

## Land, Air, and Water Resources

### 1. Conserving Land and Soil

#### a. Key Concepts

- i. Three uses that change the land are agriculture, mining, and development.
- ii. Fertile soil is made up of several layers, including litter, topsoil, and subsoil
- iii. Poor soil management can result in three problems: erosion, nutrient depletion, and desertification. Fortunately, damaged soil can sometimes be restored.

#### b. Key Terms

- i. Development
- ii. Litter
- iii. Topsoil
- iv. Subsoil
- v. Bedrock
- vi. Erosion
- vii. Nutrient depletion
- viii. Fertilizer
- ix. Desertification
- x. Drought
- xi. Land reclamation

### 2. Waste Disposal and Recycling

#### a. Key Concepts

- i. Three methods of handling solid waste are burning, burying, and recycling. Each method has advantages and disadvantages.
- ii. One way to help solve the solid waste problem is to practice the “three R’s”--reduce, reuse, and recycle.
- iii. Hazardous wastes that are not disposed of in carefully designed landfills may be incinerated or broken down by living organisms. Liquid wastes may be stored in deep rock layers.

#### b. Key Terms

- i. Municipal solid waste
- ii. Incineration
- iii. Leachate
- iv. Sanitary landfill
- v. Recycling
- vi. Biodegradable
- vii. Composting
- viii. Hazardous waste

### 3. Water Pollution and Solutions

#### a. Key Concepts

- i. Fresh water is scarce because about 97 percent of the water on Earth is salt water.
    - ii. Wastes produced by households, agriculture, industry, and mining can end up in water.
    - iii. Keeping water clean requires proper sewage treatment, the reduction of pollutants, and the effective cleanup of oil and gasoline spills.
  - b. Key Terms
    - i. Groundwater
    - ii. Pollutant
    - iii. Sewage
    - iv. Pesticide
    - v. Sediment
- 4. Air Pollution and solutions
  - a. Key Concepts
    - i. The major sources of smog are emissions from vehicles. Acid rain is caused by the emissions from power plants and factories that burn coal and oil.
    - ii. Some indoor air pollutants only affect people who are sensitive to them. Other indoor air pollutants can affect anyone.
    - iii. The key to reducing air pollution is to control emissions.
  - b. Key Terms
    - i. Emissions
    - ii. Photochemical smog
    - iii. Ozone
    - iv. Temperature inversion
    - v. Acid rain
    - vi. Radon
- 5. Global Changes in the Atmosphere
  - a. Key Concepts
    - i. A major cause of the ozone hole is a group of gases called CPCs, or chlorofluorocarbons.
    - ii. Human activities that increase carbon dioxide levels may add to the greenhouse effect.
  - b. Key Terms
    - i. Ozone layer
    - ii. Chlorofluorocarbon
    - iii. Greenhouse effect
    - iv. Global warming