



## **Nasty! A Smoking Machine**

### **Materials**

- Nasty handout, page G-27
- Materials for Smoking Machine, page G-26

Have you ever heard anyone say that smoking is a nasty habit? Why do you think they say smoking is nasty? 🤔 *It smells bad.*

Let's find out if what they say is true. We're going to conduct an experiment to find out what happens when people smoke. We will do this by making a Smoking Machine.

♥ *Make a Smoking Machine according to the directions on page G-26. Be sure to do this outdoors or in a very well ventilated area. After you have completed the experiment, continue:*

You can see the nasty brown stuff on the cotton ball. That is tar, the same nasty brown stuff that builds up in the lungs of people who smoke! No wonder smokers cough so much and have trouble breathing sometimes. Nasty!

## Smoking Machine

Conduct this experiment in a large open area with good ventilation. Use the directions below to make a smoking machine.

### Materials:

- 1 clean, clear plastic dish-washing detergent bottle with pull-top cap
- 1 piece of tube, 2-3 inches long, about the width of a cigarette
- 1 cotton ball
- 1 cigarette
- 1 book of matches
- 1 small piece of clay
- 1 book of matches or lighter to light the cigarette

### To make the smoking machine:

1. Remove the pull-top from the cap of the bottle.
2. Put tubing into the cap hole and seal with clay.
3. Place tissue or cotton on one end of the tubing and the cigarette into the other end.
4. Screw on the cap.
5. Squeeze the bottle firmly to force the air out.
6. Light the cigarette.
7. Pump the bottle slowly and steadily.

### Conclusions:

The cotton ball and the bottle become discolored as a result of the smoking test, which demonstrates the way that tar builds up in the lungs.

