

SUGGESTED SKILL

 Scientific Experiments

4.E

Explain modifications to an experimental procedure that will alter results.



AVAILABLE RESOURCES

- Classroom Resource > [AP Environmental Science Teacher's Guide](#)
- The Exam > [Chief Reader Report 2018, Q4](#)
- The Exam > [Student Performance Q&A 2016, Q3](#)
- The Exam > Samples and Commentary (2018, Q4, 2016, Q3)

TOPIC 7.1

Introduction to Air Pollution

Required Course Content

ENDURING UNDERSTANDING

STB-2

Human activities have physical, chemical, and biological consequences for the atmosphere.

LEARNING OBJECTIVE

STB-2.A

Identify the sources and effects of air pollutants.

ESSENTIAL KNOWLEDGE

STB-2.A.1

Coal combustion releases air pollutants including carbon dioxide, sulfur dioxide, toxic metals, and particulates.

STB-2.A.2

The combustion of fossil fuels releases nitrogen oxides into the atmosphere. They lead to the production of ozone, formation of photochemical smog, and convert to nitric acid in the atmosphere, causing acid rain. Other pollutants produced by fossil fuel combustion include carbon monoxide, hydrocarbons, and particulate matter.

STB-2.A.3

Air quality can be affected through the release of sulfur dioxide during the burning of fossil fuels, mainly diesel fuels.

STB-2.A.4

Through the Clean Air Act, the Environmental Protection Agency (EPA) regulated the use of lead, particularly in fuels, which dramatically decreased the amount of lead in the atmosphere.

STB-2.A.5

Air pollutants can be primary or secondary pollutants.