce the food they need in the thick, fleshy tissue of their green stems and branches. Compare *deciduous plants*, *evergreen plants*.
- upwelling** Movement of nutrient-rich bottom water to the ocean's surface. It can occur far from shore but usually takes place along certain steep coastal areas where the warm surface layer of ocean water is pushed away from shore and replaced by cold, nutrient-rich bottom water.
- warm front** Boundary between an advancing warm air mass and the cooler one it is replacing. Because warm air is less dense than cool air, an advancing warm front rises over a mass of cool air. Compare *cold front*.
- weather** Short-term changes in the temperature, barometric pressure, humidity, precipitation, sunshine, cloud cover, wind direction and speed, and other conditions in the troposphere at a given place and time. Compare *climate*.