

Environmental Issues

Section 6-2

Air Pollution

Key Idea: Air pollution causes respiratory problems for people, results in acid rain, damages the ozone layer, may affect global temperature.

Acid rain is precipitation that has an unusually high concentration of sulfuric or nitric acids, which is caused by pollution.

Global warming is the gradual increase in the average global temperature.

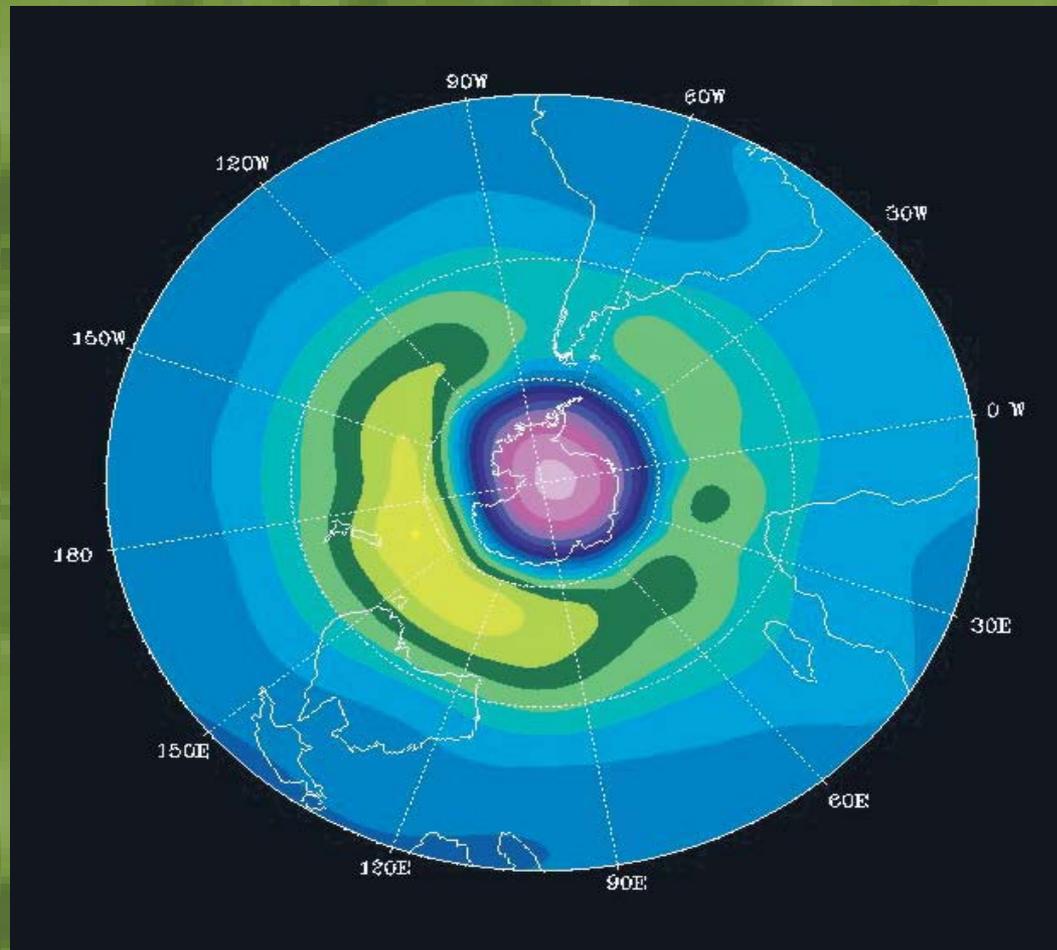
Air Pollution

- Acid rain damages forests and lakes
- The ozone layer protects life on Earth from the sun's damaging ultraviolet (UV) rays.
- The ozone layer has been damaged by CFC's.
 - Coolants in refrigerators and air conditioners and as propellants in spray cans.

Acid Precipitation



Ozone "Hole" Over Antarctica



Global Warming

Key Idea: Burning fossil fuels increases the amount of CO_2 in the atmosphere, which maybe responsible for **an increase in global temperature.**

The **greenhouse effect** is the warming of the surface and lower atmosphere of Earth that happens when greenhouse gases in the air absorb and reradiate heat.

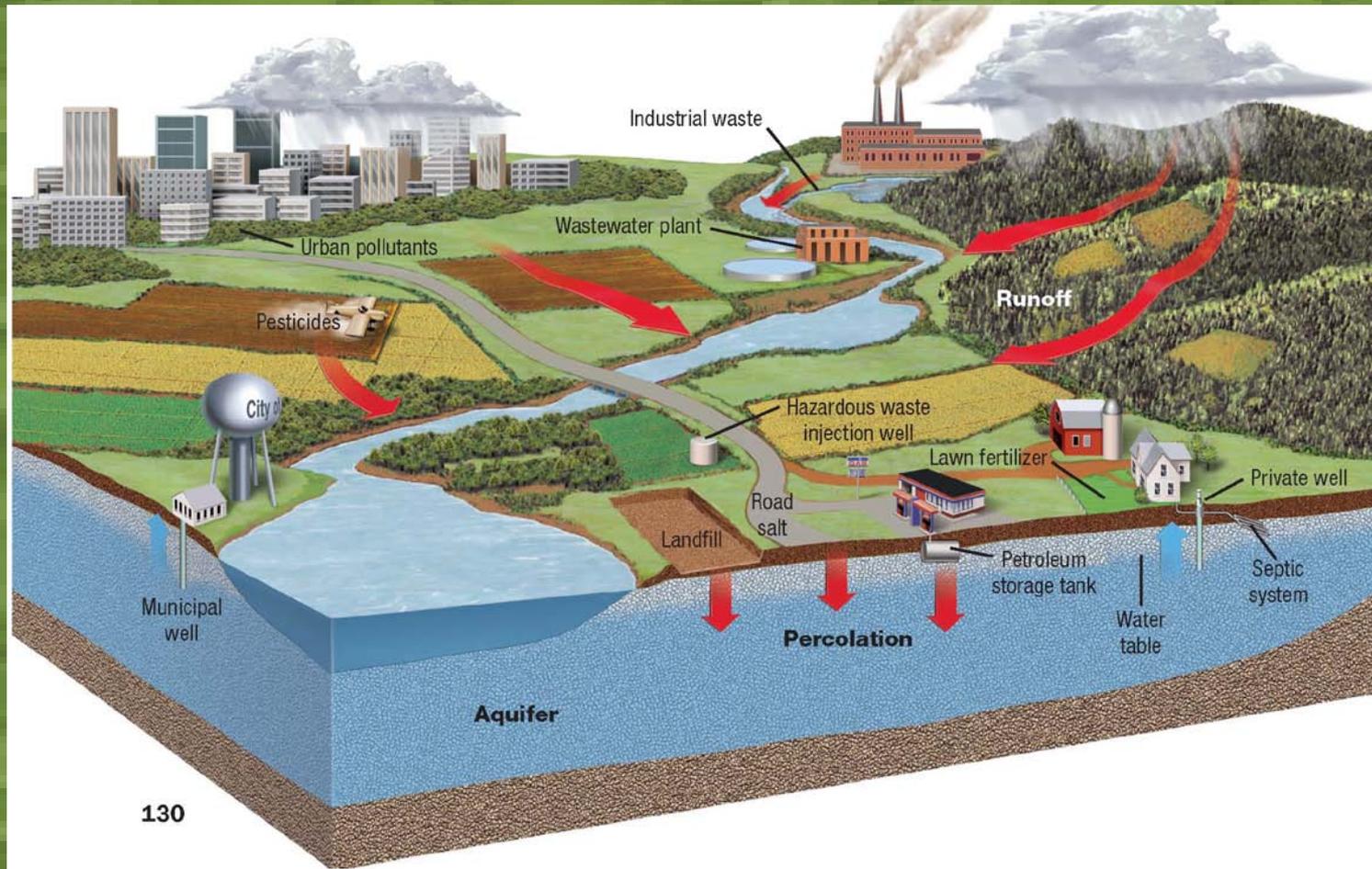
Global Warming

- Increase in temperature is caused by an increase in CO₂.
- Burning fossil fuels increases the amount of CO₂ in the atmosphere.
- Possible damage from global warming includes melting ice sheets, sea levels rise, destruction of coastal ecosystems, and changes in weather patterns.

Water Pollution

Key Idea: Water pollution can come from fertilizers and pesticides used in agriculture, livestock farms, industrial waste, oil runoff from roads, septic tanks, and unlined landfills.

Water Pollution



Water Pollution

- Fertilizers increase the amount of nutrients in the water leading to an excessive growth of algae.
- Algal blooms can deplete the oxygen in the water and then fish suffocate.

Soil Damage

Key Idea: Without **fertile soil**, we will be unable to grow crops to feed ourselves or the livestock we depend on.

Erosion is a process in which the materials of Earth's surface are worn away and transported from one place to another by wind, gravity, or water.

Soil Damage

- Roots from plants and trees help hold soil together and protect it from erosion.
- Sustainable agricultural practices can prevent erosion.
 - terracing
 - cover crop
 - crop rotation
 - contour plowing

Ecosystem Disruption

Key Idea: Ecosystem disruption can result in **loss of biodiversity, food supplies, potential cures for diseases, and the balance of ecosystems that supports all life on Earth.**

Deforestation is the process of clearing forests which causes habitat destruction.

Biodiversity is the variety of organisms in a given area.

Extinction is the death of every member of a species.

The word **sustain** means to maintain or keep in existence.

Habitat Destruction

- It causes more extinction and loss of biodiversity than any other human activities do.

Loss of Biodiversity

- Every species plays an important role in the cycling of energy and nutrients in an ecosystem.
- When a species disappears, a strand in a food web disappears.

Invasive Species

- Humans have disrupted ecosystems by intentionally and unintentionally introducing nonnative species.
 - Zebra mussels were introduced to the Great Lakes by ships traveling from the Black Sea. They clog the pipes of water treatment facilities costing millions of dollars.

Extinction

- When a species becomes extinct, we lose forever the knowledge and benefits that we might have gained from the species.