

# **Environmental Science Vocabulary by Chapter and Section**

## **Chapter 1 – Science and the Environment**

### **Section 1 – Understanding Our Environment**

- environmental science
- ecology
- agriculture
- natural resource
- pollution
- biodiversity

### **Section 2 – The Environment and Society**

- law of supply and demand
- ecological footprint
- sustainability

## **Chapter 2 – Tools of Environmental Science**

### **Section 1 – Scientific Methods**

- observation
- hypothesis
- prediction
- experiment
- variable
- experimental group
- control group
- data
- correlation

### **Section 2 – Statistics and Models**

- statistics
- mean
- distribution
- probability
- sample
- risk
- model
- conceptual model
- mathematical model

### **Section 3 – Making Informed Decisions**

- value
- decision-making model

## **Chapter 3 – The Dynamic Earth**

### **Section 1 – The Geosphere**

- geosphere
- hydrosphere
- crust
- mantle
- core
- lithosphere
- asthenosphere
- tectonic plate
- chemical weathering
- erosion

## **Section 2 – The Atmosphere**

- atmosphere
- troposphere
- stratosphere
- ozone
- radiation
- conduction
- convection
- greenhouse effect

## **Section 3 – The Hydrosphere and Biosphere**

- water cycle
- evaporation
- condensation
- precipitation
- salinity
- fresh water
- biosphere

## **Chapter 4 – The Organization of Life**

### **Section 1 – Ecosystems: Everything is Connected**

- ecosystem
- biotic factor
- abiotic factor
- organism
- species
- population
- community
- habitat

### **Section 2 - Evolution**

- natural selection
- evolution
- adaptation
- artificial selection
- resistance

### **Section 3 – The Diversity of Living Things**

- archaea
- bacteria
- fungus
- protist
- gymnosperm
- angiosperm
- invertebrate
- vertebrate

## **Chapter 5 – How Ecosystems Work**

### **Section 1 – Energy Flow in Ecosystems**

- photosynthesis
- producer
- consumer
- decomposer
- cellular respiration
- food chain
- food web
- trophic level

### **Section 2 – The Cycling of Matter**

- carbon cycle
- nitrogen-fixing bacteria
- nitrogen cycle
- phosphorous cycle

### **Section 3 – How Ecosystems Change**

- ecological succession
- primary succession
- secondary succession
- pioneer species
- climax community

## **Chapter 6 - Biomes**

### **Section 1 – What is a Biome?**

- biome
- climate
- latitude
- altitude

### **Section 2 – Forest Biomes**

- tropical rain forest
- emergent layer
- canopy
- epiphyte
- understory
- temperate rain forest
- temperate deciduous forest
- taiga

### **Section 3 – Grassland, Desert, and Tundra Biomes**

- savanna
- temperate grassland
- chaparral
- desert
- tundra
- permafrost

## **Chapter 7 – Aquatic Ecosystems**

### **Section 1 – Freshwater Ecosystems**

- wetland
- plankton
- nekton
- benthos
- littoral zone
- benthic zone
- eutrophication

### **Section 2 – Marine Ecosystems**

- estuary
- salt marsh
- mangrove swamp
- barrier island
- coral reef

## **Chapter 8 – Understanding Populations**

### **Section 1 – How Populations Change in Size**

- population
- density
- dispersion
- growth rate
- reproductive potential
- exponential growth
- carrying capacity

### **Section 2 – How Species Interact with Each Other**

- niche
- competition
- predation
- parasitism
- mutualism
- commensalism
- symbiosis

## **Chapter 9 – The Human Population**

### **Section 1 – Studying Human Populations**

- demography
- age structure
- survivorship
- fertility rate
- migration
- life expectancy
- demographic transition

### **Section 2 – Changing Population Trends**

- infrastructure
- arable land
- urbanization
- least developed countries

## **Chapter 10 - Biodiversity**

### **Section 1 – What is Biodiversity?**

- biodiversity
- gene
- keystone species
- ecotourism

### **Section 2 – Biodiversity at Risk**

- endangered species
- threatened species
- exotic species
- poaching
- endemic species

### **Section 3 – The Future of Biodiversity**

- germ plasm
- Endangered Species Act
- habitat conservation plan
- Biodiversity Treaty

## **Chapter 11 - Water**

### **Section 1 – Water Resources**

- surface water
- river system
- watershed
- groundwater
- aquifer
- porosity
- permeability
- recharge zone

### **Section 2 – Water Use and Management**

- potable
- pathogen
- dam
- reservoir
- desalination

### **Section 3 – Water Pollution**

- water pollution
- point-source pollution
- nonpoint-source pollution
- wastewater
- artificial eutrophication
- thermal pollution
- biomagnification

## **Chapter 12 - Air**

### **Section 1 – What Causes Air Pollution?**

- air pollution
- primary pollutant
- secondary pollutant
- smog
- temperature inversion

## **Section 2 – Air, Noise, and Light Pollution**

- sick-building syndrome
- asbestos
- decibel (dB)

## **Section 3 – Acid Precipitation**

- acid precipitation
- pH
- acid shock

## **Chapter 13 – Atmosphere and Climate Change**

### **Section 1 - Climate**

- climate
- latitude
- El Nino
- La Nina

### **Section 2 – The Ozone Shield**

- ozone layer
- chlorofluorocarbons (CFC's)
- ozone hole
- polar stratospheric clouds

### **Section 3 – Climate Change**

- greenhouse gases
- global warming
- Kyoto Protocol

## **Chapter 14 - Land**

### **Section 1 – How We Use Land**

- urban
- rural
- ecosystem services

### **Section 2 – Urban Land Use**

- urbanization
- infrastructure
- urban sprawl
- heat island
- land-use planning
- geographic information system (GIS)

### **Section 3 – Land Management and Conservation**

- overgrazing
- deforestation
- reforestation
- wilderness

## **Chapter 15 – Food and Agriculture**

### **Section 1 – Feeding the World**

- famine
- malnutrition
- diet
- yield

### **Section 2 – Crops and Soil**

- topsoil
- erosion
- desertification
- compost
- salinization
- pesticide
- biological pest control
- genetic engineering

### **Section 3 – Animals and Agriculture**

- domesticated
- overharvesting
- aquaculture
- livestock
- ruminant

## **Chapter 16 – Mining and Mineral Resources**

### **Section 1 – Minerals and Mineral Resources**

- mineral
- ore mineral

### **Section 2 – Mineral Exploration and Mining**

- subsurface mining
- surface mining
- placer deposit
- smelting

### **Section 3 – Mining Regulations and Mine Reclamation**

- subsidence
- reclamation

## **Chapter 17 – Nonrenewable Energy**

### **Section 1 – Energy Resources and Fossil Fuels**

- fossil fuels
- electric generator
- petroleum
- oil reserves

### **Section 2 – Nuclear Energy**

- nuclear energy
- nuclear fission
- nuclear fusion

## **Chapter 18 – Renewable Energy**

### **Section 1 – Renewable Energy Today**

- renewable energy
- passive solar heating
- active solar heating
- biomass fuel
- hydroelectric energy
- geothermal energy

### **Section 2 – Developing Energy Technologies**

- alternative energy
- ocean thermal energy conversion (OTEC)
- fuel cell
- energy efficiency
- energy conservation

## **Chapter 19 - Waste**

### **Section 1 – Solid Waste**

- solid waste
- biodegradable
- municipal solid waste
- landfill
- leachate

### **Section 2 – Reducing Solid Waste**

- source reduction
- recycling
- compost

### **Section 3 – Hazardous Waste**

- hazardous waste
- deep-well injection
- surface impoundment

## **Chapter 20 – The Environment and Human Health**

### **Section 1 – Pollution and Human Health**

- toxicology
- dose
- dose-response curve
- epidemiology
- risk assessment
- particulates

### **Section 2 – Biological Hazards**

- pathogen
- host
- vector

## **Chapter 21 – Economics, Policy, and the Future**

### **Section 1 – Economics and International Cooperation**

- sustainability
- economics

### **Section 2 – Environmental Policies in the United States**

- Environmental Impact Statement
- lobbying

### **Section 3 – The Importance of the Individual**