My NASA Data - Interactive Models

Criteria Pollutants

Grade Band

- 6-8
- 9-12

Time

- 50 minutes

Directions

Click the button below to access the Criteria Pollutants Interactive Model.

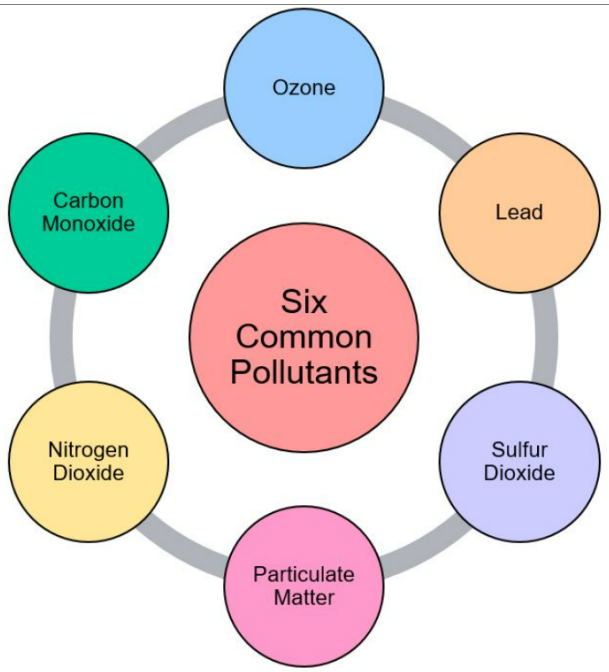
Six Common Pollutants

The Clean Air Act requires EPA to set national ambient air quality standards (NAAQS) for specific pollutants to safeguard human health and the environment. These standards define the levels of air quality that EPA determines are necessary to protect against the adverse impacts of air pollution based on scientific evidence. EPA has established standards for six common air pollutants, which are referred to as “criteria” pollutants.

- **Carbon monoxide (CO)**
- **Lead (Pb)**
- **Nitrogen dioxide (NO_2)**
- **Ozone (O_3)**
- **Particulate matter (PM), and**
- **Sulfur dioxide (SO_2)**

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Image Credit: My NASA Data



CLICK HERE

Teacher Note

Teachers who are interested in receiving the answer key, please complete the Teacher Key Request and Verification Form. We verify that requestors are teachers prior to sending access to the answer keys as we’ve had many students try to pass as teachers to gain access.

NGSS Three Dimensional Learning

NGSS Disciplinary Core Ideas

- ESS2A: Earth Materials and Systems
- ESS3C: Human Impacts on Earth Systems

Crosscutting Concepts

- Stability and Change

Science and Engineering Practices

- Developing and Using Models
- Analyzing and Interpreting Data

Learning Objectives

- Review the six criteria pollutants for which the EPA has established standards for.

- Differentiate between the pollutant sources, their health impacts, and their application to Earth Science.
- Describe what an aerosol is and its impact on the Earth System.

Essential Questions

1. What are the different sources of the six criteria pollutants?
2. How does air pollution affect human health?
3. Why does NASA study air pollution?
4. What are aerosols and what are their impact on the Earth System?

Google Docs Interactive Files

Guide to Using Google Forms with My NASA Data

Google Forms Interactive Files

Student Form