



Air Pollution

Environmental Education,
Middle School Program

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

Protecting Maine's Air, Land and Water

Air Pollution

- Air Pollution can impact your
 - Health
 - Environment
 - Nation's Economy



Clean Air Act

- The original Clean Air Act was established in **1963**. It established funding for the study and the cleanup of air pollution.
- In **1970** Congress created the Environmental Protection Agency (EPA) and gave it the primary role in carrying out the law.
- In **1990**, Congress revised and expanded the Clean Air Act,
 - Provided the EPA even broader authority to implement and enforce regulations reducing air pollutant emissions.
 - Placed an increased emphasis on more cost-effective approaches to reduce air pollution.



Clean Air Act

- By reducing air pollution, the Clean Air Act has led to significant improvements in human health and the environment in the U.S.
- Since 1970, the six commonly found air pollutants have decreased by more than 50 percent.



Criteria Air Pollutants

- Ozone
- Particle Pollution
- Carbon Monoxide
- Lead
- Sulfur Dioxides
- Nitrous Dioxides



How You Can Help Reduce Air Pollution?

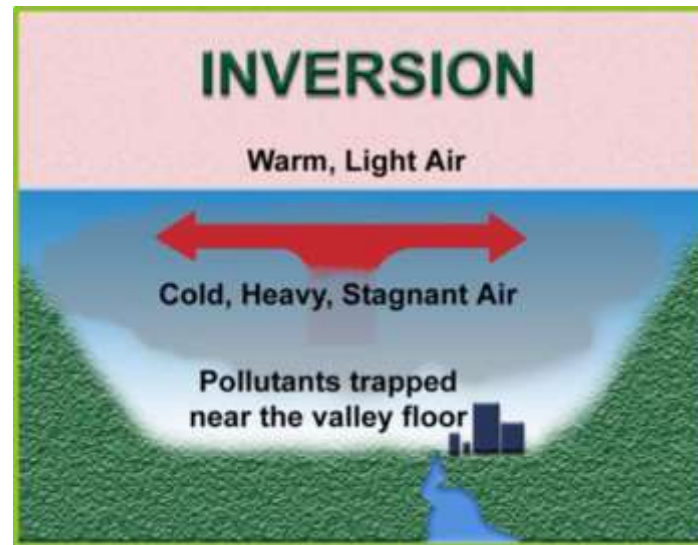
- Conserve Energy
- Drive Wisely / Ride Wisely

**REDUCE
REUSE
RECYCLE**



Thermal Inversions

Thermal inversion occurs when a layer of warm air settles over a layer of cooler air that lies near the ground. The warm air holds down the cool air and prevents pollutants from rising and scattering.



Thermal Inversion – Salt Lake Valley



A temperature inversion traps and fills the Salt Lake valley with thick smog outside Draper, Utah, on Jan. 31, 2017.

Photographer: George Frey/Getty Images



Donora, Pennsylvania Event



Introduction to Demonstration

- **Inversion in a Cup**
- **Objective:** To observe how temperature inversions are formed and discuss how inversions influence air pollution levels.





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