**Introduction to AP Environmental Science**

***The Environment: Past, Present, and Future***

**Key Terms**

|  |  |
| --- | --- |
| **Adaptation** | Responses to the changing climate (e.g., acclimatization in humans) and policies to minimize the predicted impacts of climate change (e.g., building better coastal defenses. |
| **Carbon Dioxide (CO2)** | Chemical element that is composed of 2 Oxygen and 1 Carbon atom. A gas at a standard temperature and pressure and present in the atmosphere. |
| **Carbon Footprint** | The total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide (CO2). |
| **Chlorofluorocarbons (CFC’s)** | Set of chemical compounds that deplete the Earth’s Ozone. Widely used in aerosols, solvents, propellants and coolants. These are the main cause of ozone depletion. |
| **Clean Energy** | Energy that is renewable, safe and cost effective. |
| **Clear Cutting** | A section of forest where all trees have been cut down and harvested. |
| **Climate Change** | Change in the statistical distribution of weather over a period of time typically a decade or longer. |
| **Community** | A group of people living in a particular local area. |
| **Composite Materials** | Engineered materials made from two or more constituent substances with significantly different physical or chemical properties which remain separate and distinct on a macroscopic level within the finished structure. Typically require little to no maintenance or upkeep. |
| **Compost** | A combination of food waste and brown waste that together is being decomposed through aerobic decomposition resulting in a rich black soil. The process of composting is simple and practiced by individuals in their homes, farmers on their land, and industrially by cities |
| **Conservation** | Using natural resources wisely and at a slower rate than normal. A controlled use of a resource.  The act or process of conserving. |
| **DDT (dichlorodiphenyltrichloro‐ethane)** | Synthetic chemical pesticide with a controversial history. DDT is known to have had adverse effects on humans, animals and the environment. Rachel Carson’s book *Silent Spring*, published in 1962 lead most uses of this product to be banned in the U.S. in 1972. |
| **Deforestation** | The removal of trees without appropriate replanting. |
| **Efficient** | Being effective without wasting time, effort, energy or expense.  High degree or ratio of output to input. |
| **Emission** | A substance discharged into the air, especially by an internal combustion engine. |
| **Endangered Species** | Population of a species at risk of becoming extinct. |
| **Energy Efficiency** | The use of less energy to provide the same or an improved level of service to the energy consumer in an economically efficient way; or using less energy to perform the same function. |
| **Environment** | The totality of surrounding conditions, including the air, water, and fertile land, that allows life to thrive.  Combination of external living conditions which directly affects the growth and development of living organisms. |
| **Global Warming** | Increase in the average temperature of the earth’s atmosphere. |
| **Green** | Term used to refer to services, products, and practices whose manufacturing purchase and use allows of economic development while still promoting conservations for future generations. |
| **Green Building Materials or Products** | Products or materials composed of renewable, versus nonrenewable resources. These materials and products are more environmentally responsible since impacts are considered over the life of the product. |
| **Greenhouse Effect** | When gases in the earth’s atmosphere trap in heat and build up ultimately resulting in the increase of the earth’s temperature.  Greenhouse Gasses (GHG) ‐ Gases in the atmosphere that absorb or emit radiation. GHG include ozone, water vapor, carbon dioxide, methane, and nitrous oxide. |
| **Impact** | To have a strong influence; to have an effect on something. |
| **Industrial Revolution** | The Industrial Revolution was a period from the 18th to the early 19th century where technological discoveries resulted in major changes in agriculture, manufacturing, mining, and transport. In addition to creating a greater variety and volume of products and services, the Industrial Revolution has increased the pace and intensity of natural resource consumption and contamination. |
| **Kilowatt Meter** | A device that measures the amount of electrical energy supplied to or produced by a residence, business or machine. |
| **Life Cycle Assessment** | Investigation and evaluation of the environmental impacts of a given product or service. |
| **Mercury** | Toxic chemical element found today in fish. |
| **Methane** | Principal component of natural gas which is colorless and odorless. Methane is considered a GHG. Also produced by mud volcanoes, faults and livestock. |
| **Natural Resources** | Materials that occur naturally within environments that exist relatively undisturbed by mankind, in a natural form. Natural resources are derived from the environment. Many of them are essential for our survival while others are used for satisfying our wants. Natural resources may be further classified in other ways. |
| **Organic** | Food or product made with specific production standards and never using chemical fertilizers, stimulants, antibiotics or pesticides.  Derived from living organisms. |
| **Ozone Depletion** | A slow steady decline in the total amount of Ozone in the Earth’s stratosphere. Ozone is considered a GHG. |
| **Pervious or Permeable Concrete** | Mixture of aggregate concrete, Portland Cement, water and a small amount of sand. This concrete allows water to pass through at a rate of 3‐8 gallons per minute per square foot. |
| **Photovoltaic** | Technology that converts light directly into electricity. |
| **Recycle** | Cause to repeat a cycle, to use again after processing. |
| **Reduce** | To narrow, limit or make smaller.  To lessen to an extent. |
| **Reject** | To refuse use of a particular chemical, product, items that have a particularly negative impact on the environment.  To refuse to accept. |
| **Renewable Energy** | Energy generated from natural resources ‐ such as sunlight, wind, rain, tides, and geothermal heat ‐ which are naturally replenished. |
| **Reuse** | To put to use again; use after original intention. |
| **Sustainability** | The potential for long‐term maintenance of wellbeing, which in turn depends on the wellbeing of the natural world and the responsible use of natural resources. |
| **Waste** | Any material unused or and rejected as worthless or unwanted; to use inappropriately, or inefficiently.  To use or expand needlessly and carelessly.  To destroy completely.  Worthless or useless material that is discarded as refuse. |