TeachEngineering.org - Free STEM Curriculum for K-12

Air Pollution

Visible Pollutants

Air pollution that can be seen with the naked eye

Particulate Matter – Volcanic ash pollen, dust, vehicle exhaust

Industrial Smog – Contains sulfur oxide and solid particles when fossil fuels are burned

Photochemical Smog –
Occurs when strong sunlight interacts with hydrocarbons and nitrogen oxides from cars and power plants

Invisible Pollutants

Air pollution that cannot be seen with the naked eye

Ozone (O₃) – From vehicle exhaust

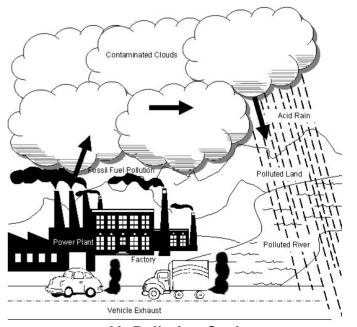
Carbon Monoxide (CO) – Vehicles exhaust, wood burning stoves, factory emissions

Sulphur Dioxide (SO₂) – Coal-burning power plants, oil refineries



Photochemical Smog

Image source: http://www.epa.gov/airnow/health/smog.pdf



Air Pollution Cycle

Air Pollution Prevention

Decrease Energy Use – Turn off lights when not in room, recycle

Drive Less – Ride your bike, walk, carpool, take the bus

Engineering Techniques – Catalytic converters in cars reduce vehicle emissions; scrubbers in power plants and factories remove pollutants from emissions before they are released into the environment; design alternative energy sources such as wind, solar and hydropower