

Types of Air Pollution

Primary Pollutants

- **Primary pollutants** enter the atmosphere directly, and are caused by either natural causes or human activity.
- For example, greenhouse gases, coals, fossil fuels, and volatile organic compounds are all pollutants that go up into the air directly.

Study Tip

Remember that primary pollutants affect the atmosphere directly, and secondary pollutants always involve chemical reactions before going into the atmosphere.

Secondary Pollutants

- **Secondary pollutants** are created by chemical reactions that take place in the atmosphere.
- Photochemical smog forms when sunlight reacts dangerously with car exhaust in the atmosphere.
- One of the major secondary pollutants is **ozone**, which is created when nitrogen oxide in the atmosphere reacts with sunlight.



Due to nitrogen oxides, the air can often take on orange-brown colors.

Concept Check

- What is the difference between primary and secondary pollutants?
- Which do you think are more harmful? Why?