

**transform boundary**—also known as transform faults, boundaries at which plates are moving past each other, sideways.

**tropical storm**—a cyclonic storm having winds ranging from approximately 48 to 121 km (30 to 75 miles) per hour.

**troposphere**—the lowest region of the atmosphere between the Earth's surface and the tropopause, characterized by decreasing temperature with increasing altitude.

**tropopause**—the boundary between the troposphere and the stratosphere varying in altitude from approximately 8 km (5 miles) at the poles to approximately 18 km (11 miles) at the equator.

**upwelling**—a process in which cold, often nutrient-rich, waters from the ocean depths rise to the surface.

**volcanoes**—an opening in the Earth's crust through which molten lava, ash, and gases are ejected.

**watershed**—the region draining into river system or other body of water.

**water-scarce**—countries that have a renewable annual water supply of less than 1,000 m<sup>3</sup> per person.

**water-stressed**—countries that have a renewable annual water supply of about 1,000–2,000 m<sup>3</sup> per person.

**weather**—the day-to-day variations in temperature, air pressure, wind, humidity, and precipitation mediated by the atmosphere in a given region.

**weathering**—the gradual breakdown of rock into smaller and smaller particles, caused by natural chemical, physical, and biological factors.

**westerly**—a type of moving air mass that results from air being deflected south and west in the Northern Hemisphere and north and west in the Southern Hemisphere near the equator (between 30° and 60°).

**wetlands**—a lowland area, such as a marsh or swamp, that is saturated with moisture, especially when regarded as the natural habitat of wildlife.

## CHAPTER 4: THE INHABITANTS OF PLANET EARTH AND THEIR RELATIONSHIPS

**allopatric speciation**—a mode of speciation introduced when the ancestral population becomes segregated by a geographic barrier.

**ammonification**—the production of ammonia or ammonium compounds in the decomposition of organic matter, especially through the action of bacteria.

**assimilation**—the process in which plants absorb ammonium (NH<sub>3</sub>), ammonia ions (NH<sub>4</sub><sup>+</sup>), and nitrate ions (NO<sub>3</sub><sup>-</sup>) through their roots.

**autotroph**—an organism that obtains organic food molecules without eating other organisms or substances derived from other organisms. Autotrophs use energy from the sun or from the oxidation of inorganic substances to make organic molecules from inorganic ones.

**bioaccumulation**—the accumulation of a substance, such as a toxic chemical, in various tissues of a living organism.