**Vocabulary**

**I. EARTH SYSTEMS AND RESOURCES**

**Richter Scale** - is a base-10 logarithmic scale, best known scale for measuring the magnitude of earthquakes.

**Plate tectonics -**is a scientific theory that describes the large-scale motion of Earth's lithosphere. Where the plates meet, their relative motion determines the type of boundary: **Convergent -** when two plates move towards one another, they form either a subduction zone or a continental collision. **Divergent** - is a linear feature that exists between two tectonic plates that are moving away from each other. **Transform** - is a type of fault whose relative motion is predominantly horizontal in either sinistral or dextral direction.

**Greenhouse Gas** - is a gas in an atmosphere that absorbs and emits radiation within the thermal infrared range.

**Ferrel cell** - is the average motion of air in the mid-latitudes. It is characterized by sinking air near 30 deg and rising air farther poleward. At the surface, air flowing poleward is deflected to the east by the coriolis force, resulting in westerly surface winds.

**Upwelling** - is an oceanographic phenomenon that involves wind-driven motion of dense, cooler, and usually nutrient-rich water towards the ocean surface, replacing the warmer, usually nutrient-depleted surface water.

**II. THE LIVING WORLD**

**Intraspecific competition** - an interaction in population ecology, whereby members of the same species compete for limited resources.

**Succession** - may be initiated either by formation of new, unoccupied habitat **Primary** - one of two types of succession. occurring in an environment in which new substrate devoid of vegetation and other organisms usually lacking soil, such as a lava flow or area left from retreated glacier, is deposited. **Secondary** - is the series of community changes which take place on a previously colonized, but disturbed or damaged habitat.

**III. POPULATION**

**Density-independent factors** - things and events that limit the size of a population regardless of the density of the population. Some things that happen to populations, such as disease and parasites, depend on the size of the population to be successful at causing destruction.

**K-selected species** - possess relatively stable populations and tend to produce relatively low numbers of offspring; however, individual offspring tend to be quite large in comparison with r-selected species. K-selected species are characterized by long gestation periods lasting several months, slow maturation (and thus extended parental care), and long life spans.

**r-selected species** - the production of numerous small offspring followed by exponential population growth is the defining characteristic of r-selected species. They require short gestation periods, mature quickly (and thus require little or no parental care), and possess short life spans.

**Survivorship curve -** is a graph showing the number or proportion of individuals surviving to each age for a given species or group. **Type 1** – a convex curve: most individuals live to adulthood with mostly mortality occurring during old age (humans, elephants, red deer). **Type 2** – a straight line: an individual’s chance of dying is independent of its age (small birds and mammals). **Type 3** – a concave curve: few individuals live to adulthood, with the chance of dying decreasing with age (oysters, redwood trees, snapping turtles).

**IV. LAND AND WATER USE**

**First Green Revolution** - research and development and technology transfer initiatives, occurring between the 1930s and the late 1960s. credited with saving over a billion people from starvation, involved the development of high-yielding varieties of cereal grains, expansion of irrigation infrastructure, modernization of management techniques, distribution of hybridized seeds, synthetic fertilizers, and pesticides to farmers.

**Integrated pest management (IPM)** - is a broad-based approach that integrates practices for economic control of pests.

**Desertification** - is a type of land degradation in which a relatively dry land region becomes increasingly arid, typically losing its bodies of water as well as vegetation and wildlife. It is caused by a variety of factors, such as climate change and human activities.

**Urban sprawl -** is basically another word for urbanization. The spreading of a city and its suburbs over more and more rural land.