



[KidsHealth.org/classroom](http://KidsHealth.org/classroom)

## Teacher's Guide

This guide includes:

- Standards
- Related Links
- Discussion Questions
- Activities for Students
- Reproducible Materials

## Standards

This guide correlates with the following National Health Education Standards:

Students will:

- Comprehend concepts related to health promotion and disease prevention to enhance health.
- Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
- Demonstrate the ability to access valid information and products and services to enhance health.
- Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Your state's school health policies:  
[nasbe.org/HealthySchools/States/State\\_Policy.asp](http://nasbe.org/HealthySchools/States/State_Policy.asp)

Breathing - it's so easy, we can do it in our sleep. But the nearly silent, automatic process of breathing gives the body the gas exchange that it needs to live. With these discussion questions and activities, students will learn how the respiratory system performs this rapid, continuous work as well as what they can do to encourage good respiratory health.

## Related KidsHealth Links

### Articles for Teens:

#### Lungs and Respiratory System

[KidsHealth.org/teen/your\\_body/body\\_basics/lungs.html](http://KidsHealth.org/teen/your_body/body_basics/lungs.html)

#### Asthma

[KidsHealth.org/teen/asthma\\_basics/what/asthma.html](http://KidsHealth.org/teen/asthma_basics/what/asthma.html)

#### Allergies

[KidsHealth.org/teen/diseases\\_conditions/allergies\\_immune/allergies.html](http://KidsHealth.org/teen/diseases_conditions/allergies_immune/allergies.html)

#### Coping With Colds

[KidsHealth.org/teen/infections/bacterial\\_viral/colds.html](http://KidsHealth.org/teen/infections/bacterial_viral/colds.html)

#### Bronchitis

[KidsHealth.org/teen/infections/common/bronchitis.html](http://KidsHealth.org/teen/infections/common/bronchitis.html)

#### Pneumonia

[KidsHealth.org/teen/infections/bacterial\\_viral/pneumonia.html](http://KidsHealth.org/teen/infections/bacterial_viral/pneumonia.html)

#### Smoking

[KidsHealth.org/teen/drug\\_alcohol/tobacco/smoking.html](http://KidsHealth.org/teen/drug_alcohol/tobacco/smoking.html)

#### How Can I Quit Smoking?

[KidsHealth.org/teen/drug\\_alcohol/tobacco/quit\\_smoking.html](http://KidsHealth.org/teen/drug_alcohol/tobacco/quit_smoking.html)

## Discussion Questions

*Note: The following questions are written in language appropriate for sharing with your students.*

1. Pollutants are all around us, from secondhand smoke to car exhaust to factory emissions. What are some of the different ways that your respiratory system filters these pollutants from the air you breathe?
2. How does your body pull air in and push it out? Where does the air travel? How does oxygen move from the lungs to your blood?
3. Runny nose, sneezing, stuffy head - you know what it's like to have a cold. What other problems can affect the respiratory system? What can you do to keep your system healthy?



## Activities for Students

*Note: The following activities are written in language appropriate for sharing with your students.*

### A Tale of Two Molecules

#### Objectives:

Students will:

- Learn the path of oxygen through the respiratory system, from the air to the blood and tissues
- Learn the path of waste gases through the respiratory system, from the tissues and blood to the air
- Understand the challenges that asthma and smoking pose to the process of respiration

#### Materials:

- Computer with Internet access
- Pen and plain paper or computer word processing program and printer

#### Class Time:

30 minutes

#### Activity:

Read the articles on KidsHealth to learn how the respiratory system exchanges gases between the air and the body. Once you've read about it, you'll be ready to live it! First, let's say you're an oxygen molecule. In a few paragraphs, describe your trip as you go from being in the air to the respiratory system and, finally, a person's body tissues. Next, put it in reverse. As a carbon dioxide molecule, describe your trip from the body's tissues to the outside air.

#### Extensions:

1. You're the oxygen molecule again. Describe the obstacles you run into as you and your oxygen molecule friends are inhaled by a person having an asthma flare-up.
2. Now, oxygen molecule, you're entering even tougher territory: the lungs of a long-term smoker. Describe your experience in this harrowing trip.



## Where There's Smoke, There's...

### Objectives:

Students will:

- Get a clear picture of smoking's effects on various parts the body
- Increase their peers' awareness of these effects

### Materials:

- Computer with Internet access
- Printer
- Large paper (easel paper, poster board)
- Scissors
- Glue stick

### Class time:

1 ½ hour

### Activity:

Are you a talented artist? Or maybe your greatest masterpiece is a stick figure? People with all levels of artistic ability can make a collage. You'll be making a collage, but it won't be the kind you'd like to hang in your room!

Using the Internet, find pictures that show the effects of smoking on a person's respiratory system, appearance, and life expectancy. Collage the images on a large sheet of heavy paper. You and your classmates can display all of your collages on a bulletin board titled "Where There's Smoke, There's...."

### Extensions:

1. Find an image of a cigarette ad - online or in print - that includes people. Answer these questions: Does the ad show the effects of smoking? Do the activities depicted in the ad realistically reflect a smoker's lifestyle?
2. Create a magazine ad for cigarettes that shows the reality of smoking. You can draw it or create a collage of images. Be sure to include an appropriate slogan.

## Reproducible Materials

### Handout: The High Price of Smoking

[KidsHealth.org/classroom/9to12/body/systems/respiratory\\_handout1.pdf](http://KidsHealth.org/classroom/9to12/body/systems/respiratory_handout1.pdf)



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## The High Price of Smoking

Instructions: Sure, smoking is an expensive habit. But smokers don't pay just from their wallets. They pay the highest price of all: their health. Here's a list of health problems that smoking can cause. Write a brief description for each one.

Cancer

Emphysema

Heart disease

Osteoporosis

Fertility problems

Reduced athletic performance

Greater risk of injury and slower healing time

Greater risk of illness

