1. What is **environmental science**?
2. The **environment** includes:

1. Environmental science is **interdisciplinary** because….
   1. Examples:
2. Using the example of coal-for-electricity, describe how each of these fields of study is involved.
   1. Economics –
   2. Geology –
   3. Engineering –
   4. Chemistry –
   5. Meteorology –
   6. Ecology –
   7. Politics -

**Major Ways Humans Have Changed the Environment**

1. Hunter-Gatherer societies:
   1. What did they do to change the environment?
   2. What were the effects of the Hunter-Gatherer societies?
2. Agricultural Revolution:
   1. What was done to change the environment?
   2. What were the effects of the Ag Revolution?
3. Industrial Revolution:
   1. What was done to change the environment?
   2. What were the effects of the Industrial Revolution?
4. Globalization:
   1. What was/is being done to change the environment?
   2. What are the effects of Globalization?

**Three Major Environmental Problems**

1. Define **natural resource** –

Resource Depletion:

1. Define **renewable resource** –
   1. Give one example of a renewable resource.
2. Define **nonrenewable resource –**
   1. Give one example of a nonrenewable resource.
   2. What is the estimated remaining supply of coal?

Pollution:

1. Define **biodegradable pollution –**
2. Define **nondegradable pollution –**
3. Mark the areas with the greatest concentrations of air pollution.



Loss of Biodiversity:

1. Define **biodiversity –**
2. Define **extinction –**
3. How many known major extinction events have occurred in the history of Earth?
   1. What caused the most recent one?
4. What is the **background rate** for mammal extinctions?
   1. How many mammal extinctions have occurred in Australia since 1788? What is the cause of these extinctions?
5. Define **conservation** –
   1. Give examples of conservation –
6. Define **preservation** –
   1. Give examples of preservation -

**Environmental Ethics**

1. What is **environmental ethics**?
2. What does **anthropocentrism** mean? Describe the philosophy.
3. What does **ecocentrism** mean? Describe the philosophy.
4. The proposed Hetch Hetchy dam was the first big debate between anthropocentrists and ecocentrists. Explain what each group wanted to do.

**Anthropocentrists-**

**Ecocentrists -**

1. Was the dam constructed? Describe the reasoning. What environmental ethics philosophy aligns with this reasoning?
2. What was the focus of the **resource conservationism** philosophy?
   1. What two federal systems were created during this time?
3. Two events lead to the beginning of the **modern environmentalism** movement. What were they?
   1. What is the primary concern of modern environmentalists?
4. What is **global environmentalism**?

**The Tragedy of the Commons**

1. Who wrote the *Tragedy of the Commons*?
2. The *Tragedy of the Commons* essay describes the source of environmental problems as…
3. What is a **commons**?
   1. What tends to happen to commons areas?
   2. What are modern examples of commons areas?

**Economics and the Environment**

1. Define **supply-and-demand** –
   1. Give an example.
2. Define **cost/benefit analysis –** 
   1. Give an example.
3. Describe the conditions found in a **developing country**.
4. Describe the conditions found in a **developed country**.

1. Which type of country has the smaller population size? Which consumes more resources?
2. Compare and contrast developing and developed countries:

|  |  |  |
| --- | --- | --- |
|  | **Developed**  **United States** | **Developing**  **Indonesia** |
| **Life expectancy** | |  |  |
| **Population Growth Rate** | |  |  |
| **Wealth** | |  |  |
| **Energy Use** | |  |  |
| **Pollution Rate** | |  |  |
| **Waste Creation** | |  |  |

1. What factors are considered when calculating an ecological footprint?
2. What is **sustainability**?
3. Sustainability is important because the Earth is a **closed system**. What does this mean?

History of Conservation & Preservation in the US –

|  |  |
| --- | --- |
| Date | Happenings |
| 1626 |  |
| 1634 |  |
| 1639 |  |
| 1641 |  |
| 1650 |  |
| 1698 |  |
| 1817 |  |
| 1844 |  |
| 1865 |  |
| 1872 |  |
| 1875 |  |
| 1885 |  |
| 1890 |  |
| 1892 |  |
| 1900 |  |
| 1902 |  |
| 1903 |  |
| 1905 |  |
| 1907 |  |
| 1909 |  |
| 1916 |  |
| 1917/27 |  |
| 1933 |  |
| 1933 |  |
| 1936 |  |
| 1940 |  |
| 1949 |  |
| 1955 |  |
| 1956 |  |
| 1960 |  |
| 1965 |  |
| 1970 |  |
| 1970 |  |
| 1973 |  |
| 1990 |  |
| 2006 |  |

Scientific Method:

O:

H:

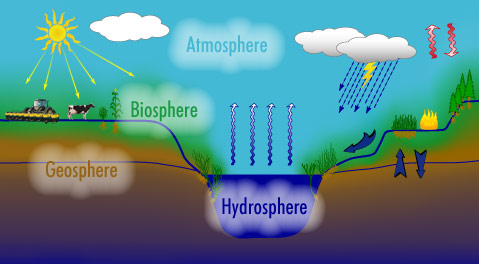
P:

E:

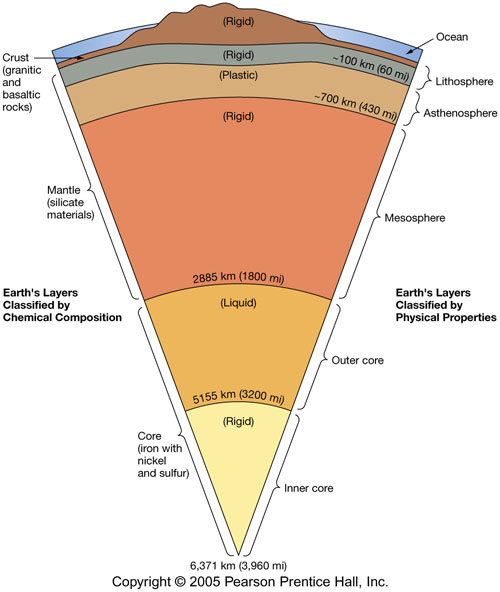
D:

C:

The Dynamic Earth –



* The Geosphere
  + Composed of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

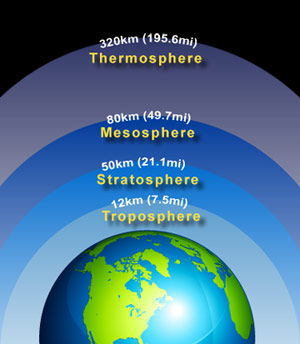


Compositional Layers:

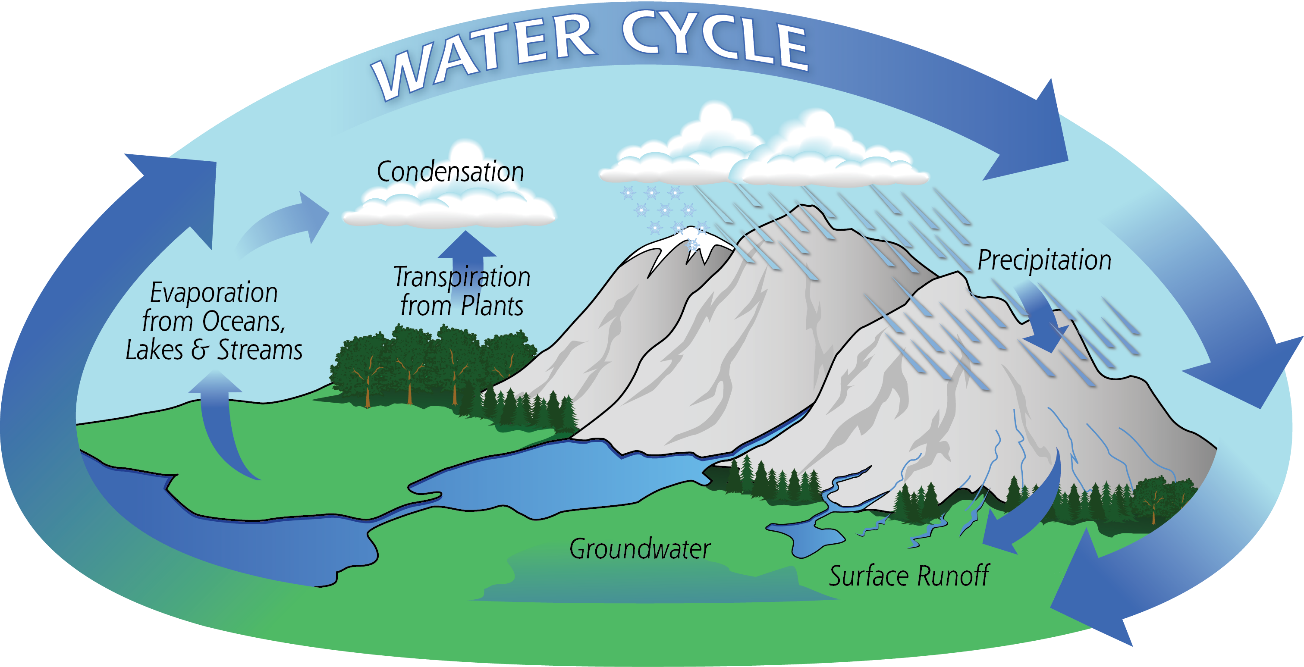
* + Crust:
  + Mantle:
  + Core:

Physical Layers:

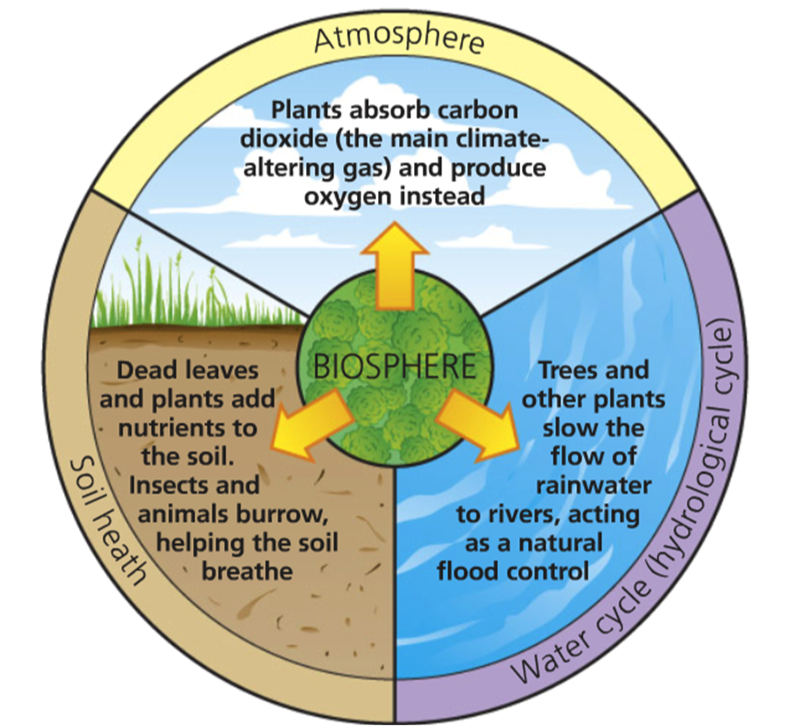
* Lithosphere:
* Asthenosphere:
* Mesosphere:
* Outer Core:
* Inner Core:
* The Atmosphere



* The Hydrosphere



* The Biosphere



* Closed System:
* Open System: