# Smoking and Human Physiology

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AIMS Multimedia is a leading producer and distributor of educational programs serving schools and libraries for nearly 40 years. AIMS draws upon the most up-to-date knowledge, existing and emerging technologies, and all of the instructional and pedagogical resources available to develop and distribute educational programs in film, videocassette, laserdisc, CD-ROM and CD-i formats.

Persons or schools interested in obtaining additional copies of this AIMS Teaching Module, please contact:

AIMS Multimedia

1-800-FOR-AIMS
1-800-367-2467
Congratulations!

You have chosen a learning program that will actively motivate your students AND provide you with easily accessible and easily manageable instructional guidelines designed to make your teaching role efficient and rewarding.

The AIMS Teaching Module provides you with a video program keyed to your classroom curriculum, instructions and guidelines for use, plus a comprehensive teaching program containing a wide range of activities and ideas for interaction between all content areas. Our authors, educators, and consultants have written and reviewed the AIMS Teaching Modules to align with the Educate America Act: Goals 2000.

This ATM, with its clear definition of manageability, both in the classroom and beyond, allows you to tailor specific activities to meet all of your classroom needs.
RATIONALE

In today’s classrooms, educational pedagogy is often founded on Benjamin S. Bloom’s “Six Levels of Cognitive Complexity.” The practical application of Bloom’s Taxonomy is to evaluate students’ thinking skills on these levels, from the simple to the complex: Knowledge (rote memory skills), Comprehension (the ability to relate or retell), Application (the ability to apply knowledge outside its origin), Analysis (relating and differentiating parts of a whole), Synthesis (relating parts to a whole), and Evaluation (making a judgment or formulating an opinion).

The AIMS Teaching Module is designed to facilitate these intellectual capabilities, AND to integrate classroom experiences and assimilation of learning with the students’ life experiences, realities, and expectations. AIMS’ learner verification studies prove that our AIMS Teaching Modules help students to absorb, retain, and to demonstrate ability to use new knowledge in their world. Our educational materials are written and designed for today’s classroom, which incorporates a wide range of intellectual, cultural, physical, and emotional diversities.
ORGANIZATION AND MANAGEMENT

To facilitate ease in classroom manage-ability, the AIMS Teaching Module is organized in four sections. You are reading Section 1, Introduction to the Aims Teaching Module (ATM).

SECTION 2, INTRODUCING THIS ATM will give you the specific information you need to integrate the program into your classroom curriculum.

SECTION 3, PREPARATION FOR VIEWING provides suggestions and strategies for motivation, language preparedness, readiness, and focus prior to viewing the program with your students.

SECTION 4, AFTER VIEWING THE PROGRAM provides suggestions for additional activities plus an assortment of consumable assessment and extended activities, designed to broaden comprehension of the topic and to make connections to other curriculum content areas.
FEATURES

INTRODUCING EACH ATM

SECTION 2

Your AIMS Teaching Module is designed to accompany a video program written and produced by some of the world’s most credible and creative writers and producers of educational programming. To facilitate diversity and flexibility in your classroom, your AIMS Teaching Module features these components:

Themes

The Major Theme tells how this AIMS Teaching Module is keyed into the curriculum. Related Themes offer suggestions for interaction with other curriculum content areas, enabling teachers to use the teaching module to incorporate the topic into a variety of learning areas.

Overview

The Overview provides a synopsis of content covered in the video program. Its purpose is to give you a summary of the subject matter and to enhance your introductory preparation.

Objectives

The ATM learning objectives provide guidelines for teachers to assess what learners can be expected to gain from each program. After completion of the AIMS Teaching Module, your students will be able to demonstrate dynamic and applied comprehension of the topic.
PREPARATION FOR VIEWING

SECTION 3
In preparation for viewing the video program, the AIMS Teaching Module offers activity and/or discussion ideas that you may use in any order or combination.

Introduction To The Program
Introduction to the Program is designed to enable students to recall or relate prior knowledge about the topic and to prepare them for what they are about to learn.

Introduction To Vocabulary
Introduction to Vocabulary is a review of language used in the program: words, phrases, usage. This vocabulary introduction is designed to ensure that all learners, including limited English proficiency learners, will have full understanding of the language usage in the content of the program.

Discussion Ideas
Discussion Ideas are designed to help you assess students’ prior knowledge about the topic and to give students a preview of what they will learn. Active discussion stimulates interest in a subject and can motivate even the most reluctant learner. Listening, as well as speaking, is active participation. Encourage your students to participate at the rate they feel comfortable. Model sharing personal experiences when applicable, and model listening to students’ ideas and opinions.

Focus
Help learners set a purpose for watching the program with Focus, designed to give students a focal point for comprehension continuity.

Jump Right In
Jump Right In provides abbreviated instructions for quick management of the program.

AFTER VIEWING THE PROGRAM

SECTION 4
After your students have viewed the program, you may introduce any or all of these activities to interact with other curriculum content areas, provide reinforcement, assess comprehension skills, or provide hands-on and in-depth extended study of the topic.
SUGGESTED ACTIVITIES

The Suggested Activities offer ideas for activities you can direct in the classroom or have your students complete independently, in pairs, or in small work groups after they have viewed the program. To accommodate your range of classroom needs, the activities are organized into skills categories. Their labels will tell you how to identify each activity and help you correlate it into your classroom curriculum. To help you schedule your classroom lesson time, the AIMS hourglass gives you an estimate of the time each activity should require. Some of the activities fall into these categories:

Meeting Individual Needs

These activities are designed to aid in classroom continuity. Reluctant learners and learners acquiring English will benefit from these activities geared to enhance comprehension of language in order to fully grasp content meaning.

Curriculum Connections

Many of the suggested activities are intended to integrate the content of the ATM program into other content areas of the classroom curriculum. These cross-connections turn the classroom teaching experience into a whole learning experience.

Critical Thinking

Critical Thinking activities are designed to stimulate learners’ own opinions and ideas. These activities require students to use the thinking process to discern fact from opinion, consider their own problems and formulate possible solutions, draw conclusions, discuss cause and effect, or combine what they already know with what they have learned to make inferences.

Cultural Diversity

Each AIMS Teaching Module has an activity called Cultural Awareness, Cultural Diversity, or Cultural Exchange that encourages students to share their backgrounds, cultures, heritage, or knowledge of other countries, customs, and language.

Hands On

These are experimental or tactile activities that relate directly to the material taught in the program. Your students will have opportunities to make discoveries and formulate ideas on their own, based on what they learn in this unit.

Writing

Every AIMS Teaching Module will contain an activity designed for students to use the writing process to express their ideas about what they have learned. The writing activity may also help them to make the connection between what they are learning in this unit and how it applies to other content areas.

In The Newsroom

Each AIMS Teaching Module contains a newsroom activity designed to help students make the relationship between what they learn in the classroom and how it applies in their world. The purpose of In The Newsroom is to actively involve each class member in a whole learning experience. Each student will have an opportunity to perform all of the tasks involved in production: writing, researching, producing, directing, and interviewing as they create their own classroom news program.

Extended Activities

These activities provide opportunities for students to work separately or together to conduct further research, explore answers to their own questions, or apply what they have learned to other media or content areas.

Link to the World

These activities offer ideas for connecting learners’ classroom activities to their community and the rest of the world.

Culminating Activity

To wrap up the unit, AIMS Teaching Modules offer suggestions for ways to reinforce what students have learned and how they can use their new knowledge to enhance their world view.
**VOCABULARY**

Every ATM contains an activity that reinforces the meaning and usage of the vocabulary words introduced in the program content. Students will either read or find the definition of each vocabulary word, then use the word in a written sentence.

**CHECKING COMPREHENSION**

Checking Comprehension is designed to help you evaluate how well your students understand, retain, and recall the information presented in the AIMS Teaching Module. Depending on your students’ needs, you may direct this activity to the whole group yourself, or you may want to have students work on the activity page independently, in pairs, or in small groups. Students can verify their written answers through discussion or by viewing the video a second time. If you choose, you can reproduce the answers from your Answer Key or write the answer choices in a Word Bank for students to use. Students can use this completed activity as a study guide to prepare for the test.

**CONSUMABLE ACTIVITIES**

The AIMS Teaching Module provides a selection of consumable activities, designed to specifically reinforce the content of this learning unit. Whenever applicable, they are arranged in order from low to high difficulty level, to allow a seamless facilitation of the learning process. You may choose to have students take these activities home or to work on them in the classroom independently, in pairs or in small groups.

**CHECKING VOCABULARY**

The Checking Vocabulary activity provides the opportunity for students to assess their knowledge of new vocabulary with this word game or puzzle. The format of this vocabulary activity allows students to use the related words and phrases in a different context.

**TEST**

The AIMS Teaching Module Test permits you to assess students’ understanding of what they have learned. The test is formatted in one of several standard test formats to give your students a range of experiences in test-taking techniques. Be sure to read, or remind students to read, the directions carefully and to read each answer choice before making a selection. Use the Answer Key to check their answers.
**ADDITIONAL AIMS MULTIMEDIA PROGRAMS**

After you have completed this AIMS Teaching Module you may be interested in more of the programs that AIMS offers. This list includes several related AIMS programs.

**ADDITIONAL READING SUGGESTIONS**

AIMS offers a carefully researched list of other resources that you and your students may find rewarding.

**ANSWER KEY**

Reproduces tests and work pages with answers marked.
THEMES
Smoking and Human Physiology explores the harmful effects of tobacco on the body. The damage that smokers do to their lungs and heart is explained in detail. The addictive nature of tobacco is also discussed, as well as the tactics used by tobacco companies to keep a steady supply of customers. Viewers are asked to consider their own personal decisions about tobacco use.

OVERVIEW
Smoking and Human Physiology is a frank and factual discussion about smoking and the effects smoking has on the body. Doctors explain the reasons people begin to smoke, the physical changes caused by nicotine and tobacco on the lungs, and the specific symptoms and diseases that result from smoking. Students will see evidence and hear statistics about the increasing number of deaths related to tobacco and smoking. Viewers of Smoking and Human Physiology will also learn how the tobacco industry aims advertising at young people in an effort to continuously recruit new smokers to replace those who die yearly of tobacco-related diseases.

OBJECTIVES
- To better understand the function of the lungs.
- To identify the effects of smoking on the body.
- To explore evidence of the harmful effects of tobacco smoke.
- To understand how and why the tobacco industry aims its advertising at young people.
INTRODUCTION TO THE PROGRAM

Tobacco kills more people in the United States than AIDS, drunk driving, fires, murder, suicide and drug overdoses combined. It is the single greatest health concern facing our society. To better understand the addictive, destructive power of tobacco, we must look at its effects on the body at a cellular level. The delicate workings of the lungs and heart are especially vulnerable to tobacco. In Smoking and Human Physiology, we will take a closer look at the physical changes the body undergoes in the presence of cigarette smoke.

INTRODUCTION TO VOCABULARY

Before starting the program, write the following words on the board. Ask the class to discuss the meaning of each word, and review the terms that are unfamiliar to students.

**addiction** - strong physical or psychological craving for a substance despite its harmful effects

**carcinogens** - substances that cause cancer

**nicotine** - dangerous, addictive drug found in all tobacco products

**secondhand smoke** - smoke that is breathed in by people who are near cigarette smokers

DISCUSSION IDEAS

Bring magazine advertisements for tobacco to class. Ask students to look at them closely and discuss how the tobacco companies are trying to appeal to buyers. Have them list some words that describe the people in the ads. Do these words accurately describe the typical smoker? Why have the tobacco companies chosen to show the images in the ads? What are they suggesting about people who smoke?

FOCUS

Introduce the subject of smoking by asking students, “Why do people choose to smoke—especially if they know it is harmful?” Encourage open discussion about peer pressure, the youthful feeling of immortality, media influences, and the desire to be mature and independent.
JUMP RIGHT IN

HOW TO USE THE SMOKING AND HUMAN PHYSIOLOGY AIMS TEACHING MODULE

Preparation

▷ Read Smoking and Human Physiology Themes, Overview, and Objectives to become familiar with program content and expectations.

▷ Use Preparation for Viewing suggestions to introduce the topic to students.

Viewing SMOKING AND HUMAN PHYSIOLOGY

▷ Set up viewing monitor so that all students have a clear view.

▷ Depending on your classroom size and learning range, you may choose to have students view Smoking and Human Physiology together or in small groups.

After Viewing SMOKING AND HUMAN PHYSIOLOGY

▷ Select Suggested Activities that integrate into your classroom curriculum. If applicable, gather materials or resources.

▷ Choose the best way for students to work on each activity. Some activities work best for the whole group. Other activities are designed for students to work independently, in pairs, or in small groups. Whenever possible, encourage students to share their work with the rest of the group.

▷ Duplicate the appropriate number of Vocabulary, Checking Comprehension, and consumable activity pages for your students.

▷ You may choose to have students take consumable activities home, or complete them in the classroom, independently, or in groups.

▷ Administer the Test to assess students’ comprehension of what they have learned, and to provide them with practice in test-taking procedures.

▷ Use the Culminating Activity as a forum for students to display, summarize, extend, or share what they have learned with each other, the rest of the school, or a local community organization.
SUGGESTED ACTIVITIES

Writing

Ask each student to choose one of the following tobacco-related topics. Have them use library resources and/or the Internet to research the topics. Students should summarize their findings in a short paper.

• spit tobacco
• smoking and pregnancy
• secondhand smoke
• cigarettes and the media (TV and movies)
• tobacco advertising

Hands On

Divide students into cooperative groups. Ask each group to work together on anti-smoking campaigns. Each campaign should have a central message summarized in a tagline. Encourage each group to brainstorm for ideas before deciding on the strongest one. Depending on the resources available, have each group develop their winning campaign idea into a poster, brochure, T-shirt, bumper sticker, video public service announcement or website.

If possible, share the completed campaigns with the rest of the school by displaying them in the hallway, library, or trophy cases. Get input from other classes on the most effective campaigns, as well as the least effective. What type of approach seems to work best when trying to discourage young people from smoking?

Meeting Individual Needs

Ask students to choose one of the following terms. Have each student look up the chosen term in an encyclopedia. After reading the article, they should close the encyclopedia and write a short summary of the term in their own words.

- tobacco
- cancer
- emphysema
- addiction
- nicotine
Critical Thinking

Many laws are being proposed to eliminate smoking from public places. Choose two groups of class members and have the groups debate the following question: “Should it be against the law to smoke in public places?”

Encourage students to consider the following points:
• Secondhand smoke is dangerous to anyone who breathes it.
• Smoking is not a crime. It is legal for adults to smoke.
• Smoking in public places raises health-care costs and causes people to miss more work.
• If smoking is banned, it may lead to other restrictions based on lifestyle.

After the debate, let the rest of the class vote to indicate their position after hearing both sides of the argument.

Link to the World

Most of us know at least one person who smokes tobacco. Using the information they learned in the video *Smoking and Human Physiology*, ask each student to write a letter to a smoker they care about. Ask them to express their concern and frustration over the smoker’s dangerous habit.

Once the letter is completed, they may wish to keep it to themselves or share it with the smoker. In any case, encourage them to use respectful language. Most smokers want to give up tobacco, but find it hard to do so. Ask students to keep this in mind. Giving someone support is the best way to help them overcome problems. In addition, remind students that adults are allowed to make their own decisions, even when we don’t agree.

Connection to History

If tobacco is so dangerous, why is it legal? To find out, we must look at the history of tobacco in the United States. Ask students to research the history of tobacco using library books, encyclopedia articles and the Internet.

Have students focus specifically on the following questions:
• When did tobacco first appear in the United States?
• What major event led to the widespread use of tobacco?
• When were laws passed restricting the advertisement of tobacco on TV or in magazines?
• When were warnings on cigarette packages first introduced?
• What do these warnings say?
• Why is it so hard to control what the tobacco industry does?
In the Newsroom

Lately, there have been many stories in the news related to tobacco. New legislation has been passed to discourage young people from smoking. In addition, many facts have been revealed about tobacco companies and their knowledge of nicotine’s addictive nature.

Ask each student to locate a recent article related to tobacco. Have students present a summary of their articles to the class, along with their own thoughts on the significance of the information.

Connection to Science

The following experiments will help students have a better understanding of tobacco’s harmful effects on the body. For the experiment, you’ll need two large bottles of fruit juice, each in a different flavor, enough paper cups for everyone in the class to have two, enough plastic straws for each student to have one, and a blindfold.

First, give each student a plastic straw. Ask students to place the straws in their mouths and pinch their noses closed. As you time them for 60 seconds, instruct them to breathe through the straws only. When the 60 seconds are over, ask them how they felt while breathing through the straws. Did it make them uncomfortable or nervous? How would they feel if they had to breathe that way all the time? Explain that this is similar to what people with emphysema experience everyday.

Next, pour small amounts of each juice into the paper cups. Blindfold each student one at a time. While blindfolded, they should hold their noses firmly closed and taste the juice in each cup. Was it hard for them to tell the difference between the two juices? How did that make them feel? What would eating be like if they had no taste at all? Explain that the poisons in tobacco deaden nerve endings in the nose and mouth. As a result, smokers have diminished senses of taste and smell.

Culminating Activity

Using what they have learned in the unit, ask each student to write a question related to the program. Collect the questions and use them to write a review quiz. After giving the quiz, ask students if they enjoyed designing the test. How would they feel about designing more tests in the future?
## VOCABULARY

The following terms are from *Smoking and Human Physiology*. Fill in the number of each term next to its closest definition.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. cilia</td>
<td>a chemical substance that causes cancer</td>
</tr>
<tr>
<td>2. cholesterol</td>
<td>thick substance found in cigarette smoke which contains many harmful substances</td>
</tr>
<tr>
<td>3. nicotine</td>
<td>an illness of the lungs which causes the inner walls to lose their elasticity</td>
</tr>
<tr>
<td>4. addiction</td>
<td>tiny blood vessels that carry blood to the lungs</td>
</tr>
<tr>
<td>5. carcinogen</td>
<td>fine hairs that line the lungs, trapping dust and other particles</td>
</tr>
<tr>
<td>6. emphysema</td>
<td>type of tumor that contains cancerous cells</td>
</tr>
<tr>
<td>7. capillaries</td>
<td>drug that increases blood pressure and heart rate, while causing arteries to contract</td>
</tr>
<tr>
<td>8. malignant</td>
<td>substance that attaches itself to the walls of our lungs as we age, whether we smoke or not</td>
</tr>
<tr>
<td>9. cancer</td>
<td>serious, often deadly disease that causes the body’s cells to mutate and grow out of control</td>
</tr>
<tr>
<td>10. tar</td>
<td>strong physical or psychological craving for a substance despite its harmful effects</td>
</tr>
</tbody>
</table>
CHECKING COMPREHENSION

Read the following sentences and circle the letter of the word that best fills each blank.

The lungs are made up of millions of tiny ___1____. Inside them, small blood vessels called ___2____ carry blood to our lungs. The blood picks up fresh ___3____ and gets rid of carbon dioxide. Next, the blood is pumped by the heart back through the body. To carry out this vital task, the lungs must be protected from disease and infection. Tiny hairs called ___4____ filter dust and other harmful particles out of the air we breathe. Cigarette smoke damages these hairs and leaves the lungs at risk for ___5____. ___6____ collects in the lungs, causing the smoker to have a chronic cough. With enough smoking, the ___7____ of the lungs are gradually damaged. The smoker has trouble breathing and ___8____ becomes very difficult. ___9____, the thick substance found in cigarette smoke, also collects in the lungs. This can damage lung cells and lead to the formation of a ___10____.

1. A. nerve cells
   B. blood cells
   C. cartilage fragments
   D. air sacs

2. A. capillaries
   B. aortas
   C. bronchia
   D. cilia

3. A. nitrogen
   B. oxygen
   C. platelets
   D. plasma

4. A. follicles
   B. lashes
   C. capillaries
   D. cilia

5. A. infection
   B. stroke
   C. oxidation
   D. respiration

6. A. Air
   B. Water
   C. Blood
   D. Mucus

7. A. nerves
   B. size and position
   C. inner walls
   D. white blood cells

8. A. exercising
   B. eating
   C. sleeping
   D. hearing

9. A. Cholesterol
   B. Tar
   C. Calcium
   D. Nitrosamine

10. A. cancerous tumor
    B. genetic mutation
    C. pulmonary artery
    D. varicose vein
SECONDHAND SMOKE

When people smoke near you, they aren’t just hurting themselves. What would you do or say to protect your lungs in each situation described below?

1. You’re doing your homework when your aunt lights up a cigarette just a few feet away. The smoke is blowing right in your face.

2. You’re driving some friends to school when one of them takes out a cigarette and says, “Nobody minds if I smoke, right?” You don’t want your clothes or your car to smell like smoke.

3. You’re about to enjoy your favorite meal in your favorite restaurant. Even though you’re sitting in the non-smoking section, someone at the next table lights up a cigarette. All you can taste is smoke.

4. A friend is hanging out with you in your room. You want to impress the friend and maybe even date her (him). When you’re not looking, the friend lights up a cigarette. If your mom smells the smoke, you’ll be in big trouble.
TRUE OR FALSE

Place a T next to statements that are true and an F next to statements that are false.

1. ___ Cilia carry oxygen-rich blood away from the lungs.
2. ___ Emphysema occurs when the lungs’ air sacs become damaged and lose their elasticity.
3. ___ Only smokers have deposits of cholesterol and calcium in their blood vessels.
4. ___ Nicotine causes the arteries to contract and blood pressure to increase.
5. ___ Tobacco smoke contains over forty carcinogens.
6. ___ People who stop smoking can reduce their risk of developing lung disease.
7. ___ Passive smoking does not harm the lungs of non-smokers.
8. ___ Cigarettes are the most heavily advertised product in the United States.
9. ___ Children of smokers have a higher risk of lung illnesses such as asthma.
10. ___ Tobacco companies have begun marketing in many third-world companies.
Use the number code below to read these unbelievable facts about tobacco.

A = 1   G = 6   M = 11   S = 16
B = 2   H = 7   N = 12   T = 17
C = 3   I = 8   O = 13   U = 18
D = 4   K = 9   P = 14   W = 19
E = 5   L = 10  R = 15   Y = 20

1. Cigarettes contain over four-thousand chemicals, including two-hundred 14-13-8-16-13-12-16.

2. Each year in the United States, smoking causes over five 11-8-10-8-13-12 years of lost life.

3. Cigarettes contain 1-15-16-5-12-8-3, the same substance found in rat poison.

4. Nicotine was once the main ingredient in many bug and weed 9-8-10-10-5-15-16.

5. A pack-a-day smoker inhales about seven 14-13-18-12-4-16 of tar during his or her lifetime.

6. At a crowded restaurant or concert, second-hand smoke can produce six times more pollution than a busy 7-8-6-7-19-1-20.

7. Nicotine is more addictive than 7-5-15-13-8-12-5 or 3-13-3-1-8-12-5.

8. Smoking kills more people than AIDS, alcohol, drug abuse, car crashes, murder and fires... 3-13-11-2-8-12-5-4.
TOBACCO TACTICS

Tobacco companies fill cigarette ads with pictures of healthy people having the time of their lives. This is one way that tobacco companies help people forget about the dangers of smoking.

Find a cigarette ad in a magazine and use it to answer the following questions.

1. Do you think the people in the ad look like real smokers? Why or why not?

2. Does the ad use any of the following tactics to sell tobacco? If so, which one? How is the tactic used in the ad you chose?
   - **Tactic:** ads that show sexy people doing glamorous things  
     **Hidden Message:** use this product and you’ll be sexy, grownup and glamorous
   - **Tactic:** ads that show people being active, athletic and adventurous  
     **Hidden Message:** tobacco is not dangerous; if you smoke, you’ll have a great time
   - **Tactic:** ads that use beautiful young models and words like “thin” or “slim”  
     **Hidden Message:** tobacco will make you thin, youthful and beautiful
   - **Tactic:** ads that show people in a certain group (women, African-Americans)  
     **Hidden Message:** everyone who’s like you is doing it
   - **Tactic:** ads that show women as superior to men  
     **Hidden Message:** smoking will make you independent and dominant

3. On the back of this sheet, draw a version of the ad showing what can really happen to people who smoke. Use the information you learned in the video Smoking and Human Physiology, and be creative.
WORD SEARCH

The following words can be found in the maze below. The letters may be arranged horizontally, vertically, diagonally or backward.

nicotine
tobacco
emphysema
cancer
carcinogen
epidemic
malignant
bronchi
oxygen
cholesterol
TEST

Circle the phrase which best answers each question.

1. The lungs work to supply the body with fresh:
   - carbon dioxide.
   - oxygen.
   - blood.
   - colloids.

2. Smoking destroys the lungs' defense against:
   - white blood cells.
   - cholesterol.
   - oxygen.
   - infection.

3. What are the deposits that attach themselves to the walls of our lungs as we age, whether we smoke or not?
   - nicotine and tar.
   - oxygen and carbon monoxide.
   - white blood cells and lymphatic cells.
   - cholesterol and calcium.

4. Nicotine increases blood pressure and causes the arteries to:
   - lose their elasticity.
   - stretch.
   - contract.
   - weaken.

5. The United States Surgeon General classified nicotine as a narcotic because it is:
   - addictive.
   - illegal in most countries.
   - safe when used with a filter.
   - either inhaled or injected.
6. Capillaries are tiny:
   - blood vessels.
   - hairs that clean the lungs.
   - red blood cells that dissolve in the lungs’ air sacs.
   - air sacs that deliver oxygen to the blood.

7. The disease that causes the inner walls of the lungs to lose their elasticity is called:
   - cancer.
   - emphysema.
   - bronchitis.
   - pneumonia.

8. Nicotine contains over 40 cancer-causing substances, also known as:
   - narcotics.
   - non-polar substances.
   - toxins.
   - carcinogens.

9. Babies born to smokers have a greater risk of:
   - cancer.
   - emphysema.
   - low birth weight.
   - stroke.

10. Secondhand smoke is smoke that is inhaled:
    - from an unlit cigarette.
    - by people who are near a smoker.
    - through a filter.
    - none of the above
ADDITIONAL AIMS MULTIMEDIA PROGRAMS

You and your students might also enjoy these other AIMS Multimedia programs:

9865-EN-VID-JE3: “Alcohol Abuse and Teens: The Turning Point”
9918-EN-VID-JE3: “Crack: Dead at Seventeen”
VOCABULARY

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2. cholesterol
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6. emphysema
7. capillaries
8. malignant
9. cancer
10. tar

5. a chemical substance that causes cancer
10. thick substance found in cigarette smoke which contains many harmful substances
6. an illness of the lungs which causes the inner walls to lose their elasticity
7. tiny blood vessels that carry blood to the lungs
1. fine hairs that line the lungs, trapping dust and other particles
8. type of tumor that contains cancerous cells
3. drug that increases blood pressure and heart rate, while causing arteries to contract
2. substance that attaches itself to the walls of our lungs as we age, whether we smoke or not
9. serious, often deadly disease that causes the body’s cells to mutate and grow out of control
4. strong physical or psychological craving for a substance despite its harmful effects
CHECKING COMPREHENSION

Read the following sentences and circle the letter of the word that best fills each blank.

The lungs are made up of millions of tiny __1__. Inside them, small blood vessels called __2__ carry blood to our lungs. The blood picks up fresh __3__ and gets rid of carbon dioxide. Next, the blood is pumped by the heart back through the body. To carry out this vital task, the lungs must be protected from disease and infection. Tiny hairs called __4__ filter dust and other harmful particles out of the air we breathe. Cigarette smoke damages these hairs and leaves the lungs at risk for __5__. __6__ collects in the lungs, causing the smoker to have a chronic cough. With enough smoking, the __7__ of the lungs are gradually damaged. The smoker has trouble breathing and __8__ becomes very difficult. __9__, the thick substance found in cigarette smoke, also collects in the lungs. This can damage lung cells and lead to the formation of a __10__.

1. A. nerve cells  
   B. blood cells  
   C. cartilage fragments  
   D. air sacs

2. A. capillaries  
   B. aortas  
   C. bronchia  
   D. cilia

3. A. nitrogen  
   B. oxygen  
   C. platelets  
   D. plasma

4. A. follicles  
   B. lashes  
   C. capillaries  
   D. cilia

5. A. infection  
   B. stroke  
   C. oxidation  
   D. respiration

6. A. Air  
   B. Water  
   C. Blood  
   D. Mucus

7. A. nerves  
   B. size and position  
   C. inner walls  
   D. white blood cells

8. A. exercising  
   B. eating  
   C. sleeping  
   D. hearing

9. A. Cholesterol  
   B. Tar  
   C. Calcium  
   D. Nitrosamine

10. A. cancerous tumor  
    B. genetic mutation  
    C. pulmonary artery  
    D. varicose vein
SECONDHAND SMOKE

When people smoke near you, they aren’t just hurting themselves. What would you do or say to protect your lungs in each situation described below?

1. You’re doing your homework when your aunt lights up a cigarette just a few feet away. The smoke is blowing right in your face.

   Answers will vary.

2. You’re driving some friends to school when one of them takes out a cigarette and says, “Nobody minds if I smoke, right?” You don’t want your clothes or your car to smell like smoke.

   Answers will vary.

3. You’re about to enjoy your favorite meal in your favorite restaurant. Even though you’re sitting in the non-smoking section, someone at the next table lights up a cigarette. All you can taste is smoke.

   Answers will vary.

4. A friend is hanging out with you in your room. You want to impress the friend and maybe even date her (him). When you’re not looking, the friend lights up a cigarette. If your mom smells the smoke, you’ll be in big trouble.

   Answers will vary.
TRUE OR FALSE

Place a T next to statements that are true and an F next to statements that are false.

1. __ F ___ Cilia carry oxygen-rich blood away from the lungs.
2. __ T ___ Emphysema occurs when the lungs' air sacs become damaged and lose their elasticity.
3. __ F ___ Only smokers have deposits of cholesterol and calcium in their blood vessels.
4. __ T ___ Nicotine causes the arteries to contract and blood pressure to increase.
5. __ T ___ Tobacco smoke contains over forty carcinogens.
6. __ T ___ People who stop smoking can reduce their risk of developing lung disease.
7. __ F ___ Passive smoking does not harm the lungs of non-smokers.
8. __ T ___ Cigarettes are the most heavily advertised product in the United States.
9. __ T ___ Children of smokers have a higher risk of lung illnesses such as asthma.
10. __ T ___ Tobacco companies have begun marketing in many third-world companies.
ANSWER KEY for page 22

NUMBER CODE

Use the number code below to read these unbelievable facts about tobacco.

A = 1  G = 6  M = 11  S = 16
B = 2  H = 7  N = 12  T = 17
C = 3  I = 8  O = 13  U = 18
D = 4  K = 9  P = 14  W = 19
E = 5  L = 10  R = 15  Y = 20

1. Cigarettes contain over four-thousand chemicals, including two-hundred
   14-13-8-16-13-12-16.

   poisons

2. Each year in the United States, smoking causes over five 11-8-10-10-8-13-12 years of lost life.

   million

3. Cigarettes contain 1-15-16-5-12-8-3, the same substance found in rat poison.

   arsenic

4. Nicotine was once the main ingredient in many bug and weed 9-8-10-10-5-15-16.

   killers

5. A pack-a-day smoker inhales about seven 14-13-18-12-4-16 of tar during his or her lifetime.

   pounds

6. At a crowded restaurant or concert, second-hand smoke can produce six times more pollution
   than a busy 7-8-6-7-19-1-20.

   highway

7. Nicotine is more addictive than 7-5-15-13-8-12-5 or 3-13-3-1-8-12-5.

   heroine, cocaine

8. Smoking kills more people than AIDS, alcohol, drug abuse, car crashes, murder and fires...
   3-13-11-2-8-12-5-4.

   combined
TOBACCO TACTICS

Tobacco companies fill cigarette ads with pictures of healthy people having the time of their lives. This is one way that tobacco companies help people forget about the dangers of smoking.

Find a cigarette ad in a magazine and use it to answer the following questions.

1. Do you think the people in the ad look like real smokers? Why or why not?

   Answers will vary.

2. Does the ad use any of the following tactics to sell tobacco? If so, which one? How is the tactic used in the ad you chose?

   • Tactic: ads that show sexy people doing glamorous things
     Hidden Message: use this product and you’ll be sexy, grownup and glamorous

   • Tactic: ads that show people being active, athletic and adventurous
     Hidden Message: tobacco is not dangerous; if you smoke, you’ll have a great time

   • Tactic: ads that use beautiful young models and words like “thin” or “slim”
     Hidden Message: tobacco will make you thin, youthful and beautiful

   • Tactic: ads that show people in a certain group (women, African-Americans)
     Hidden Message: everyone who’s like you is doing it

   • Tactic: ads that show women as superior to men
     Hidden Message: smoking will make you independent and dominant

   Answers will vary.

3. On the back of this sheet, draw a version of the ad showing what can really happen to people who smoke. Use the information you learned in the video Smoking and Human Physiology, and be creative.
WORD SEARCH

The following words can be found in the maze below. The letters may be arranged horizontally, vertically, diagonally or backward.

nicotine
tobacco
emphysema
cancer
carcinogen
epidemic
malignant
bronchi
oxygen
cholesterol
TEST

Circle the phrase which best answers each question.

1. The lungs work to supply the body with fresh:
   - carbon dioxide.
   - oxygen. [Circle]
   - blood.
   - colloids.

2. Smoking destroys the lungs’ defense against:
   - white blood cells.
   - cholesterol.
   - oxygen.
   - infection. [Circle]

3. What are the deposits that attach themselves to the walls of our lungs as we age, whether we smoke or not?
   - nicotine and tar.
   - oxygen and carbon monoxide.
   - white blood cells and lymphatic cells.
   - cholesterol and calcium. [Circle]

4. Nicotine increases blood pressure and causes the arteries to:
   - lose their elasticity.
   - stretch.
   - contract. [Circle]
   - weaken.

5. The United States Surgeon General classified nicotine as a narcotic because it is:
   - addictive. [Circle]
   - illegal in most countries.
   - safe when used with a filter.
   - either inhaled or injected.
6. Capillaries are tiny:

   • blood vessels.
   • hairs that clean the lungs.
   • red blood cells that dissolve in the lungs' air sacs.
   • air sacs that deliver oxygen to the blood.

7. The disease that causes the inner walls of the lungs to lose their elasticity is called:

   • cancer.
   • emphysema.
   • bronchitis.
   • pneumonia.

8. Nicotine contains over 40 cancer-causing substances, also known as:

   • narcotics.
   • non-polar substances.
   • toxins.
   • carcinogens.

9. Babies born to smokers have a greater risk of:

   • cancer.
   • emphysema.
   • low birth weight.
   • stroke.

10. Secondhand smoke is smoke that is inhaled:

    • from an unlit cigarette.
    • by people who are near a smoker.