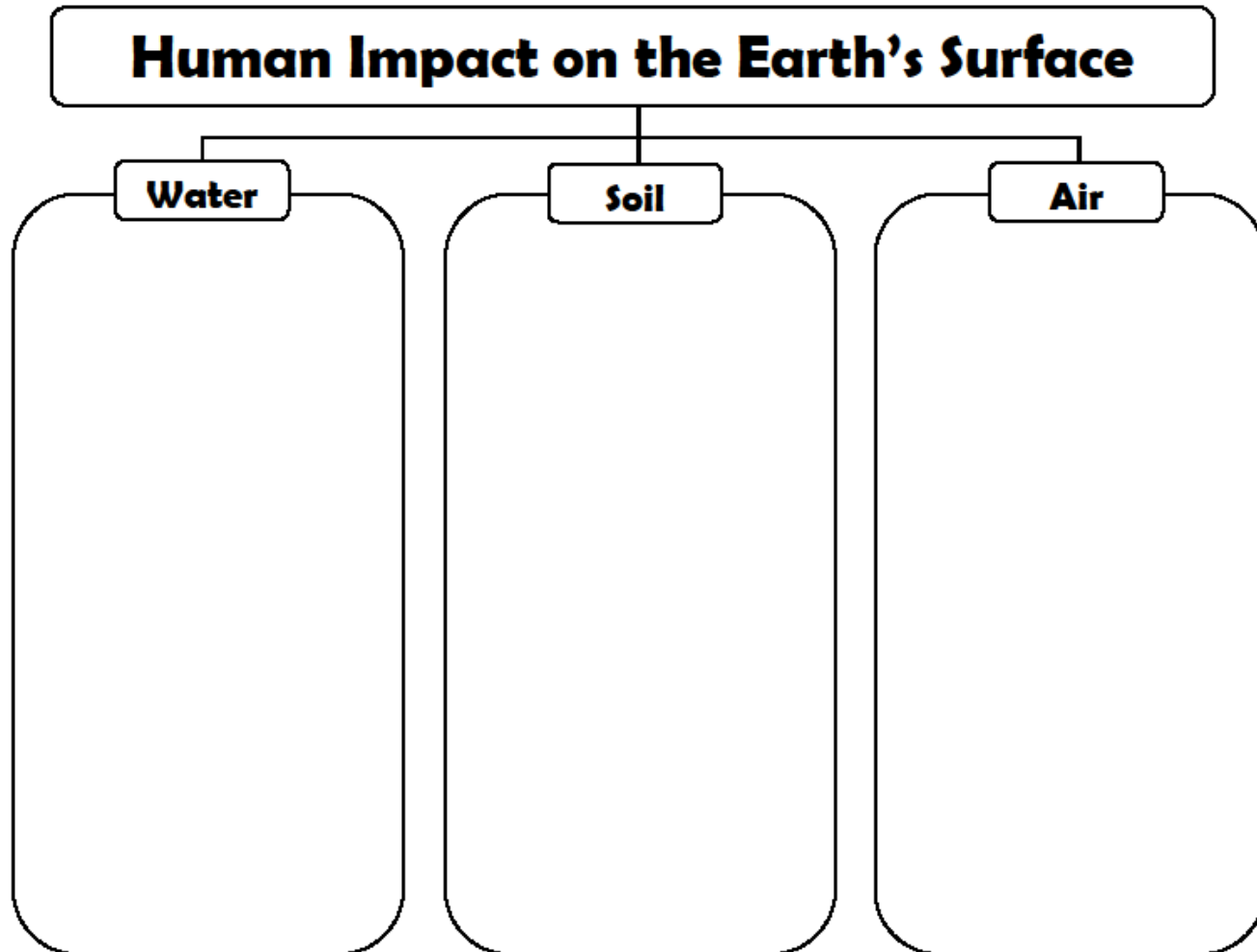


Use your Graphic Organizer to take Notes



Human Impact on Water

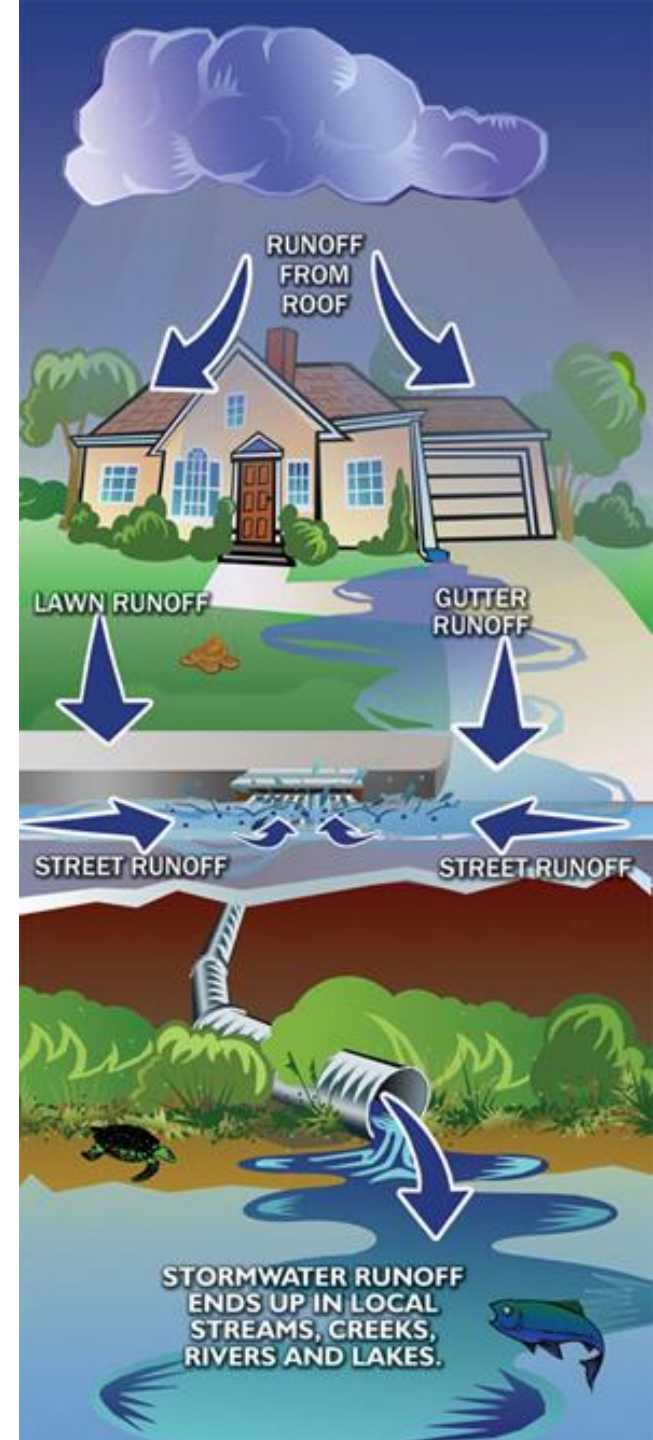


Water and Human Impact

Water that doesn't soak into the ground or evaporate, but flows across the Earth's surface is called runoff.

Runoff can cause significant erosion to the Earth's surface

Runoff

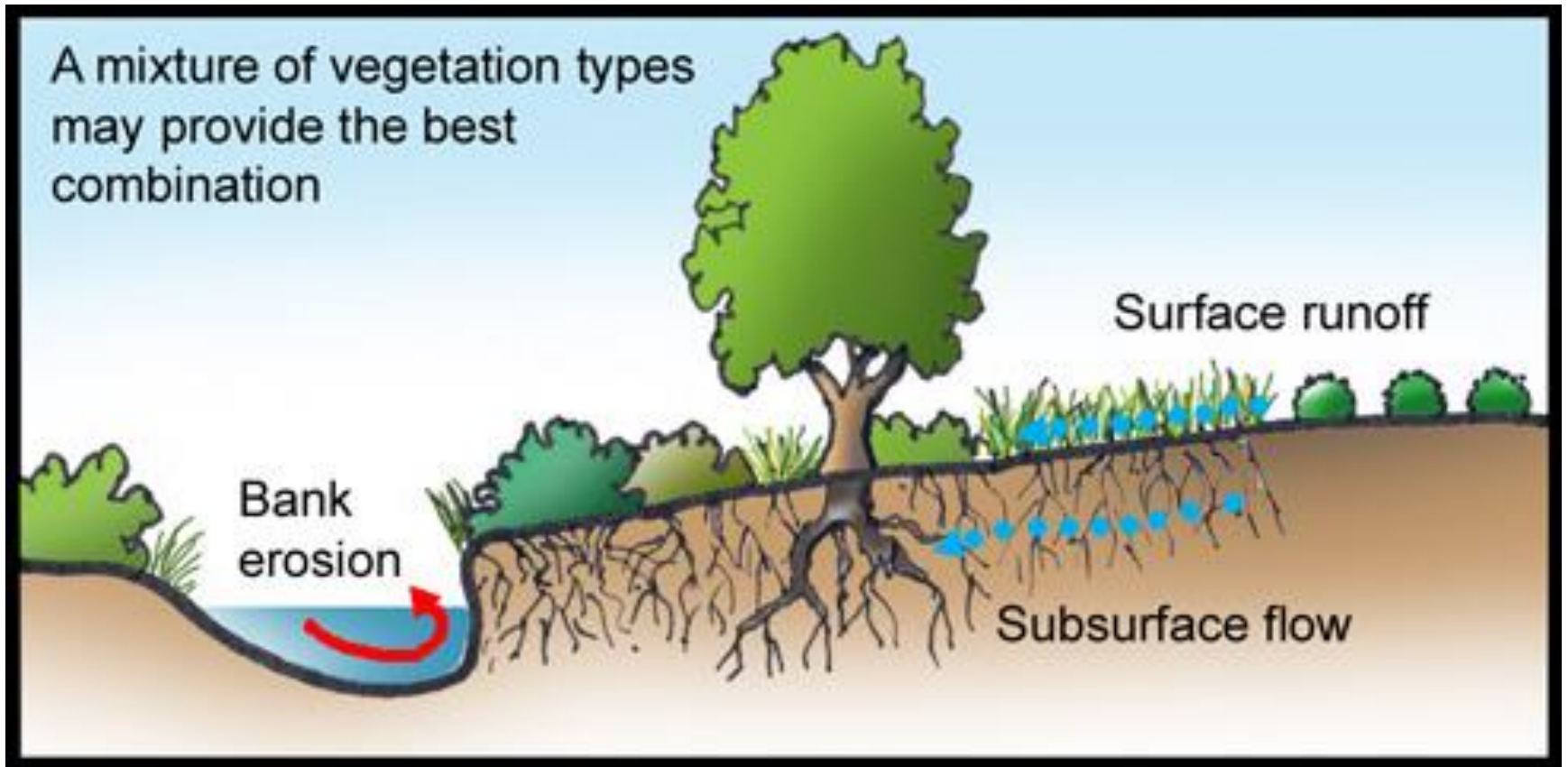


Water and Human Impact

Plants and their roots (vegetation) help prevent soil from being carried away.

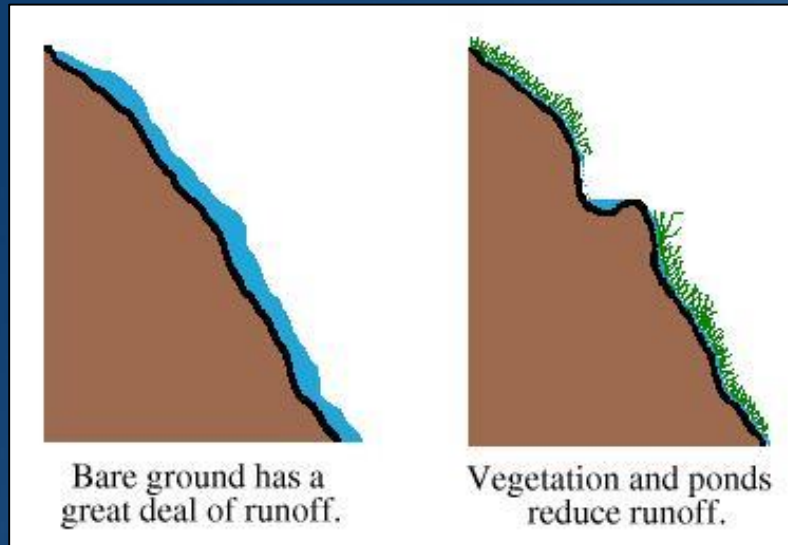


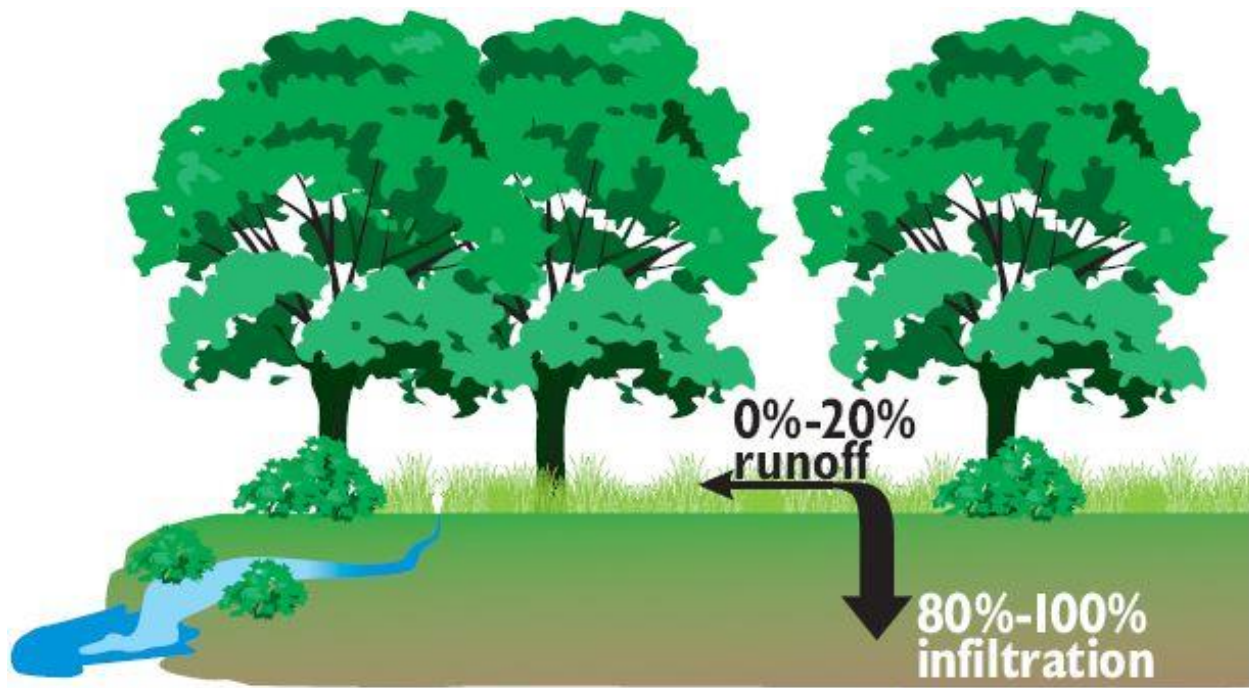
Plants Prevent Erosion



Water and Human Impact

Cutting down vegetation causes or increases runoff and erosion.







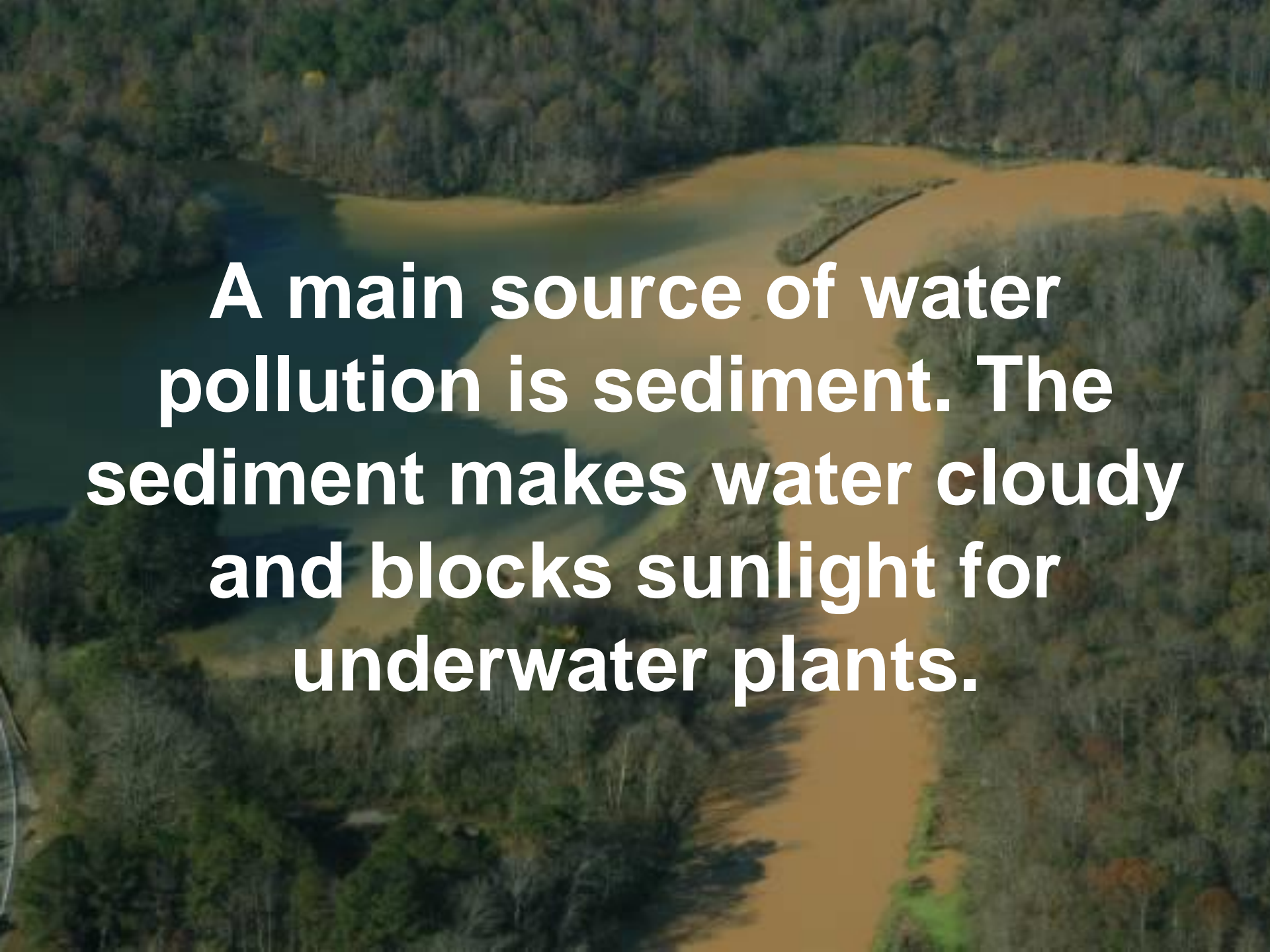
Wetlands

- **Protect water quality by trapping sediment and other pollutants that can get in the water**
- **Provide flood protection because they act like a sponge holding excess runoff after a storm**
- **Protect shorelines from erosion**

Water Pollution

All organisms need water. Polluted water can cause disease or bring death to many living things.



An aerial photograph of a river flowing through a forested area. The river is divided into two distinct sections: a darker, clearer section on the left and a much wider, turbid, brownish-yellow section on the right. A small, narrow island or sandbar is visible in the middle of the river, separating the two sections. The surrounding forest is dense with trees in various shades of green and brown, suggesting some autumn foliage. The text is overlaid in the center of the image, spanning across both the clear and turbid parts of the river.

A main source of water pollution is sediment. The sediment makes water cloudy and blocks sunlight for underwater plants.



Water Pollution

Human activities can increase the amount of sediment in rivers, lakes, and oceans.

Sediments can be carried from farm fields, construction sites, cleared forests, land used for livestock, etc.

Water Pollution

Farmers and home owners use Pesticides to kill pests which can run off into water.



Water Pollution

Fertilizers are used to help plants grow. Rain washes away some of the fertilizer into ponds, rivers, and streams. These fertilizers harm organisms.



Water Pollution

Metals and other substances released by mining and manufacturing can pollute water for many years.

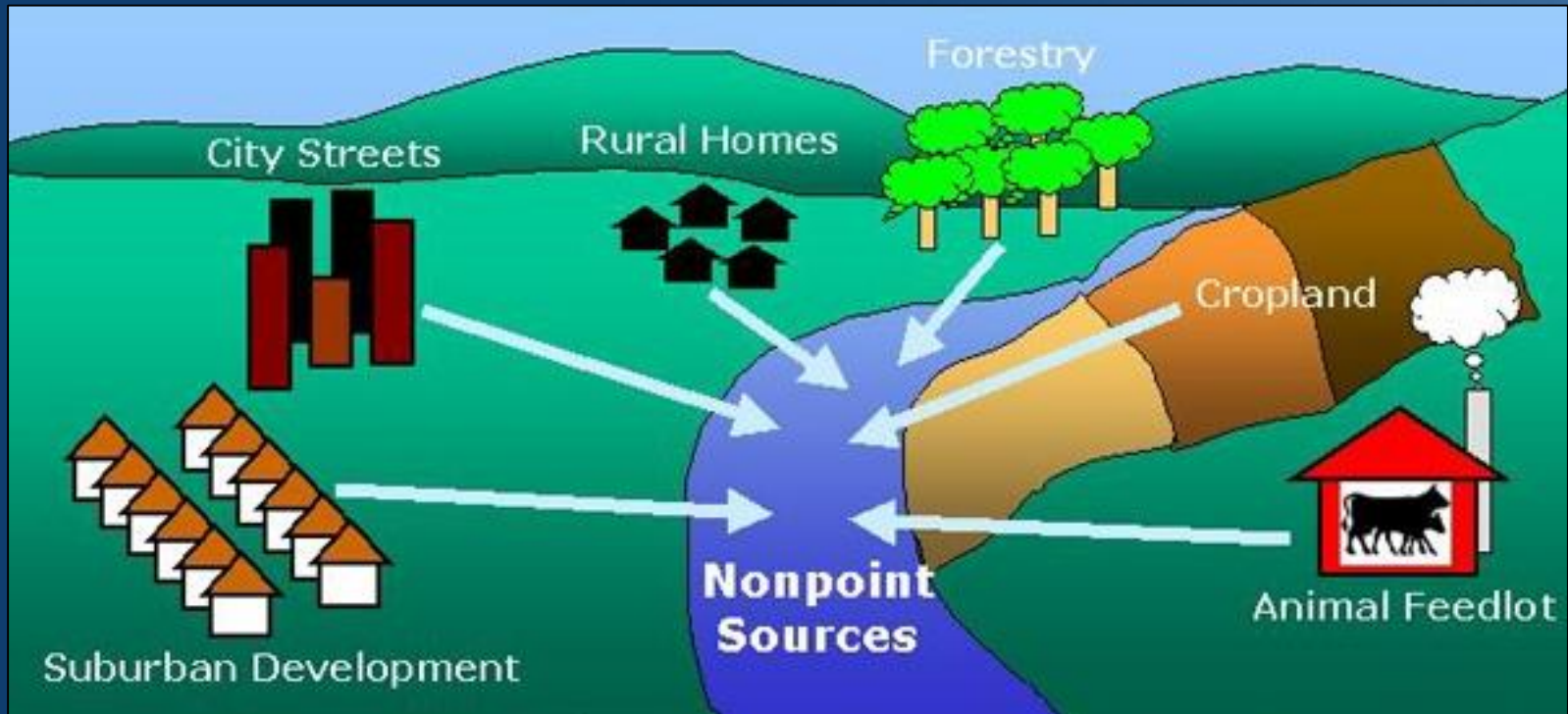


Water Pollution

Oil and gasoline can run off roads and parking lots into water sources when it rains.



Water Pollution





Water Pollution

Turn to an elbow partner and discuss some other ways in which humans contribute to water pollution.

Why is Conversation important?

The Earth's resources can be reduced or used up if humans don't use conservation strategies.



Conservation

**What are some
ways to conserve
water?**

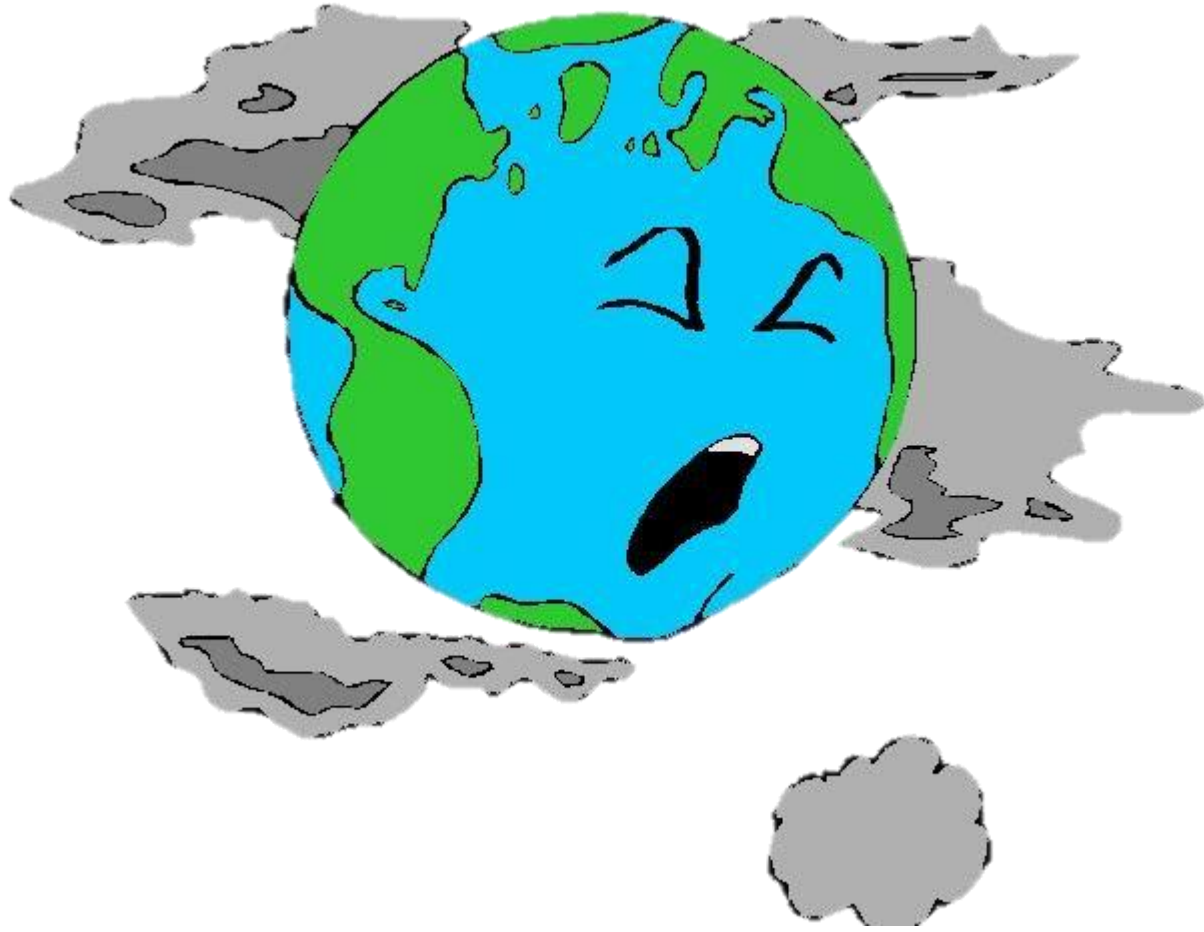
Water Conservation

- Reduce water pollution by treating (cleaning) water before it enters a stream, lake, or river.
- Dispose of chemicals properly so they do not make it to water sources
- Reduce the use of water
- Protect wetlands and forests which help water quality and protect from erosion

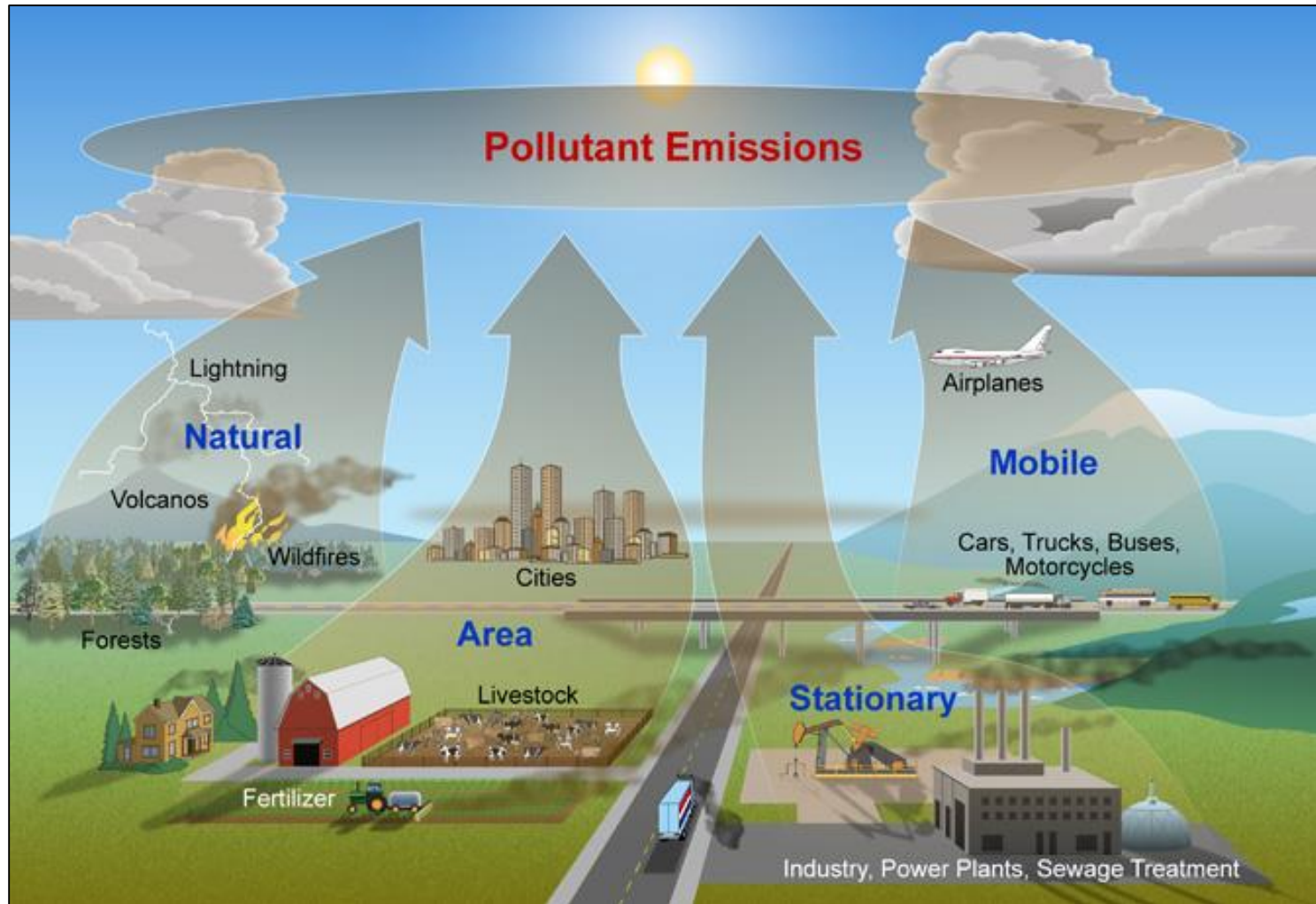
Human Impact on Air



Air pollution is the introduction of harmful materials into the Earth's atmosphere.



Causes of Air Pollution



Causes of Air Pollution

- Emissions (release) of pollutants from cars, trucks, buses, factories, power plants, etc. that use fossil fuels
- Dust from fields, construction sites, and mines contribute to air pollution
- Natural disasters such as forest fires and volcano eruptions contribute to air pollution



Emissions





Dust

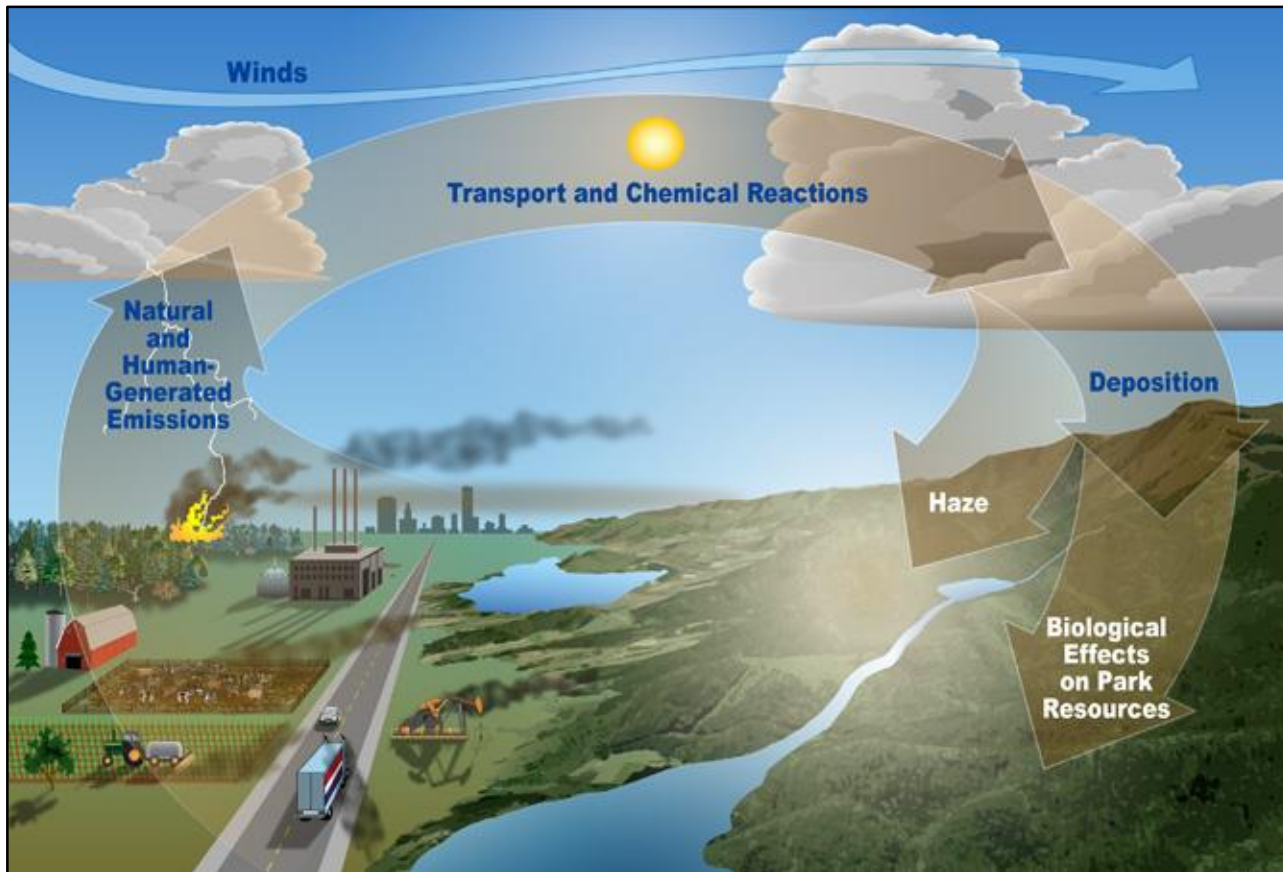




Natural Disasters



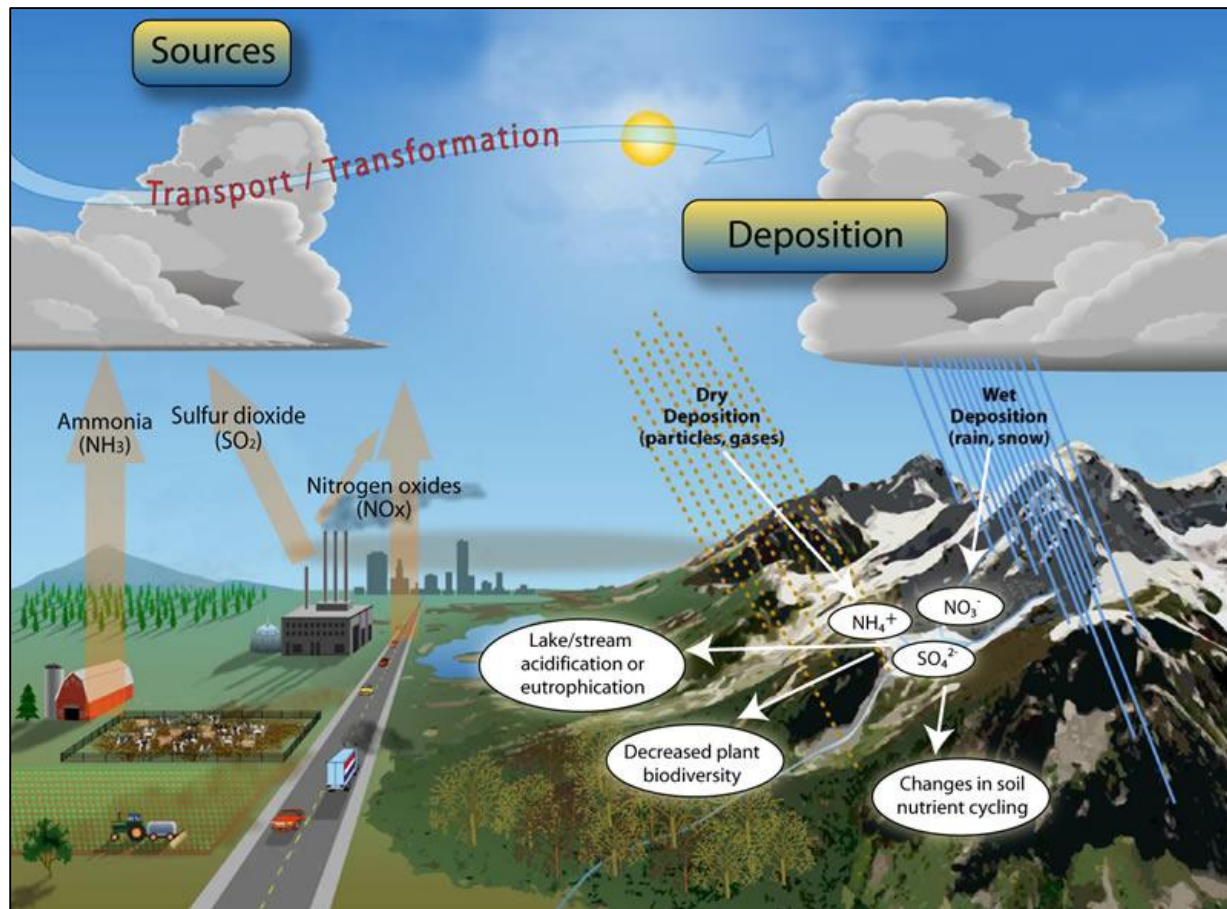
Air Pollution does not have boundaries. It is carried by winds and deposited over long distances.



Effects of Air Pollution

- Power plants, vehicles, and factories release pollutants that combine with moisture in the air to cause acid rain.
- Acid rain contaminates drinking water, harms plants and animals, and damages rocks and buildings.

Effects of Air Pollution: Acid Rain



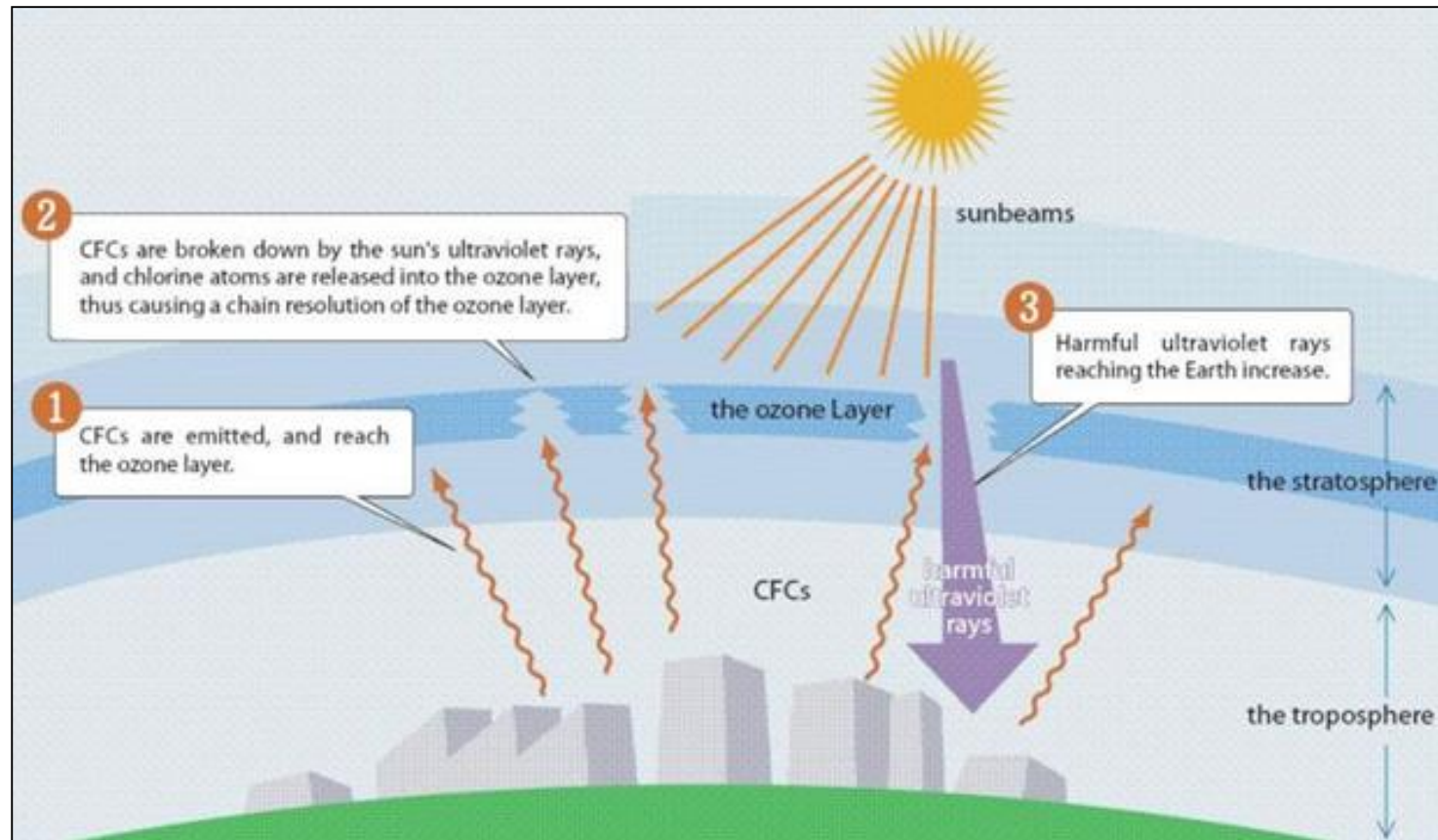
Effects of Air Pollution

- When fossil fuels (coal, oil, gas) are burned, they release pollutants and other greenhouse gases that are linked with global warming
- These gases get trapped in the atmosphere (called the greenhouse effect) and can cause changes in climate

Effects of Air Pollution

- Other pollutants that come from products such as aerosol cans, cooling systems, and refrigerator equipment (called CFC's) cause “holes” in the ozone layer.
- The ozone layer helps protect the earth from solar UV radiation (from the sun).

Effects of Air Pollution: Ozone Depletion



Air Conservation



Air Conservation

- Reduce emissions from vehicles, factories, power plants (new technology and government regulations can help)
- Reduce dust from construction sites, fields, and mining sites
- Reduce the use of fossil fuels and products that release CFC's
- Use Renewable energy sources (wind and solar power)