

# **Educational Guide on Lung Health for Elementary School Students**

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# Lung Health for Elementary School Students

## Instructional Guide

### INTRODUCTION

This educational guide is designed to help students:

- Develop a basic understanding of the lungs and asthma.
- Learn ways that they can support classmates with asthma.
- Develop a basic understanding of the lungs and the health effects of smoking.
- Learn ways that they can resist pressure to smoke.

This lung health curriculum features six lessons and a resource section designed with both the teacher and the student in mind. The lessons are specifically tailored for delivery to elementary school children in grades 3/4 and 5/6.

The curriculum may be treated as a learning module with one lesson per day or one to two lessons per week. Alternatively any section may be pulled and used as a stand-alone lesson. Time required for each lesson ranges from 45 to 60 minutes.

These lessons may be delivered as part of a science curriculum or a health education program. Though this curriculum is designed to meet relevant national educational goals and standards for elementary schools, it may be used effectively in other settings by healthcare or community workers. Because these lessons include role-playing exercises involving student interactions, some sections (esp. Section II and IV) may also be appropriate for social science classes.

Each section contains objectives, standards, guiding questions, key points, teaching points, a list of materials and resources for lesson preparation, a vocabulary list, detailed activities, and achievement indicators. The alphabetized vocabulary lists feature words appropriate for students in grades 3 through 6. Words that are more appropriate for students in grades 5 and 6 are indicated with brackets.

The Going Further section features a set of warm-up activities, suggestions for student role-playing skits, a full listing of the relevant National Educational Standards referenced in each section, as well as a list of print and online resources to help teachers and facilitators prepare and present the lessons. There are also sources of materials to distribute to students and parents.

## **Section I**

### **HEALTHY LUNGS**

One Lesson

#### **Lesson Objectives**

Students will be able to:

- Describe how the lungs and airways help us breathe.
- Identify the main parts of the lungs on a diagram.

#### **Curriculum Link(s) for This Lesson**

Relevant National Educational Goals

(Full text of national educational goals in Section VI - Going Further)

- NPH-H.K-4.1 and NPH-H.5-8.1 Health Promotion and Disease Prevention - Students will comprehend concepts related to health promotion and disease prevention.

#### **Guiding Questions**

- What do our lungs do that makes them so important? (bring air into the body and remove waste gases)
- What are the names of the parts of the body used during breathing? (nose, throat, airways, lungs, air sacs)
- What does each of those parts do to help you breathe? (guide, clean, and warm the air, bring the air to the blood)

#### **Key Points**

1. Lungs help us breathe by bringing air into the body and providing oxygen to the blood.
2. Airways [or bronchi] are breathing tubes that carry air in and out of the lungs.
3. The airways end in air sacs [or alveoli] where the blood takes in oxygen.

#### **Teaching Points**

1. Breathing is something most of us do without thinking.
2. During a normal day, we breathe almost 25,000 times.
3. The lungs bring air into the body and provide oxygen to the blood while removing the "waste gas" carbon dioxide.
4. Air first enters through the nose or mouth and from there passes through the throat.
5. Air travels from the throat to the windpipe [or trachea] and into the two lungs.
6. Inside the lungs air passes in and out through breathing tubes called airways.
7. The airway inside each lung branches out and looks like an upside-down tree.
8. The branches of each airway end in air sacs where the blood takes in oxygen from the air.
9. Diseases of the lungs that harm the airways or air sacs make it hard to breathe.

## **Vocabulary**

*Note: Words in brackets may be more appropriate for 5/6 graders.*

### **air**

The atmosphere all around us that we breathe, consisting mostly of nitrogen, about one-fifth oxygen, and a small percentage of carbon dioxide

### **air sacs**

Tiny thin-walled sacs that occur as clusters at the ends of the smallest branches of the airways and covered with small blood vessels called capillaries where the blood takes oxygen from the air and gives off carbon dioxide to the air

### **airways**

Branching tubes within the lungs that carry air to and from the air sacs.

### **[alveoli]**

The scientific name for air sacs.

### **breathing**

The action of pulling air into the lungs (inhaling) and then pushing the air out (exhaling).

### **[bronchi]**

The scientific name for airways.

### **carbon dioxide**

The body makes this gas when it uses oxygen and must send it back into the atmosphere because too much carbon dioxide in the lungs results in loss of consciousness.

### **lungs**

A pair of spongy, moist, bag-like organs located in the chest that help us breathe by bringing air into the body so the blood can obtain oxygen.

### **oxygen**

The part of air that passes from the lungs into the blood to allow life functions.

### **[trachea]**

The scientific name for windpipe.

### **windpipe**

The tube that carries air between the throat and the lung's airways.

## **Materials and Resources**

- Obtain a model of the lungs (see Resources in Section VI, Going Further), or obtain overhead equipment and use the labeled diagram of the lungs to make a transparency.
- Make copies of the handout *Your Lungs*.
- If your school or facility has access to the American Lung Association's Open Airways program, make use of the excellent models and posters of that program (see the resources in the Going Further section).

## Lesson Components

### **To Begin**

- 4 rules (listen, raise hand, learn, have fun)
- Introduce educator(s)
- Pass out folders/materials
- Warm-Up Exercise (if desired)
  - Time: Limit to 10 minutes.
  - Select from list in Section VI - Going Further
- Talk with the students about what they know about their lungs and how they breathe.

### **Activities**

#### **Grades 3 and 4**

Instructional Approach: Demonstration, hands-on

Time: 10-15 minutes

- Talk to the class about breathing.
- Explain how our lungs help us breathe.
- Show the class a model of the lungs (or diagram on overhead). Point out the key parts of the lung's anatomy (windpipe, airways, and air sacs) and describe what each part does.
- Let students come up to the front of the class to handle the model.
- Distribute the handout *Your Lungs*. Ask the students to write in names of the key parts of the lung, choosing the names from the list at the bottom of the page. Discuss the correct answers.

### **Activities**

#### **Grades 5 and 6**

Instructional Approach: Demonstration, hands-on

Time: 10-15 minutes

- Talk to the class about breathing.
- Explain how our lungs help us breathe.
- Show the class a model of the lungs (or diagram on overhead). Point out key parts of the anatomy, including the windpipe (trachea), airways (bronchi), and air sacs (alveoli), and describe what each part does.
- Let students come up to the front of the class to handle the model.
- Distribute the handout *Your Lungs*. Ask the students to write in names of the key parts of the lung, choosing the names from the list at the bottom of the page. Discuss the correct answers.

## Reflection and Closure

Ask students what they learned about breathing and lungs:

- What did you learn that helps you understand breathing better than you did before?
- What did you learn from handling the lung models?
- What new things do you feel you know about your own lungs?

**Wrap-Up Idea:** Students get in a circle. Pick one child to start, and that child throws a ball or, if available, a foam learning lung to another other. Every time a child catches it, he or she tells one thing they learned from the class.

## Achievement Indicators

- Students correctly label a diagram of the lungs.
- Students correctly describe the pathway of air from nose and mouth into and out of the lungs.

## **Section II - Lesson 1**

### **TROUBLED LUNGS - ASTHMA**

Two Lessons

#### **Asthma Lesson 1**

##### **Asthma Lesson 1 Objectives**

Students will be able to:

- Describe asthma as something that makes it hard for some people to breathe.
- Identify two signs [symptoms] of asthma.
- Describe an "asthma attack."
- Explain that asthma is not something that can be passed to other children like a cold.

##### **Curriculum Link(s) for This Lesson**

Relevant National Educational Goals

(Full text of national educational goals in Section VI - Going Further)

- NPH-H.K-4.1 and NPH-H.5-8.1 Health Promotion and Disease Prevention - Students will comprehend concepts related to health promotion and disease prevention.
- NPH-H.K-4.3 and NPH-H.5-8.3 Reducing Health Risks - Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

##### **Guiding Questions - Asthma Lesson 1**

- How does oxygen get from the air around you into your blood? (mouth/nose > throat > windpipe > airways > aveoli > blood)
- What happens during an "asthma attack?" (airways narrow and body makes extra mucus that can block the airways, breathing becomes labored and noisy, person is often frightened)
- What does contagious mean? (see Vocabulary below)
- Do you need to worry about "catching" asthma? (no, it's not contagious)

##### **Key Points - Asthma Lesson 1**

- Mucus keeps airways moist and clean of dust and germs, but too much mucus can cause breathing problems.
- Asthma is a condition that makes it hard to breathe because it increases the amount of mucus and makes airways smaller.
- People with asthma may cough or wheeze, feel short of breath, or have pain or a tight feeling in the chest.
- Asthma cannot be "caught" like a cold.

## Teaching Points - Asthma Lesson 1

- Asthma is a condition that narrows the airways, making it hard to get air in and out of the lungs.
- In asthma, the airways narrow with the swelling of the airway walls, tightening of airway muscles, and extra mucus. When the airways narrow, air gets trapped in the air sacs. All of this makes it very hard for air to pass through the airways.
- Many children have asthma.
- Usually it is not possible to tell if a person has asthma by the way the person looks or acts.
- Signs [symptoms] of asthma include coughing or wheezing, feeling short of breath, or having pain or a tight feeling in the chest.
- When people who have asthma have trouble breathing, it is called an asthma attack and it can take different forms. Sometimes during an asthma attack, people will cough and cough, or they might feel like they can't catch their breath, or they might feel like air is trapped in their lungs and they can't get it out, or they might have pain in their chest, or they might have very noisy breathing.
- Asthma is not contagious and cannot be passed from one person to another like a cold.

## Vocabulary - Asthma Lesson 1

*Note: Words in brackets may be more appropriate for 5/6 graders.*

### **asthma**

A narrowing of the airways in the lungs combined with extra mucus that makes breathing very difficult.

### **contagious**

Used to describe a disease or medical condition that can be caught from another person who has it... like a cold, but not like asthma.

### **mucus**

The thick fluid that normally serves to keep the linings of the air passages (windpipe and airways) moist and clean.

### **[symptoms]**

Signs that show a disease or medical condition is present.

### **wheezing**

A whistling sound caused by restricted breathing passageways.

## Materials and Resources - Asthma Lesson 1

- Obtain one unwrapped straw for each student.
- Make copies of the handout *Airways Narrowed by Asthma*.
- Obtain American Lung Association airway models

## Lesson Components - Asthma Lesson 1

### **To Begin**

- 4 rules (listen, raise hand, learn, have fun)
- Warm-Up Exercise (if desired)
  - Limit to 10 minutes.
  - Select from list in Section VI - Going Further

- Talk about famous athletes who have asthma and tie this to the idea that it is entirely possible to live a normal, active life with asthma as long as it is controlled by medicines and by avoiding "triggers." Some famous athletes who have asthma: Dennis Rodman (pro basketball player), Jerome Bettis (pro football player), Michelle Kwan (ice skater), Jackie Joyner-Kersey (Olympic Gold medal runner), Tom Dolan (American gold medal, swimming, 2000 Olympics).
- Ask the students how large they think their airways are. They should try to compare them to objects they are familiar with. For example, "I think my airways are the size of a paper towel tube, a pencil, a needle..."

**Activity - Asthma Lesson 1**  
**Grades 3 through 6**

Instructional Approach: Interactive demonstration

Time: 10-15 minutes

- Distribute the handout that shows how the airways are narrowed by asthma.
- Explain that asthma is a condition that narrows the airways and makes it hard to get air in and out of the lungs.
- Although many children have asthma, it is not always easy to tell who has it. Most of the time children with asthma can run and play just like their classmates.
- Explain that although children with asthma may cough or wheeze, they cannot pass on asthma to a classmate like a cold or flu. Asthma is not contagious.
- Ask if anyone in the class has asthma. Ask those students to describe how they feel when asthma bothers them. If no child has asthma, ask students to come to the front of the class and demonstrate some of the signs [symptoms] of asthma such as coughing and wheezing.
- To show students what it feels like to breathe with asthma, pass out the unwrapped straws and ask children to close their lips around the straw and breathe. Ask whether they found it easy to breathe this way (most students should say yes). Then ask the students to use their fingers to pinch the middle of the straw until it is almost closed and try breathing again. Ask whether their breathing was easier or harder (most students will say harder). Ask whether it would be easier or harder to breathe if the straw were filled with a thick liquid like a milkshake (most students will say harder). Explain that in people with asthma, the airways are narrowed like the pinched straw and filled with a thick liquid called mucus, making it harder to breathe.

**Reflection and Closure - Asthma Lesson 1**

Ask students what they learned about asthma:

- How can you tell if another person has asthma?
- What happens that makes breathing so difficult for a person with asthma?
- What did you learn from breathing through the pinched straw?
- What would you think if you heard another student wheezing?

**Achievement Indicators - Asthma Lesson 1**

- Students correctly describe two signs [symptoms] of asthma.
- Students correctly describe what happens in the airways when asthma is bothering a person.
- Students correctly explain that asthma is not contagious.

[Lesson 2 of "Troubled Lungs - Asthma" follows]

## **Section II - Lesson 2**

### **TROUBLED LUNGS - ASTHMA**

#### **Asthma Lesson 2**

##### **Asthma Lesson 2 Objectives**

Students will be able to:

- Explain that a person with asthma can usually exercise and play sports with no breathing problems, but that this person can suddenly start having great difficulty breathing.
- Name two things (triggers) that can make asthma worse.
- Identify two things that children can do to help control their asthma and stay healthy.
- Identify two ways to support a classmate who has asthma.

##### **Curriculum Link(s) for This Lesson**

Relevant National Educational Goals

(Full text of national educational goals in Section VI - Going Further)

- NPH-H.K-4.3 and NPH-H.5-8.3 Reducing Health Risks - Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.
- NPH-H.K-4.4 and NPH-H.5-8.4 Influences on Health - Students will analyze the influence of culture, media, technology, and other factors on health.

##### **Guiding Questions - Asthma Lesson 2**

- Why is life for a child with asthma sometimes a little more difficult than it is for other children? (they need to be constantly on the look out for triggers; they worry about asthma attacks)
- What can a child with asthma do to improve his/her chances of breathing easily? (take medicine, avoid triggers, visit doctor regularly)
- What should be done when a child with asthma has an "attack?" (they may need special help and classmates should get help from an adult)

##### **Key Points - Asthma Lesson 2**

- People with asthma can exercise and play sports like everyone else most of the time.
- When the airways narrow more than usual, asthma gets worse and a person has more trouble breathing.
- Certain things (triggers) can make asthma worse, including furry or feathered pets, colds and allergies, tobacco smoke, cold air, and playing hard.
- The first step that children can take to control their asthma and stay healthy is to stay away from the things that make their asthma worse.
- Children with asthma can take medicine to prevent, control or relieve attacks.

## Teaching Points - Asthma Lesson 2

- Certain things (triggers) can make asthma worse and make it harder to breathe. These things include allergens like mold, pollen from many kinds of plants, cockroaches, dust mites (tiny bugs that live in house dust), substances from furry or feathered animals, dust, and cigarette smoke as well as air pollution, car exhaust, strong smells from paint or cleaning products, and very cold air.
- Having a cold or flu can also make some children's asthma get worse.
- The airways of people with asthma are very sensitive, especially to things in the air. When asthma is not controlled with medicine, those things that make asthma worse (triggers) cause the airway walls to swell and mucus to increase. As this begins to happen, a person with asthma begins to have trouble breathing.
- Running and playing hard can make it harder for anyone to breathe. But sometimes children with asthma have a lot of trouble breathing when they play hard. These children may need to take a special medicine before they exercise.
- Because things that make asthma worse can't be avoided, people with asthma may need to take medicine. Children with asthma need to see a doctor to get the kind of medicine that is right for them.
- Children take medicine in different ways, including pills, inhalers, and nebulizers.
- Many children take medicine every day, even when they feel fine, to keep asthma from getting worse. These medicines are *controllers*, which reduce mucus and airway swelling to keep the airways open.
- Some children need to take medicine during or before they start playing hard to keep asthma from getting worse.
- After an asthma attack has begun, medicines called *relievers* provide quick relief and help to stop the symptoms by relaxing muscles around the airways and opening the airways.
- Different people use different medicines. Some use the controllers while others use relievers. They should not be shared.
- Children who are having a very hard time breathing because their asthma is worse may need special help. When this happens, classmates should get help from an adult.

### Important Point: What to Do in Case of Asthma Attack

#### Asthma Action Plan

- Relax, sit down.
- Stay calm, both the person with the asthma attack and the person staying with her or him.
- Get help - get an adult or call 911.
- Practice this action plan with different scenarios. Everyone with asthma should have an asthma management and action plan, which includes knowing your own triggers, symptoms, medications, and emergency plan and contacts. Discuss this plan with your doctor, parents, teachers, and school nurse.

## Vocabulary - Asthma Lesson 2

Note: Words in brackets may be more appropriate for 5/6 graders.

### [allergen]

Anything that can cause the body to have an allergic response, which is an unpleasant or even dangerous reaction of the body to some foreign substance. An asthma attack is a severe form of allergic response.

### controller

This is the type of asthma medicine that is used daily to keep the asthma from getting worse. It works by reducing mucus and airway swelling.

### dust mite

A very small eight-legged animal related to spiders, often found living in dust that can start an asthma attack if accidentally inhaled.

### inhalor

A tube-like device that provides a dose of asthma medicine through the mouth and into the lungs.

### mold

A fungus that grows on many surfaces, including old food and moist places, and produces particles that can start an asthma attack.

### [nebulizer]

A device used to spray tiny particles of asthma medicine into the lungs.

### pollen

Small particles, released into the air by plants, that can start an asthma attack when inhaled by a person with asthma.

### reliever

This is the type of asthma medicine used only when the symptoms are getting worse and there is the risk of an asthma attack. It quickly reopens the airways.

### spacer

A device that helps focus the direction of the asthma medicine when it is sprayed into the lungs by providing space between the dispenser and the throat so medicine doesn't bounce off back of throat

### trigger

A small thing that causes a large event to happen, as in the way inhaling pollen can start an asthma attack.

## Materials and Resources - Asthma Lesson 2

- Make copies of the handout *Find the Things That Make Asthma Worse* or *Things That Make Asthma Worse Word Search*.
- Obtain different types of asthma medicine for a demonstration (pills, inhalers, and nebulizers).
- Prepare additional guided discussion questions based on Additional Scenarios for Asthma *Guided Discussion* (see below).

## Lesson Components - Asthma Lesson 2

### To Begin

- 4 rules (listen, raise hand, learn, have fun)
- Point out that for most people with asthma, they only have trouble breathing some of the time. Ask the students what they think might make a person with asthma start having trouble breathing. What might make breathing easier for these people?
- Warm-Up Exercise: Pictionary with Asthma Triggers (playing this game is described in Section VI - Going Further).
  - Limit Pictionary to 20 minutes.
  - These Pictionary words consist of examples of triggers and how to control them (since often it is impossible to get away from a trigger): bugs, bug spray, dust, dog, flowers, trees, cold/flu, weather, smoke, cleaners, exercise, food, emotions, cat.
  - Discuss types of triggers at the end of the game:
    1. **Allergens** – pollen, mold and dust (keep plants outside, wash bed sheets weekly in hot water, vacuum carpets, few or no stuffed animals), pets (wash pets, keep pets outside, keep pets out of the asthmatics bedroom, clean cages), food allergies, cockroaches (eat only at the dining table, use roach traps).
    2. **Irritants** – tobacco smoke (don't smoke, ask people to smoke outside), air pollution, strong odors (buy odor-free shampoo & soap, buy hypoallergenic perfume and makeup), aerosol sprays (avoid).
    3. **Exercise** – take medication before exercise, do warm-up/cool-down exercises before/after.
    4. **Cold air, changes in weather and temperature** – wear a scarf, cover mouth areas.
    5. **Strong feelings** – stress, laughing, crying, anger, and other emotions (take a deep breath, stay calm, talk to an adult about your concerns or problems).
    6. **Having a cold or flu.**

### Activities - Asthma Lesson 2

#### Activity 1 - Grades 3 and 4

Instructional Approach: Interactive presentation

Time: 10 minutes

- Explain how people with asthma have sensitive airways and certain things make the airways narrow.
- Give a few examples of the kinds of things (triggers) that make asthma worse, writing the examples on the blackboard.
- Ask students to name other triggers that might make asthma worse. Write correct suggestions on the blackboard and explain more about them.
- Distribute *Things That Make Asthma Worse* Word Search and ask children to circle the names of things that can make asthma worse (the correct words are listed at the bottom of the page). Discuss the correct answers.

#### Activity 1 - Grades 5 and 6

Instructional Approach: Interactive presentation

Time: 10 minutes

- Explain how people with asthma have sensitive airways and certain things make the airways narrow.
- Give a few examples of the kinds of things (triggers) that make asthma worse, writing the examples on the blackboard.
- Ask students to name other triggers that might make asthma worse. Write correct suggestions on the blackboard and explain more about them.
- Ask students to think about things in the classroom that make asthma worse and add these items to the list. After everyone has given their ideas, add any other things that have not been suggested and explain how they make asthma worse.

- Distribute *Things That Make Asthma Worse* Word Search and ask children to circle the names of things that can make asthma worse (the correct words are listed at the bottom of the page). Discuss the correct answers.

### **Activity 2 - Grades 3 through 6**

Instructional Approach: Interactive discussion and demonstration and guided discussion

Time: 15 minutes

- Remind students about the triggers that can make asthma worse. Ask for ideas on how children with asthma can stay away from these things (don't have furry pets, keep away from cigarette smoke, don't go outside if it is very cold). Explain other things that children with asthma can do to stay healthy (see the doctor, take medicine).
- Talk about different kinds of asthma medicine (controllers - daily and relievers - when symptoms are moving toward an attack). Demonstrate how children take asthma medicine in different forms (show pills and demonstrate how nebulizers, inhalers and spacers are used).
- Present the scenario described below and use the questions that follow and other questions as appropriate to guide discussion about ways that classmates can support children who have asthma.

*Joshua is a third grader who has asthma. Most of the time he feels fine and doesn't want to be treated differently than other children. Joshua is supposed to take a special medicine before his physical education class and recess that allows him to run and play hard without bringing on an asthma attack. Sometimes other children tease him about having to take his medicine and call him a sissy.*

- *How do you think Joshua feels when they tease him?* (Answers might include embarrassed, angry, and reluctant to take his medicine.)
- *What could his classmates do to be nice to Joshua?* (Answers might include stop teasing him, remind him to take his medicine, include him in games.)

### **Additional Scenarios for Guided Discussion on Asthma - Grades 3 through 6**

Develop additional guided discussions based on the following scenarios to help students explore ways they can support children with asthma.

1. Monica has asthma and needs to take her medicine every day before lunch. Because she has to go to the nurse's office to get her medicine, she is always a few minutes late getting to the cafeteria. If when she gets to the cafeteria a little late there are no seats left with her class, she may have to sit with younger children she does not know.
2. All the children in class are supposed to take turns clapping the dust from blackboard erasers. Joshua has asthma. Chalk dust is one of the things that irritates his airways and makes his asthma worse.
3. Darius needs to take his asthma medicine before physical education class to keep his asthma from getting worse. He doesn't want to take his medicine because he is afraid his classmates will tease him or not want him on their team.
4. Kiera's science class wants to do a project that includes caring for a rabbit or hamster in the classroom for one month. Kiera has asthma, and being around furry animals makes it worse.

## **Reflection and Closure - Asthma Lesson 2**

Ask students what new things they learned about asthma:

- What happens when a person has an asthma attack?
- What kinds of things can make asthma worse or even trigger an asthma attack?
- What can people with asthma do to keep breathing normally?
- What can children with asthma do to stay healthy?
- What new things do they feel they know about their own lungs?

## **Achievement Indicators - Asthma Lesson 2**

- Students correctly describe three things that can make asthma worse.
- Students correctly describe one way to make breathing easier for a person having an asthma attack.
- Students correctly identify what people with asthma can do to keep breathing normally.

## **Section III**

### **TROUBLED LUNGS - TOBACCO**

One Lesson

#### **Lesson Objectives**

Students will be able to:

- Describe three health effects of smoking.
- Identify two harmful chemicals found in cigarettes.
- Identify three reasons for not smoking.
- Explain why people have trouble quitting smoking.

#### **Curriculum Link(s) for This Lesson**

Relevant National Educational Goals

(Full text of national educational goals in Section VI - Going Further)

- NPH-H.K-4.1 and NPH-H.5-8.1 Health Promotion and Disease Prevention - Students will comprehend concepts related to health promotion and disease prevention.
- NPH-H.K-4.3 and NPH-H.5-8.3 Reducing Health Risks - Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.
- NPH-H.5-8.6 and NPH-H.5-8.6 Setting Goals for Good Health - Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.

#### **Guiding Questions**

- Most children will know someone who smokes. Ask individuals why they think those people smoke. (they want to look "grown-up," they are addicted)
- What is that person doing to his/her body by smoking? (harming it in a variety of ways, becoming addicted)
- If you had to pick someone to race and you really wanted to win, would you prefer to race someone who smokes or someone who doesn't smoke? (smoking harms sports performance, so race a smoker)
- Why do you always hear that this person or that person is "trying to quit" smoking? (because the nicotine in cigarette smoke is highly addictive)

#### **Key Points**

- Smoking increases the risk for many diseases.
- Breathing smoke from other people's cigarettes (second-hand smoke) can also damage the lungs.
- Smoking hurts physical fitness, is unattractive, and wastes money.
- Smoking starts damaging the lungs as soon as you smoke your first cigarette.
- Cigarettes and other tobacco products contain chemicals (such as formaldehyde, cyanide, ammonia and nicotine) that damage the lungs.
- Nicotine is an addictive chemical that prevents people from stopping smoking.

## Teaching Points

- Cigarette smoking is bad for your health, and smokers have an increased risk for certain health problems.
- Increased risk means that a person who smokes has a greater chance of getting a certain disease than people who don't smoke.
- Smoking can damage the lungs and increase risk for lung cancer (when the airways and air sacs are narrowed or squeezed by the uncontrolled growth of cancer cells), emphysema, bronchitis, pneumonia, and more colds and flu.
- Smoking and smokeless tobacco (also called chewing tobacco, spit tobacco, or snuff) also increases risk for cancer of the mouth and voice box [larynx] as well as heart attack and stroke.
- Cigarette smoking kills at least 400,000 people in the United States each year. It would take three fully loaded jumbo jets crashing each day of the year with no survivors to reach the same number of deaths as those caused by smoking.
- Breathing smoke from other people's cigarettes (secondhand smoke) can also damage the lungs.
- Smoking makes it harder to run and play sports. Smoking makes the heart beat faster.
- Smoking is unattractive. It stains fingers and teeth, causes bad breath, and makes your hair and clothes smell bad. Smoking also causes wrinkles, especially around the mouth, and ages skin faster than normal. Smokers have more cavities than nonsmokers do.
- Cigarettes are expensive.
- Smoking starts damaging the lungs as soon as you smoke your first cigarette. That's why people trying their first cigarette often cough and feel short of breath, dizzy, or nauseous. Even though a person may get used to these symptoms, they are signals of the damage that is occurring to your body almost immediately from cigarette smoke.
- Cigarettes contain many chemicals that are harmful to the lungs and other parts of the body. These include formaldehyde (used to preserve dead animal specimens), ammonia (used to clean windows and toilets), cyanide (found in rat poison), and nicotine (used in pesticides).
- Nicotine is an addictive drug that prevents people from stopping smoking, even if they want to quit.
- When someone smokes a cigarette, the lungs quickly absorb the nicotine and this drug then moves quickly into the bloodstream, where it is circulated through the brain. Nicotine first reaches the brain 10 seconds after inhaling cigarette smoke.
- Nicotine acts on the brain to produce a feeling of relaxation, a feeling that only lasts for a short time.
- People who smoke tobacco usually become addicted to nicotine before they realize it. Once addicted to nicotine, they only feel comfortable when it is in their body. It then becomes very difficult to stop smoking.
- Young people are particularly vulnerable to the addictive effects of nicotine.
- Three out of four teens who are daily smokers say they keep smoking because it's really hard to quit. When they do try to quit, they suffer "withdrawal symptoms" (headaches, depression, restlessness) like people who are addicted to other drugs.

### ***Adaptations for All-Girl Classes***

Include the following additional teaching points in the interactive activity:

- Women and girls are more likely to suffer the harmful effects of cigarette smoke than are men.
- Stress and depression are related to smoking for girls. Two-thirds of girls who say they smoke several cigarettes or more per week say they do so to relieve stress. Girls who are depressed are twice as likely to smoke as girls with no symptoms of depression.
- [Use this teaching point at your discretion.] Smoking during pregnancy is a cause of low birth weight in infants and increases the risk of miscarriage, stillbirth, preterm delivery, and infant death.
- Emphasize effects that mar physical attractiveness. Ask girls to think about the financial strain of smoking and encourage them to use their creative and mathematical skills to find

reasons not to smoke and ways to use the money they could save from not buying cigarettes. (Girls might suggest buying frozen yogurt instead of a pack of cigarettes or saving for a CD or magazine subscription.)

- Three out of four girls and young women (ages 12 to 24) who smoke report that they need to have (are dependent on) cigarettes.

## **Vocabulary**

*Note: Words in brackets may be more appropriate for 5/6 graders.*

### **addiction**

Describes the effect of some drugs that makes a person need to keep taking the drug to avoid very unpleasant feelings like nausea and extreme nervousness (called withdrawal) caused by the body developing a chemical dependence on the drug.

### **[bronchitis]**

A condition caused by a variety of inhaled irritants, including tobacco smoke, in which the linings of the airways become swollen.

### **[emphysema]**

A type of serious and irreversible damage to the lungs where the walls of the air sacs break down caused by prolonged breathing of a variety of irritants, especially tobacco smoke.

### **nicotine**

A highly addictive drug found in tobacco that gives tobacco users the relaxed feeling they crave.

### **secondhand smoke**

This refers to smoke from another person's cigarette or exhaled by a cigarette smoker that is then inhaled by someone else.

## **Materials and Resources**

- Make copies of the handout Harmful Effects of Cigarette Smoking Word Search.
- Obtain tobacco education tools such as a jar of tar or a "Smokey Sue" doll (see resources in Going Further section).
- Make copies of the handout *Chemicals Contained in Cigarettes*.
- Make copies of the True/False Quiz on *The Truth About Smoking*.
- Materials for "What's Cooking in the Kitchen" game: beaker or bowl, chef's hat, apron, products and harmless substitutes placed in containers labeled "Rat Poison, Flammable, etc) - paint thinner, nail polish remover, disinfectant, Windex, solvent, rat poison, cadmium, insecticide, and pesticide.

## Lesson Components

### To Begin

- 4 rules (listen, raise hand, learn, have fun)
- Warm-Up Exercise: Use the first activity.

### Activities

#### Activity 1 - Grades 3 through 6

Instructional Approach: Interactive game, demonstration

Time: 10 minutes

- Divide the class into two teams.
- Explain that the object of the game is to name the most reasons why cigarette smoking is bad for you.
- Ask each team successively to suggest a different reason. (Reasons could include increased risk of lung cancer or heart attack, more colds, shortness of breath, stained teeth, bad breath). Make a list on the blackboard of the correct reasons.
- Continue the game until one team cannot think of another reason why it is bad to smoke. The team that identifies the most reasons wins.
- After the winner is determined, go back to the list and expand on each point. Ask the students whether they know anyone with the problems identified. Add to the list any additional reasons that the students did not identify and explain.
- Ask the students to notice how many reasons there are not to smoke cigarettes.
- Use tobacco education tools to demonstrate the tar that accumulates in smokers' lungs.
- Place a lighted cigarette in Smokey Sue's mouth and pump the bulb. Explain that the tar collected in the tube represents what would be deposited in the smoker's lungs. Pass the tube around to students.
- Show the class the sealed jar of tar and explain that it represents the amount of cancer-causing liquid that one-pack-a-day smokers put into their lungs each year. Pass the jar around to the students.

#### Activity 2 - Grades 3 through 6

Instructional Approach: Word search

Time: 10 minutes

- Distribute the word search handout (*Harmful Effects of Cigarette Smoking Word Search*) and ask the students to circle words that name the harmful effects of cigarette smoking.
- Correct words are listed at the bottom of the page for third and fourth graders.

#### Activity 3 - Grades 3 through 6

Instructional Approach: Interactive presentation

Time: 15 minutes

- Distribute the handout *Chemicals Contained in Cigarettes*. Explain that there are many, many different chemicals in cigarette smoke, and many of them are harmful.
- Talk about the harmful chemicals that are listed on the handout.
- Ask students to think of ways that these chemicals normally are used (correct answers include to kill rats or insects, to clean toilets, to preserve dead animals). Describe other uses that the class has not identified.
- Ask students whether it is a good idea to put these chemicals in their bodies.
- Then ask the students if they have ever wondered why people keep smoking even though cigarettes contain poisonous chemicals and can lead to serious illness or death. Tell students that the answer lies in the brain. Explain how the nicotine in cigarette smoke is sent to the brain and how the feeling of pleasure it produces leads to addiction. Explain that this addiction is what makes people keep smoking even though they know it is not good for them.
- Emphasize that young people are particularly vulnerable to the addictive effects of smoking.
- Distribute and ask students to complete *The Truth About Smoking*.
- Review the correct answers with the class and discuss why people might have the wrong idea about smoking.

#### **Activity 4 - Grades 3 through 6**

Instructional Approach: Interactive presentation

Time: 10 minutes

What's Cooking in the Kitchen?

- Teacher/facilitator dons apron and chefs hat.
- Teacher/facilitator mixes the primary harmful ingredients of tobacco, one at a time, into beaker, pointing out the uses of each (these "ingredients" will be prepared ahead of time, substituting harmless fluids for the dangerous ones and labeling them in big letters): toluene (highly toxic ingredient in paint thinner), acetone (toxic solvent found in nail polish remover), phenol (found in disinfectants), ammonia (glass cleaner), benzene (highly flammable liquid used as solvent and rocket fuel), cyanide (poison for rats), cadmium (damages liver, kidneys and brain, stays in the body for years), arsenic (poison for insects and weeds), nicotine (used in pesticides to kill insects).
- Ask the class where all these chemicals are found in one place - tobacco.
- Point out that tobacco actually has over 4,000 chemicals - 43 are known cancer-causing agents.

#### **Reflection and Closure**

Ask students what they learned about tobacco and smoking:

- What are the problems with smoking - for your lungs, for the rest of your body, for your overall health?
- What do so most smokers have so much trouble quitting?
- What about secondhand smoke?

#### **Wrap-Up Activity Idea**

Name that Smoker Charade

- Students partner up.
- Give each group a piece of paper with one of the following effects of smoking written on it: yellow teeth, bad breath, yellow fingers, smelly clothes, heart attack, cavities, wrinkles, can't exercise well, wasting a lot of money, can't smell or taste food very well.
- Give the groups a little prep time to prepare their charade skits.
- Rest of class tries to guess what each charade depicts (great game).

#### **Achievement Indicators**

- Students correctly describe three health hazards of smoking.
- Students correctly explain why it is so hard to stop smoking.
- Students correctly name and describe two harmful chemicals found in tobacco.
- Students correctly explain what secondhand smoke is and why it is harmful.

## **Section IV**

### **MAKING SMART DECISIONS ABOUT SMOKING**

One Lesson

#### **Lesson Objectives**

Students will be able to:

- Explain how advertising tries to get young people to smoke.
- Describe the ways to resist peer and media pressures to smoke.

#### **Curriculum Link(s) for This Lesson**

Relevant National Educational Goals

(Full text of national educational goals in Section VI - Going Further)

- NPH-H.K-4.1 and NPH-H.5-8.1 Health Promotion and Disease Prevention - Students will comprehend concepts related to health promotion and disease prevention.
- NPH-H.K-4.3 and NPH-H.5-8.3 Reducing Health Risks - Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.
- NPH-H.K-4.4 and NPH-H.5-8.4 Influences on Health - Students will analyze the influence of culture, media, technology, and other factors on health.
- NPH-H.K-4.5 and NPH-H.5-8.5 Using Communication Skills to Promote Health - Students will demonstrate the ability to use interpersonal communication skills to enhance health.
- NPH-H.5-8.6 and NPH-H.5-8.6 Setting Goals for Good Health - Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.

#### **Guiding Questions**

- Where did you learn what you know about smoking? (media - advertisements in magazines and billboards, smoking portrayed in movies and television, friends - and relatives who smoke)
- How old do you think most smokers were when they started smoking? (most under 18, all but 5 percent under 21)
- Why does a person start smoking in the first place? (influenced by media, relatives and peers)

#### **Key Points**

- Young people are the targets of cigarette advertising.
- Cigarette ads try to make young people think that smoking is glamorous and cool, but the ads don't tell the whole story.
- Tobacco companies use many ways to try to get young people to smoke.
- People around you who smoke can also pressure you to use cigarettes.
- There are actions young people can take to resist pressures to smoke.

## Teaching Points

- Tobacco advertising has been banned from television and radio since 1971.
- But tobacco companies still spend more than \$4 billion dollars each year in advertising, making cigarettes one of the most heavily advertised products in the United States.
- Now tobacco companies advertise in magazines, newspapers, and billboards and they sponsor televised sporting events such as car races.
- Young people are by far the main source of new customers for tobacco companies. Only 5 percent of their new customers are over the age of 21.
- The tobacco companies need new, young smokers to replace older smokers who quit or die.
- It's not surprising that the tobacco industry targets much of its advertising to young people, even those who are too young to buy cigarettes. Appeals to young people include:
  - Ads with bright colors, cartoons, and lots of pictures
  - Ads in magazines that have a high teen readership
  - Billboard ads near schools or parks where children play
  - Sponsorship of concerts by bands that are popular with young audiences
  - Special promotions that give away items such as t-shirts, caps, and sunglasses
  - Ads on the internet
- This advertising has worked! Teens are more influenced to begin smoking by tobacco advertising than by pressure from their friends. Teens are twice as likely as adults to smoke the three most heavily advertised cigarette brands (Marlboro, Camel, and Newport).
- The images in cigarette ads show people who are rugged, independent, popular, glamorous, thin, good-looking, and successful. They imply that anyone who smokes will achieve the same image.
- And yet surveys show that most teens (86 percent) would rather date people who don't smoke. Exercising and eating right are healthier ways than smoking to control weight. Most athletes don't smoke because it would hurt their performance.

### **Adaptations for All-Girl Classes**

Include the additional teaching points in the interactive activity:

- Girls are prime targets for tobacco companies.
- Tobacco ads in women's magazines often link smoking to fashion, beauty, and being thin. The average weight gain after quitting smoking is only about 5 pounds and usually can be controlled by diet and exercise.

During the discussion about cigarette ads, ask how these ads show women. (Answers might include thin, fashionable, sophisticated, independent, attractive to men.) During the "reality check" explore these images. For example, ask whether cigarettes really help girls to look more glamorous or be more popular. (Answers might include cigarettes give you wrinkles, yellow teeth, and bad breath.) Ask whether smoking is a good way to stay thin?" (An answer might be "No. If this were true, you would never see an overweight smoker. Exercising and eating right are healthy ways to control your weight") "Do most champion athletes smoke?" (An answer might be "No. Most athletes don't smoke because it would hurt their performance.")

### **Vocabulary**

*Note: Words in brackets may be more appropriate for 5/6 graders.*

#### **advertising**

Advertising is a way for a company to sell its product and make money by familiarizing people with the product and convincing them to use it.

#### **media**

Sources of entertainment, advertising, music, news and other information, including magazines, newspapers, radio, television, movies, internet, and billboards.

#### **media pressure**

Attempts by media to get you to do what you may not otherwise want to do or think of doing.

### **peer pressure**

Attempts by people who are your age (or are in your class or are your friends) to get you to do something that you may not otherwise want to do.

## **Materials and Resources**

- Collect cigarette advertisements that are *culturally relevant* from youth-oriented magazines such as *Vibe*, *Rolling Stone*, *Sports Illustrated*, *Hot Rod*, and *Mademoiselle*. Include examples of ads with rugged outdoor scenes (e.g., Marlboro), a focus on women (e.g., Virginia Slims, Capri), and young people of both genders having fun together (e.g., Newport).
- Make copies of these ads to distribute to students.
- If desired, prepare additional guided discussion questions based on Additional Scenarios for Smoke-Free Guided Discussion (below).

## **Lesson Components**

### **To Begin**

- 4 rules (listen, raise hand, learn, have fun)
- Warm-Up Exercise (if desired)
  - Limit to 10 minutes.
  - Select from list in Section VI - Going Further

### **Activities**

#### **Activity 1 - Grades 3 through 6**

Instructional Approach: Demonstration

Time: 15 minutes

- Talk about advertising in general and then discuss how tobacco companies use advertising to sell cigarettes.
- Ask students whether they have noticed any cigarette ads and where they have seen them. (They might have seen them at a concert, in magazines for young people, on a billboard near school, on a T-shirt worn by a classmate.)
- Pass out and/or display the previously collected culturally relevant cigarette ads.
- Talk about the reason and the ways that tobacco companies are targeting their ads to young people. Use examples, if possible, from the ads that students said they noticed. Note how these ads might be working since some teens smoke.
- Talk about how tobacco advertising tries to make young people think that smoking is cool and how smoking will make them smile and have friends. Pass out the different ads that you have collected and ask students to study each one and discuss what the images are trying to say about smoking. (Answers might include smokers are popular, smokers are independent and strong like a cowboy, smokers are thin and good-looking, smokers are champion athletes, smoking makes you relaxed.) Write the messages on the blackboard. Suggest any messages that the students do not identify. If students agree, add them to the list on the blackboard.
- Then guide students through a "reality check" of each message. You might ask:
  - Are smokers really the most popular people? Do you prefer to be around a smoker? (Answers might include "No. People who smoke have bad breath. Even their clothes and cars smell bad.")
  - Are smokers really independent? (An answer might be "No. They are letting a big tobacco company think for them instead of making their own decision.")

- Is smoking a good way to stay thin? (An answer might be "No. If this were true, you would never see an overweight smoker. Exercising and eating right are healthy ways to control your weight.")
- Do most champion athletes smoke? (An answer might be "No. Most athletes don't smoke because it would hurt their performance.")
- Does smoking really make you relaxed? (An answer might be "No. Smoking actually makes the heart beat faster.")

### **Activity 2 - Grades 3 through 6**

Instructional approach: Interactive discussion and guided group discussion.

Time: 15 minutes

- Remind the class about ways that they might be pressured to try smoking: friends trying to get them to smoke and tobacco companies trying to get young people to smoke by using media pressure (advertising, smoking portrayed in movies). Ask students if they have ever been in a situation where they felt pressure to do something they didn't want to do.
  - Ask them to explain the situation.
  - What made them feel pressure to do something?
  - How did they respond to the pressure?
  - What influenced their decision to do or not to do the thing they originally didn't want to do?
  - Use students' examples to make two lists on the blackboard of pressures on young people to do things they don't want to do, one list of people (friends, relatives and others) and one of media. Leave the list on the blackboard for reference during the next activity.
- Now ask the students how they might be pressured to smoke cigarettes.
  - Who might influence them to smoke? (Answers might include cigarette ads and people - including parents, older siblings, and friends - who smoke.)
  - What might people say to influence students to smoke? (Answers might include "Smoking is a sign of being grown up. Smoking will make you fit in with popular people. Smoking makes you feel good. Smoking makes you tough")
  - Add to the two lists on the blackboard any new ways that the students think of that people and media might pressure them.
- Ask the students to recall the results of their "reality checks" of cigarette ads in the last lesson. Explain that whenever someone asks them to do something, the important thing is to stop and think, and decide whether they really want to do it.
- Present the following scenario and use the questions that follow and other questions as appropriate to guide a discussion about ways that young people can resist pressure to smoke:

*Claudia is a [third, fourth, fifth, or sixth] grader who has never smoked cigarettes. After school, she walks home with her older sister Maria and two of Maria's friends. Maria's friends light up cigarettes on the way home and ask Claudia to try one. They tell her if she is old enough to walk with them, she is old enough to smoke. And besides, no one will know if she tries smoking.*

*How do you think Claudia feels when she is asked to smoke?*

Answers might include:

- She feels tempted to try it to impress the older children.
- She feels afraid to look like a sissy or a baby in front of the older girls.
- She feels scared because she knows smoking can make you feel sick and is bad for you.

*How are Maria's friends trying to pressure Claudia to smoke?*

Answers might include:

- The sister's friends are pressuring her by suggesting that it is grown-up to smoke.
- They are pressuring her by saying she will be like them and can hang out with them if she smokes.
- They are pressuring her by saying it is okay to smoke if no one finds out.

*How can Claudia respond to this pressure if she decides she really doesn't want to smoke?*

Answers might include:

- She could simply say, "No thanks."
- She could put off the suggestion by saying, "I don't feel like it right now."
- She could get help from her sister by asking, "You don't smoke, do you?"

### ***Additional Scenarios for Smoke-Free Guided Discussion***

If time and opportunity allow, you can develop other guided discussions using the additional scenarios provided below to help students explore ways they can resist pressures to smoke that happen after school, at home, or on the weekends. These can also be set up as skits with 3-5 students acting out the parts followed by a class discussion focusing on which students were the recipients of peer pressure and how they handled it. Three more scenarios for skits are presented in the Going Further section.

1. *Terrence goes to a community park with his older cousin. Terrence knows that his cousin's parents (his aunt and uncle) smoke, so he is not entirely surprised when his cousin pulls out a pack of cigarettes and offers one to Terrence. When Terrence shows surprise, the cousin tells him that his parents don't mind him smoking as long as he doesn't do it the house.*
2. *Kevin plays on a baseball team in his neighborhood. Several members of his team are collecting coupons from cigarette packs to get rewards like T-shirts and caps. The teammates are eager to get the prizes as soon as possible and ask Kevin to contribute coupons.*
3. *Cely stops at the local drugstore for a soda on the way home from school. A group of classmates are smoking outside the store. One member of the group is a boy Cely would like to date. Another person in the group asks Cely to stop and smoke a cigarette with them.*

### ***Adaptation for All-Girl Classes***

Consider leading with scenario 3 (Cely). Guided discussion questions might include:

- *"Why might Cely feel tempted to smoke a cigarette?"* (Answers might include to impress the friends of the boy she would like to date, to make the boy she wants to date see her as sophisticated or grown up, to feel accepted by a group of classmates.)
- *"What might help Cely resist this pressure?"* (Answers might include asking herself whether she really wanted to date someone who smoked, questioning whether she wanted to be in a group of people who hung out and smoked, remembering that it is really more grown up to make her own decisions than to do something because someone else asked her to, thinking of other things she could buy for the price of cigarettes.)

### **Reflection and Closure**

- Review the reality of cigarette advertising (it is designed to make money and does not tell the whole story about smoking).
- Review what students have learned about the true effects of smoking (yellow teeth, shortness of breath, odor on hair and clothes, increased risk for serious diseases).
- Review the ways people can pressure you to smoke and how to respond to that pressure.

### ***Wrap-Up Activity Idea***

Weighing the Pros and Cons

- Discuss one way of handling peer pressure (or any decision) is to weigh the pros (positives) and cons (negatives).

- In the case of peer pressure to smoke, the students should now have a fairly good idea of the pros and cons. Write two lists, pros and cons, side by side on the blackboard and have the students "weigh the pros and cons."

### **Achievement Indicators**

- Students correctly describe two ways that cigarette companies target young people with their advertising.
- Students correctly identify other people's behavior and words that create pressure to smoke.
- Students describe two ways of resisting pressure to smoke.

## **Section V**

### **LUNG REVIEW**

Review and Graduation

#### **Lesson Objectives**

- Review lungs, asthma, smoking, and smart decision making.

#### **Guiding Questions**

- What do you know about the lungs now?
- What makes asthma worse?
- How can people control asthma?
- Name some ways you can be kind and supportive to classmates with asthma.
- What is in tobacco smoke?
- How does smoking harm you?
- How might people pressure you to smoke?
- How can you resist pressure to smoke?

#### **Teaching Points**

- Go over what the students have learned about the lungs, asthma, smoking, and making smart decisions.
- Review vocabulary from each lesson.

#### **Materials and Resources**

- Prepare short quiz, if desired, based on the learning objectives from each section (repeated below for your convenience).
- Prepare graduation certificates
- Prepare refreshments for graduation party

#### **Lesson Components**

##### ***To Begin***

- 4 rules (listen, raise hand, learn, have fun)
- Warm-Up Exercise (if desired)
  - Limit to 10 minutes.
  - Select from list in Section VI - Going Further

##### ***Review***

- Go over what the students have learned about the lungs. (Lesson 1)
- Review what the students learned about asthma, what makes asthma worse (triggers), and ways to control asthma and stay healthy. Emphasize that children who have asthma can run, play, and do most things that other children can do. But sometimes they need extra help. Remind the students of the ways they can be kind and supportive to classmates with asthma. (Lessons 2 and 3)
- Review the reality of cigarette advertising. (Lesson 4)
- Review what students have learned about the true effects of smoking. (Lesson 4)

- Go over what the students have learned about the effects of smoking. Emphasize that the nicotine in cigarettes is addictive, making it hard to stop smoking once you start. (Lesson 4)
- Remind students that there are many pressures to smoke cigarettes but just as many ways to resist those pressures. (Lesson 5)
- Review vocabulary.

### **Achievement Indicators**

If desired, give the students a short quiz based on the learning objectives from each chapter:

- Describe how the lungs and airways help us breathe.
- Identify the main parts of the lungs on a diagram.
- Describe asthma as something that makes it hard for some people to breathe.
- Identify two signs [symptoms] of asthma.
- Describe an "asthma attack."
- Explain that asthma is not something that can be passed to other children like a cold.
- Explain that a person with asthma can usually exercise and play sports with no breathing problems, but that this person can suddenly start having great difficulty breathing.
- Name two things (triggers) that can make asthma worse.
- Identify two things that children can do to help control their asthma and stay healthy.
- Identify two ways to support a classmate who has asthma.
- Describe three health effects of smoking.
- Identify two harmful chemicals found in cigarettes.
- Identify three reasons for not smoking.
- Explain why people have trouble quitting smoking.
- Explain how advertising tries to get young people to smoke.
- Describe ways to resist pressure to smoke.

### **Graduation**

- Hand out certificates
- Party (refreshments, music)
- Take picture of class

## Section VI

### GOING FURTHER: A GUIDE FOR TEACHERS AND FACILITATORS

- Warm-Up Activities
- Suggestion for an Additional Student Activity
- Educational Standards - References to Curriculum Links
- Annotated Resources and References - Print and Online

#### WARM-UP ACTIVITIES

*Note: Teachers and facilitators decide about using warm-up activities more than once or not using them at all as time and class dynamics suggest.*

##### **The Name Game**

One person says her/his name, then says a word (adjective, fruit, animal, or object) that begins with the same letter. The next person repeats the first person's name and the chosen word beginning with the same letter, and then adds his/her name with a word (adjective, fruit, etc.). This continues around the class with the list of names and same-first-letter words getting longer and longer.

##### **The Winking Game**

Students are grouped in pairs, with everyone having a partner, except one who will be the first "winker." The students form two circles, one inside the other, with one student from each pair sitting in a chair in the inner circle with one chair left empty. The other students each stand behind their seated partner to form the outer circle. The standing partners must keep their heads down so they cannot clearly see what is going on in the circle. The one person who doesn't have a partner in the chair in front of him/her is the winker. The winker looks directly at different sitting students and soon winks one of them. Everyone sitting in a chair must watch closely and constantly at the winker. After the winker winks at a seated person, that person must go to the empty chair in front of the winker before their partner behind touches him/her on the back. If the partner does touch them before they get up, that person must stay seated and the winker winks at someone else. If the partner doesn't touch them on the back and the winked-at person makes it to the empty chair, then the student who didn't touch his/her partner in time is the new winker. After the students get the idea, you can have two winkers.

##### **Pictionary - Asthma Triggers**

- Divide the class into two teams. Each team selects a new person to draw for each word (only the teacher and drawer know the word). Both teams try to guess the word as the drawer keeps drawing for 60 seconds.
- After each word (or after the entire game) discuss how to control each trigger.

##### **Healthy/Unhealthy Behaviors and Habits**

- Children get in a circle and give a cheer.
- Teacher describes a health-related activity (smoking, swimming, living in a place with air pollution, playing with cats, etc)... if a child thinks this is an unhealthy behavior, stay in the circle; if healthy, go to the inside of the circle and give a cheer.
- No right or wrong answer, it's their opinion (good game—can bring out a lot of discussion when there's disagreement).

##### **Follow-the-Leader Peer Pressure Game**

One person leaves the room and everyone forms a circle. Choose one person in the circle to be the leader. The leader does six or so various movements while everyone else in the circle follows whatever the leader does. Then the person outside comes back in and tries to figure out who the leader is. This can be used to lead into a discussion of ways peer pressure is used to influence both good and bad behaviors.

## **SUGGESTION FOR AN ADDITIONAL STUDENT ACTIVITY**

### ***Skits - Peer Pressure***

These skits require about six students acting out the parts. The skit should be followed by a class discussion focusing on which students were the recipients of peer pressure and how they handled it.

1. *Everyone is outside the school hanging out before school starts. One student says, "I don't want to go to school today." Another student agrees, saying, "Today would be perfect to skip classes 'cause I didn't do my homework." Another suggests that it would really be fun to hang out at the mall instead of going to school. Finally another one says, "Hey, we can't afford to get into any more trouble. We better go to class." What would you do?*
2. *A group of friends are over at one student's house in the afternoon when no adults are at home. They decide that they are bored and want to rent a video. Someone says that the video store is too far away to walk and no one wants to take the bus. One person says, "I can drive!" Several others excitedly suggest that they can all go to the video store in the car that is parked in the garage with the keys in it. Some others disagree. What would you do?*
3. *Three friends meet three of their other friends at the mall. Two start bragging about clothes, CDs, and other things that they have shoplifted. "It's so easy! We do it all the time and never get caught." Some of the others say that it really does sound easy. When some say they don't care how easy it is, they won't steal, others say, "You are such babies! Come on, let's get some stuff." What would you do?*

## EDUCATIONAL STANDARDS - REFERENCES TO CURRICULUM LINKS

### RELEVANT NATIONAL STANDARDS FOR PHYSICAL EDUCATION AND HEALTH

#### GRADES K-4

##### NPH-H.K-4.1

###### Health Promotion and Disease Prevention

***Students will comprehend concepts related to health promotion and disease prevention.***

- Describe relationships between personal health behaviors and individual well being.
- Identify indicators of mental, emotional, social, and physical health during childhood.
- Describe the basic structure and functions of the human body systems.
- Describe how the family influences personal health.
- Describe how physical, social, and emotional environments influence personal health.
- Identify common health problems of children.
- Identify health problems that should be detected and treated early.
- Explain how childhood injuries and illnesses can be prevented or treated.

##### NPH-H.K-4.2

###### Health Information, Products and Services

***Students will demonstrate the ability to access valid health information and health-promoting products and services.***

- Analyze how behavior can impact health maintenance and disease prevention.
- Describe the interrelationships of mental, emotional, social, and physical health throughout adulthood.
- Explain the impact of personal health behaviors on the functioning of body systems.
- Analyze how the family, peers, and community influence the health of individuals.
- Analyze how the environment influences the health of the community.
- Describe how to delay onset and reduce risks of potential health problems during adulthood.
- Analyze how public health policies and government regulations influence health promotion and disease prevention.
- Analyze how the prevention and control of health problems are influenced by research and medical advances.

##### NPH-H.K-4.3

###### Reducing Health Risks

***Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.***

- Identify responsible health behaviors.
- Identify personal health needs.
- Compare behaviors that are safe to those that are risky or harmful.
- Demonstrate strategies to improve or maintain personal health.
- Develop injury prevention and management strategies for personal health.
- Demonstrate ways to avoid and reduce threatening situations.
- Apply skills to manage stress.

##### NPH-H.K-4.4

###### Influences on Health

***Students will analyze the influence of culture, media, technology, and other factors on health.***

- Describe how culture influences personal health behaviors.
- Explain how media influences thoughts, feelings, and health behaviors.
- Describe ways technology can influence personal health.
- Explain how information from school and family influences health.

##### NPH-H.K-4.5

###### Using Communication Skills to Promote Health

***Students will demonstrate the ability to use interpersonal communication skills to enhance health.***

- Distinguish between verbal and non-verbal communication.
- Describe characteristics needed to be a responsible friend and family member.
- Demonstrate healthy ways to express needs, wants, and feelings.
- Demonstrate ways to communicate care, consideration, and respect of self and others.
- Demonstrate attentive listening skills to build and maintain healthy relationships.
- Demonstrate refusal skills to enhance health.
- Differentiate between negative and positive behavior used in conflict situations.
- Demonstrate non-violent strategies to resolve conflicts.

#### **NPH-H.K-4.6**

##### **Setting Goals for Good Health**

***Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.***

- Demonstrate the ability to apply a decision-making process to health issues and problems.
- Explain when to ask for assistance in making health-related decisions and setting health goals.
- Predict outcomes of positive health decisions.
- Set a personal health goal and track progress toward its achievement.

#### **NPH-H.K-4.7**

##### **Health Advocacy**

***Students will demonstrate the ability to advocate for personal, family, and community health.***

- Describe a variety of methods to convey accurate health information and ideas.
- Express information and opinions about health issues.
- Identify community agencies that advocate for healthy individuals, families, and communities.
- Demonstrate the ability to influence and support others in making positive health choices.

### **GRADES 5-8**

#### **NPH-H.5-8.1**

##### **Health Promotion and Disease Prevention**

***Students will comprehend concepts related to health promotion and disease prevention.***

- Explain the relationship between positive health behaviors and the prevention of injury, illness, disease, and premature death.
- Describe the interrelationship of mental, emotional, social, and physical health during adolescence.
- Explain how health is influenced by the interaction of body systems.
- Describe how family and peers influence the health of adolescents.
- Analyze how environment and personal health are interrelated.
- Describe ways to reduce risks related to adolescent health problems.
- Explain how appropriate health care can prevent premature death and disability.
- Describe how lifestyle, pathogens, family history, and other risk factors are related to the cause or prevention of disease and other health problems.

#### **NPH-H.5-8.2**

##### **Health Information, Products and Services**

***Students will demonstrate the ability to access valid health information and health-promoting products and services.***

- Analyze the validity of health information, products, and services.
- Demonstrate the ability to utilize resources from home, school, and community that provide valid health information.
- Analyze how media influences the selection of health information and products.
- Demonstrate the ability to locate health products and services.
- Compare the costs and validity of health products.
- Describe situations requiring professional health services.

#### **NPH-H.5-8.3**

##### **Reducing Health Risks**

***Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.***

- Explain the importance of assuming responsibility for personal health behaviors.
- Analyze a personal health assessment to determine health strengths and risks.
- Distinguish between safe and risky or harmful behaviors in relationships.
- Demonstrate strategies to improve or maintain personal and family health.
- Develop injury prevention and management strategies for personal and family health.
- Demonstrate ways to avoid and reduce threatening situations.
- Demonstrate strategies to manage stress.

#### **NPH-H.5-8.4**

##### **Influences on Health**

***Students will analyze the influence of culture, media, technology, and other factors on health.***

- Describe the influence of cultural beliefs on health behaviors and the use of health services.
- Analyze how messages from media and other sources influence health behaviors.
- Analyze the influence of technology on personal and family health.
- Analyze how information from peers influences health.

#### **NPH-H.5-8.5**

##### **Using Communication Skills to Promote Health**

***Students will demonstrate the ability to use interpersonal communication skills to enhance health.***

- Demonstrate effective verbal and non-verbal communication skills to enhance health.

- Describe how the behavior of family and peers affects interpersonal communication.
- Demonstrate healthy ways to express needs, wants and feelings.
- Demonstrate ways to communicate care, consideration, and respect of self and others.
- Demonstrate communication skills to build and maintain healthy relationships.
- Demonstrate refusal and negotiation skills to enhance health.
- Analyze the possible causes of conflict among youth in schools and communities.
- Demonstrate strategies to manage conflict in healthy ways.

#### **NPH-H.5-8.6**

##### **Setting Goals for Good Health**

***Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.***

- Demonstrate the ability to apply a decision-making process to health issues and problems individually and collaboratively.
- Analyze how health-related decisions are influenced by individuals, family, and community values.
- Predict how decisions regarding health behaviors have consequences for self and others.
- Apply strategies and skills needed to attain personal health goals.
- Describe how personal health goals are influenced by changing information, abilities, priorities, and responsibilities.
- Develop a plan that addresses personal strengths, needs, and health risks.

#### **NPH-H.5-8.7**

##### **Health Advocacy**

***Students will demonstrate the ability to advocate for personal, family, and community health.***

- Analyze various communication methods to accurately express health information and ideas.
- Express information and opinions about health issues.
- Identify barriers to effective communication of information, ideas, feelings, and opinions about health issues.
- Demonstrate the ability to influence and support others in making positive health choices.
- Demonstrate the ability to work cooperatively when advocating for healthy individuals, families, and schools.

## **ANNOTATED RESOURCES AND REFERENCES - PRINT AND ONLINE**

[Note: All web sites checked and active September 2001]

### **Allergy and Asthma Network/Mothers of Asthmatics, Inc.**

2751 Prosperity Avenue, Suite 150

Fairfax, Virginia 22031

Telephone: 1-800-878-4403 or (703) 641-9595

Fax: (703) 573-7794

Internet: [www.aanma.org](http://www.aanma.org)

This organization provides information and books about children with asthma.

### **American Academy of Pediatrics**

141 Northwest- Boulevard

PO. Box 747

Elk Grove Village, Illinois 60009-0747

Telephone: (847) 434-4000

Fax: (847) 434-8000

Internet: [www.aap.org](http://www.aap.org)

This organization offers publications about asthma for parents and children.

### **American Association for Respiratory Care**

11030 Ables Lane

Dallas, Texas 75229

Telephone: (972) 243-2272

Fax: (972) 4842720, or (972) 484-6010

Internet: [www.aarc.org](http://www.aarc.org)

This organization publishes a *Healthy Lung Fun Activity Sheet* with puzzles, a word search, and other games to help children learn about lung health. The web site has an online asthma quiz.

### **American College of Chest Physicians**

3300 Dundee Road

Northbrook, Illinois 60062-2348

Telephone: 1-800-343-227 or (847) 498-1400

Fax: (847) 498-5460

Internet: [www.chestnet.org](http://www.chestnet.org)

ACCP publishes patient guides on asthma and other lung health issues.

### **American Lung Association**

For the nearest affiliate call 1-800-LUNG USA (586-4872).

Internet: [www.lungusa.org](http://www.lungusa.org)

Publications on asthma in children are available from this organization.

### **Asthma and Allergy Foundation of America**

1233 20th Street, NW, Suite 402

Washington, DC 20036

Telephone: 1-800-7ASTHMA (727-8462)

Fax: (202) 466-8940

Internet: [www.aafa.org](http://www.aafa.org)

In addition to resources especially for children with asthma, this organization has a web site with online activities for kids.

**Centers for Disease Prevention and Control (CDC)**

Surgeon General's Report for Children about Smoking  
<http://www.cdc.gov/tobacco/sgr/sgr4kids/sgrmenu.htm>

At this web site, children can find an online magazine providing facts, tips, and activities that can help them become or stay smoke-free.

**CDC's Tobacco Information and Prevention Source**

Tobacco Tips for Kids

[www.cdc.gov/tobacco/tips4youth.htm](http://www.cdc.gov/tobacco/tips4youth.htm)

Children can find posters, videos, tip sheets, and celebrity smoke-free messages at this web site.

**Channing L. Bete Co., Inc.**

200 State Road South

Deerfield, Massachusetts 01373-0200

Telephone: 1-806-628-7733

Fax: 1-800499-6464

Internet: [www.channing-bete.com](http://www.channing-bete.com)

This publisher offers coloring and activities books, brochures, and videos on asthma for children and parents.

**The CHEST Foundation**

3300 Dundee Road

Northbrook, Illinois 60062-2348

Telephone: (847) 498-8370

Fax: (847) 498-5460

Internet: [www.chestnet.org/foundation/index.html](http://www.chestnet.org/foundation/index.html)

This foundation creates educational programs, supports research, and raises public awareness about diseases of the chest and their prevention. Its web site provides a self-evaluation to determine whether a person's asthma is under control.

**Girl Power Campaign Headquarters**

11426 Rockville Pike

Rockville, Maryland 20852

Telephone: 1-800-729-6686

Internet: [www.health.org/gpower](http://www.health.org/gpower)

This federally sponsored national public education campaign provides a variety of materials for girls on underage tobacco use.

**Girl Scouts of the USA**

420 5th Avenue

New York, New York 10018-2798

Telephone: 1-800-GSUSA 4 U (478-7248)

Internet: [www.girlscouts.org](http://www.girlscouts.org)

This organization publishes colorful print and online Girl Scouts Against Smoking education materials geared for three different age levels starting at 5 years.

**Health Edco**

WRS Group, LTD.

P.O. Box 21207

Waco, Texas 76702-1207

Telephone: 1-800-299-3366

Fax: 1-888-9777653

Internet: [www.wrsgroup.com](http://www.wrsgroup.com)

Health education tools, including a model of the lungs, are available from this company.

**Jayjo Books**

P.O. Box 213

Valley Park, Missouri 63088-0213

Telephone: (636) 861-1331

Fax: (636) 861-2411

Internet: [www.jayjo.com](http://www.jayjo.com)

This publisher offers colorful books about coping with asthma for young children.

**Journeyworks Publishing**

PO. Box 8466

Santa Cruz, California 95061-8466

Telephone: 1-800-755-1998

Fax: 1-800-775-5853

Internet: [www.journeyworks.com](http://www.journeyworks.com)

Teen-oriented health education pamphlets are this company's specialty and include multiple titles on smoking cessation and tobacco prevention.

**National Center for Tobacco-Free Kids**

1707 L Street, NW, Suite 800

Washington, DC 20036

Telephone: (202) 296-5469

Fax: (202) 296-5427

Internet: [www.tobaccofreekids.org](http://www.tobaccofreekids.org)

A non-governmental initiative launched to protect children from tobacco addiction and exposure to secondhand smoke. The Web site offers news, reports, statistics, campaign materials, and Webcasts.

**National Heart, Lung, and Blood Institute**

NHLBI Information Center

PO. Box 30105

Bethesda, Maryland 20824-0105

Telephone: (301) 251-1222

Fax: (301) 251-1223

Internet: [www.nhlbi.nih.gov/health/public/lung/index.htm#asthma](http://www.nhlbi.nih.gov/health/public/lung/index.htm#asthma)

Provides information about asthma and other lung diseases.

**National Institute on Drug Abuse**

Mind Over Matter Web Site - Nicotine

Internet: <http://165.112.78.61/MOM/TG/momtg-nicotine.html>

This web site provides information for kids and teachers about the effect of nicotine (and other drugs) on the brain.

**Smoke-Free Kids**

Internet: [www.smokefree.gov](http://www.smokefree.gov)

This web site is a joint effort of the U.S. Department of Health and Human Services, the U.S. Women's National Soccer Team, and US Soccer. It provides fact sheets, posters, a quiz, and tips for coaches and parents—all aimed at encouraging girls not to smoke cigarettes.