

## Combustion



*Essential Question: Other than heat, what are the outputs of combustion?*

### Overview

A major source of air pollution is combustion—the process of burning. In this activity, you will investigate what happens to a variety of materials as they burn.

### Materials

For the class:

- 1 small bottle of turpentine
- 1 box of kitchen matches
- access to water

For each group:

- 1 600-mL beaker
- 1 pair of crucible tongs
- 1 aluminum pie pan
- 1 3-mL pipette
- 2 cotton balls
- 2 wads of wool
- 2 wads of colored newspaper

### Safety

Wear your goggles and lab apron. Follow standard safety rules for using glassware or working with matches. Tie back long hair, and tie back or remove any article of clothing or jewelry that can hang down and touch chemicals or flames. Never taste anything involved in an experiment and never directly smell the source of any vapor or gas.

### Procedure

1. Make a data table that lists the following: the material you burned, the color of the smoke when burned, the odor of the smoke, the observed products, and any other observations you can make.
2. Place a ball of cotton in the aluminum pan.
3. Use a match to set the cotton on fire. Use the crucible tongs to cover the pan and burning cotton with the 600-mL beaker. If the flame begins to go out before the cotton is fully burned, lift the edge of the beaker slightly to let in more air.