

Lesson 7 - Air Pollution Awareness Poster

Purpose - Create a poster that outlines the causes, effects, and solutions to air pollution. (If we finish early

▶ What's in the air you breathe? - Amy Hrdina and Jesse Kroll

▶ London cleaned up its air pollution. Delhi can too.

Test Review - Show the test so students know what to study.

Warm up - Watch - Background overview

a. What is the local source of pollution? (3 min)

2. What is a poster (or infographic)? Explain - What is an "infographic?" An infographic is like a poster, usually online, and attempts to support information (data) with connected pictures. Example - [Air Quality](#) infographic. Answer these questions about the Air Quality infographic.

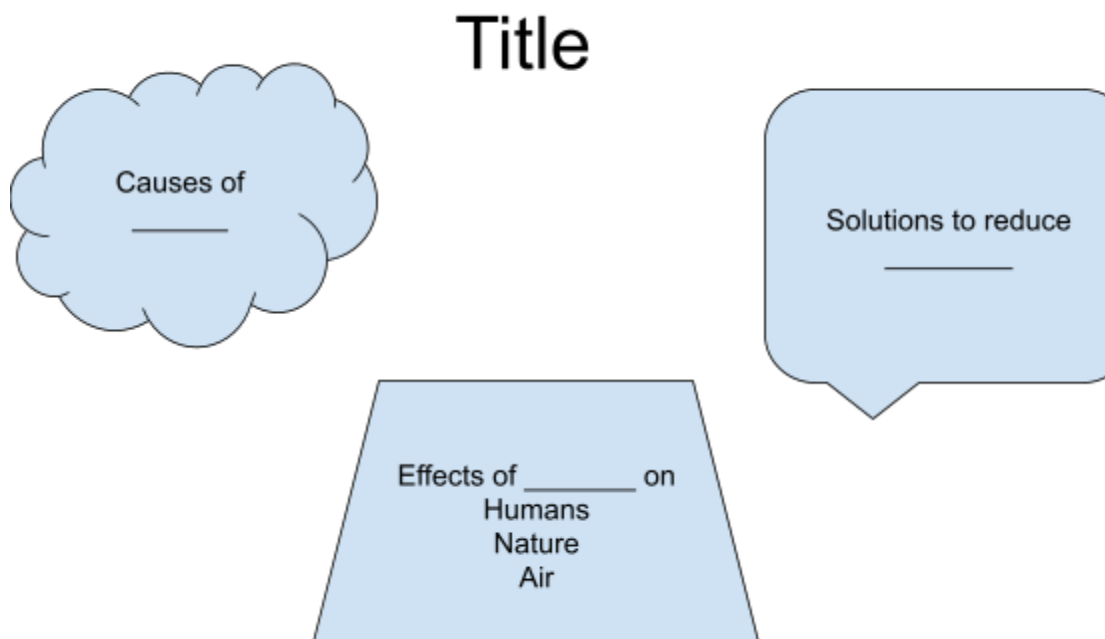
Example - See here.



3. Assign topics randomly students. Work alone OR in a group of 2.
 - a. Smog
 - b. Particle Pollution (particulate matter)
 - c. Ozone
 - d. Carbon Dioxide
 - e. Nitrogen Dioxide
 - f. Acid Rain

Option - you can create the poster in any language.

4. Poster Needs...(Model this on the projector)
 - a. What is the cause of the problem?
 - b. What are the effects of that pollution to humans, nature, and air?
 - c. What are possible solutions to reduce air pollution?
 - d. Pictures - Have at least 1 picture for each idea you put.



Share posters with the class if students finish quickly.

Air Particle Pollution (extra article if needed)

<p>Air pollution affects everyone. It comes in various forms including gases, ozone, and particulate matter. Short-term health effects from can result in throat and eye irritation as well as difficulty breathing. Longer exposure to particulate pollution can result in chronic health concerns, such as cancer and damage to the body's immune, neurological, reproductive, and respiratory systems.</p>	<p>What health concerns are caused by particulate pollution?</p>
<p>Those most susceptible (at risk) people include the elderly (old people), children, and people with asthma. There are guidelines in place to alert people to days during which the air pollution levels may be high.</p>	<p>What kind of people have bigger risks from air pollution?</p>
<p>The major sources of particulates to the air you breathe include coal and oil burning power plants, diesel engines, and wood-burning fireplaces. Natural sources of particulate matter include volcanic ash, pollen, and dust. The amount of particulate matter in the air can be measured. One technique uses a device that collects particles on a filter strip and periodically shines light through the strip to record the difference in light transmittance. This difference correlates to the particle mass collected over a period of time. You will use a similar technique.</p>	<p>What are common sources of particle pollution in air?</p>
<div data-bbox="142 1365 730 1785"> <p>The diagram illustrates the relative sizes of various particles. A thick grey line represents a human hair with a diameter of 50-70 microns. A small cluster of red dots represents PM2.5 particles, which are less than 2.5 microns in diameter. A larger cluster of blue dots represents PM10 particles, which are less than 10 microns in diameter. A pile of yellowish grains represents fine beach sand, with a diameter of 90 microns. Labels with arrows point to each of these elements.</p> </div> <div data-bbox="812 1270 1047 1669"> <p>Particulate matter consists of a mixture of particles ranging from large particles such as smoke, dust, and pollen to smaller ones from vehicle exhaust and coal-fired plants.</p> </div>	<p>How does PM 2.5 compare in size to a human hair?</p>