Air Pollution WebQuest   adapted from: http://crescentok.com/staff/jaskew/isr/webquest/questpollute.htm

Task 1: Air Pollution

Air pollution is a broad term applied to all physical (particulate matter), chemical, and biological agents that modify the natural characteristics of the atmosphere.

Air Pollutants are classified as either Primary or Secondary. A Primary air pollutant is one that is emitted directly to the air from a given source. Carbon monoxide is an example of a primary air pollutant because it is produced as a byproduct of combustion.

A Secondary air pollutant is formed in the atmosphere through chemical reactions involving primary air pollutants. The formation of ozone in photochemical smog is an example of a secondary air pollutant.

The atmosphere is a complex, dynamic and fragile system. Concern is growing about the effects of air pollutant emissions in a global context, and the inter-linkage of these emissions with global warming, climate change and stratospheric ozone depletion.

This task provides information about the causes and effects of air pollution.

Use this air pollution webpage to answer the following questions.

1. Worldwide, how many people are estimated to die each year due to air pollution?

2. In what country and year did the worst short-term civilian air pollution event occur?

3. How many casualties occurred in the worst single incident of air pollution to occur in the U.S.?

4. What name is used to indicated all sources of pollution caused by "human activity"?

5. All contaminants of the air can be divided into two groups. What are they?

6. What do the letters TSP stand for?

7. Both the PM10 and PM2.5 units refer to what characteristic of atmospheric particles?

8. What group of air pollutant gases destroy the stratospheric ozone layer?

9. What group of air pollutant gases causes acid rain?

10. Two pollutants sometimes found in shower water mist are damaging to inhale. What are they?

11. How many lung cancer deaths are estimated annually in the U.S. by second-hand tobacco smoke?

12. How do pets contribute to indoor air pollution?

Task 2: Noise Pollution

Noise pollution is unwanted man-made sound that penetrates the environment. Noise pollution can be caused by many sources including highways, vehicles, police cars, ambulances, factories, concerts, music, air-conditioners, engines, machine, aircraft, helicopters, alarms, public address systems, industrial development and construction work. In general, noise pollution refers to any noise irritating to one's ear which comes from an external source. The word "noise" comes the Latin word "nausea" meaning seasickness.

This task shows how sound can become noise pollution. Use this noise pollution webpage to answer the following questions.

1. How does military SONAR kill marine mammals?

2. What is infrasonic sound?

3. What type of noise pollution escalated rapidly in the late 1990s?

4. What "urban legend" is mentioned in the reading?

5. What authorities are usually responsible for protecting against noise?

6. What two US cities have a law allowing impounding of cars with loud stereos?

7. What percentage of people bothered by noise will file an official complaint?

Conclusion to the WebQuest:

There is no question that preventing pollution and protecting the environment costs a lot of money. US industries spend billions of dollars each year to meet EPA air and water pollution standards; cars and trucks have increasingly more expensive modifications to meet gas milage and emission standards; environmentalists continually block oil exploration and logging operations in wilderness areas; and no nuclear powerplants have been built in the US in over twenty five years. The combination of government regulations and protests by environmentalists makes fewer jobs available and significantly increases the price of just about all consumer goods, including food, gasoline, and electricity.