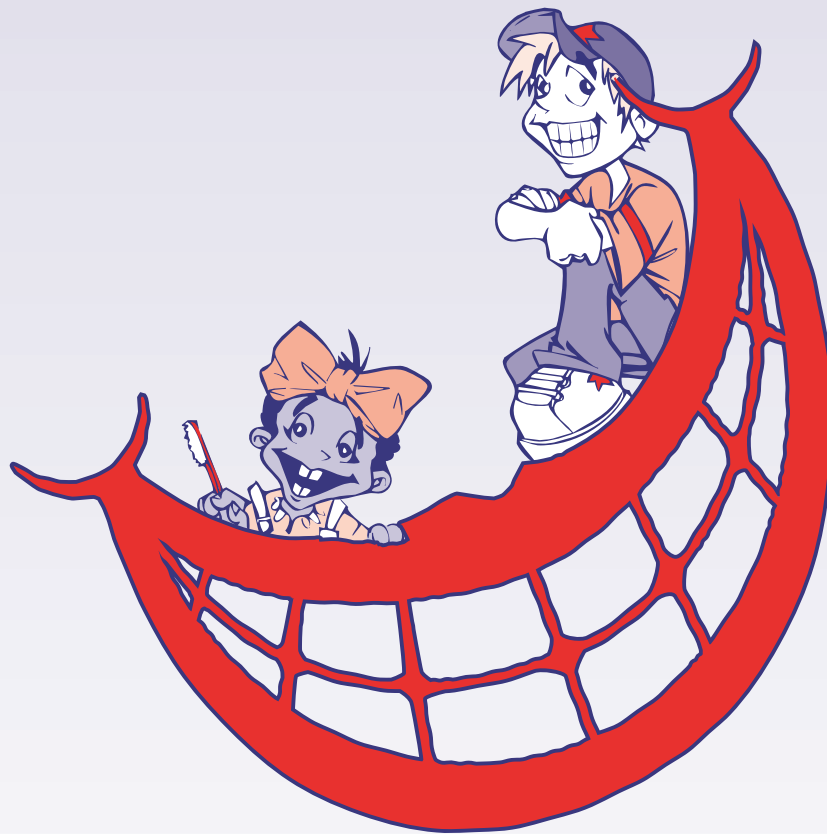


# Oral Health

Supplemental Curriculum Resource

Seventh Grade



South Carolina Healthy Schools  
Office of Adult and Community Education  
Division of District and Community Services  
South Carolina Department of Education

**Inez M. Tenenbaum**

State Superintendent of Education

# *The South Carolina Department of Education's Oral Health Curriculum Guides*

The Oral Health Supplemental Curriculum Resource Guides were developed and endorsed by South Carolina Healthy Schools in the Office of Adult and Community Education at The South Carolina Department of Education in 2002-2003. The lessons and activities for Kindergarten, 2<sup>nd</sup> and 7<sup>th</sup> grade students were designed to reinforce the health and safety learning standards at these grade levels. The Oral Health Supplemental Curriculum Resource Guides were funded through CDC DASH Cooperative Agreement U58/CCU417047-03-02 and South Carolina Healthy Schools at the State Department of Education.

The Oral Health Supplemental Curriculum Resource Guide for Preschool, developed in 2005, draws from and was designed to be part of the original oral health curriculum resource series. The Preschool Guide, part of the *More Smiling Faces in Beautiful Places* project, was funded by a grant from the Robert Wood Johnson Foundation.

## **Oral Health Supplemental Resource Guides**

### **Purpose:**

These guides contain lessons that encourage students to take care of their teeth as well as teach them oral health concepts. Each of the student activities in the *Oral Health Supplemental Resource Guides* includes a list of needed materials, background information, step-by-step instructions and suggested extension and evaluation activities. These guides are primarily designed for classroom use.

### **Highlights:**

#### **Preschool Resource Guide**

- 6 activities designed for children age 3-4
- parent tip sheets included with each activity

#### **Kindergarten Resource Guide**

- aligned with health and safety standards
- 8 hands-on activities
- additional ideas for the center-based classroom

#### **2<sup>nd</sup> Grade Resource Guide**

- introductory activities
- 12 standards-based lessons that actively engage students
- ideas for integrating oral health concepts in all subject areas
- resources for students and teachers

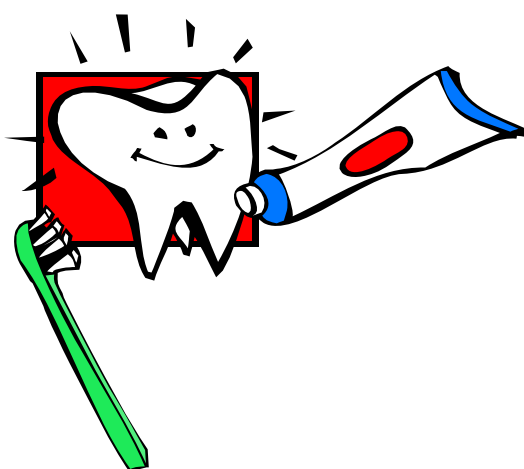
#### **7<sup>th</sup> Grade Resource Guide**

- 15 lessons aligned with health and safety standards
- age-appropriate lessons include preventing dental injuries, resisting tobacco use, determining healthy and unhealthy foods for teeth and bodies, and learning about orthodontics

The Oral Health Supplemental Curriculum Resource Guides are available on CD. For more information contact the Oral Health Division at 803-898-0194.

**ORAL HEALTH  
SUPPLEMENTAL  
CURRICULUM RESOURCE**

**SEVENTH GRADE**



**South Carolina Healthy Schools  
Office of Adult and Community Education  
Division of District and Community Services  
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The initial draft was made available to the Children's Oral Health Coalition Curriculum Committee for its review. The committee members were Dr. Linda Kaste, College of Dental Medicine, Medical University of South Carolina; Beverly Dunbar; Dee Dee Chewing, Healthy Learners; Cindy Poole, Health Reach; and Libby Brown, South Carolina Department of Health and Environmental Control. The materials were also reviewed by several district-level health coordinators: Beth Barry, Richland School District One; Lorraine Conrad, Richland School District Two; Kitty Farnell, District Five of Lexington and Richland Counties; Sara Morgan, Lee County School District; and Joan Trezevant, Fairfield County School District. Dr. Raymond Lala, oral health coordinator at the South Carolina Department of Health and Environmental Control, was also given the opportunity to review the document and provide input.

As part of the development process, classroom teachers from Richland District Two and Lexington District One also reviewed the materials: Nancy Ankney, Gwen Sasiene, and Dr. Ann Slater. In addition, State Department of Education staff in the Office of Curriculum and Standards and the Office of Adult and Community Education were given the opportunity to review drafts of the curriculum and make suggestions.

## **How the *Oral Health Supplemental Curriculum Resource* Relates to the South Carolina Health and Safety Curriculum Standards**

The South Carolina health and safety education curriculum standards are based on seven learning standards that identify what students should know and be able to do.

### **Learning Standards**

1. Students will comprehend health promotion and disease-prevention concepts.
2. Students will demonstrate the ability to access valid health information, products, and services.
3. Students will demonstrate the ability to practice behaviors that enhance health and reduce risks.
4. Students will analyze the influence of personal beliefs, culture, media, technology, and other factors on health.
5. Students will demonstrate the ability to use interpersonal communication skills to enhance health.
6. Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.
7. Students will demonstrate the ability to advocate for personal, family, and community health.

Additionally there are six identified target content areas within which students should work to fulfill each standard:

### **Content Areas**

- I. Personal Health and Wellness
- II. Nutritional Choices
- III. Mental Health
- IV. Injury Prevention
- V. Family Living and Healthy Sexuality
- VI. Alcohol, Tobacco, and Other Drugs

The *Oral Health Supplemental Curriculum Resource* was designed in alignment with these standards and content areas. General topics and student performance indicators were developed and correlated with specific health and safety learning standards and content areas where applicable.

## Assessing the Oral Health Activities

Each of the student activities in the *Oral Health Supplemental Resource* includes a suggested evaluation activity. When selecting or designing an assessment tool, one must examine the purpose of the assessment. The selection, design, and use of assessment techniques should also be guided by considerations of validity, reliability, and objectivity (i.e., the extent to which strategies will yield information that is relevant, accurate, and verifiable). To help ensure that student assessments have these three characteristics, the following guidelines may prove helpful:

- Judgments should be based on the results of multiple assessment techniques (i.e., a variety of formats and methods of assessment should be used).
- Assessment procedures should be fair to all students.
- Assessments should adequately represent the range of objectives and standards that students are expected to achieve.
- The techniques used for assessment should be compatible with the approaches used for instruction.
- The criteria for making judgments about student responses should be clearly established.

It is essential for health and safety educators and their students to be active participants in the assessment process. In fact, assessment itself might best be viewed as a learning experience—one that encourages teachers and students to reflect on their classroom experiences and to share those reflections with family, school, and community. When we see it in that light, we can easily acknowledge that assessment is involved in much of what goes on in classrooms every day. Throughout a given class period, the teacher and students continually evaluate their own work and the work of others. The challenge for health and safety educators is to find innovative ways to provide systematic feedback about students and programs.

Here are three general recommendations for assessment in health and safety:

- The type of assessment used should fit the purpose of the assessment.
- Individual classroom assessments should measure both the students' knowledge of essential facts and concepts and their ability to apply the knowledge and skills.
- Both objective and performance assessments should be used in the classroom.

## Using Performance Tasks as an Assessment Tool

**Performance tasks** are exercises, or curriculum-embedded projects, that students complete over an extended period of time (more than one class period). The exercise involves several parts and may require multiple activities and types of responses. Students may complete some work in groups, but the final product always includes one or more individually completed components.

Although performance tasks will require health facts and concepts specific to the context of the assessment, they are intended to assess thinking and behavioral skills such as accessing information, analyzing influences, decision making, and communication (i.e., refusal skills or advocacy).

Tasks at the seventh-grade level could include brainstorming and other group work, writing in journals and learning logs; role-playing, improvisations, and reenactments that enable students to explore their understanding of various experiences; debating the pros and cons of issues; utilizing art or media such as posters, brochures, or videos; and interviewing and conferencing are ideal ways to determine a student's level of understanding. Performance tasks are intended to be grounded in authentic student experiences, investigations, and interactions that are genuine for students in their home, school, or community environments. Performance assessments are especially well suited to certain content areas since they allow teachers to directly observe the application of the desired skill.

(Source: *South Carolina Health and Safety Education Curriculum*, South Carolina Department of Education.)



# General Health and Safety Topics and Student Performance Indicators

## I. Oral Health and Overall Health

### CONTENT AREA I: PERSONAL HEALTH AND WELLNESS

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicators:**

- A. The student will be able to identify personal practices that promote a healthy lifestyle (e.g., washing hands, brushing teeth, using fluoride, getting proper nutrition).
- B. The student will be able to identify the structure and functions of the major body systems (e.g., describe a healthy mouth, the function of teeth, and the process of losing teeth).
- C. The student will be able to describe how lifestyle behaviors, environment, genetics, and medical care influence oral health.
- D. The student will be able to describe how oral health problems can affect overall health.

**Learning Standard 2:** Access valid health information, products, and services.

**Student Performance Indicator:**

The student will be able to identify sources and services that promote oral health and prevent oral health–related diseases.

**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicator:**

The student will be able to determine and demonstrate strategies to improve or maintain personal health, with an emphasis on oral health care.

**Learning Standard 6:** Use goal-setting and decision-making skills to enhance health.

**Student Performance Indicator:**

The student will be able to develop and implement a personal health and wellness program with specific goals related to oral health.

## II. Oral Health and Nutrition

### CONTENT AREA II: NUTRITIONAL CHOICES

**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicators:**

- A. The student will be able to explain the relationship between food selection and oral health.
- B. The student will demonstrate the ability to make nutritive comparisons of different food products.

**Learning Standard 5:** Use interpersonal communication skills to enhance health.

**Student Performance Indicator:**

The student will be able to use effective communication skills to explain what foods are beneficial to oral health.

**Learning Standard 6:** Use goal-setting and decision-making skills to enhance health.

**Student Performance Indicators:**

- A. The student will be demonstrate the ability to select foods that have a positive impact on oral health as well as general health.
- B. The student will be able to develop a personal dietary plan that benefits his or her oral health as well as general health.
- C. The student will be able to determine the consequences of poor nutritional choices and the benefits of positive choices.

### **III. Self-Esteem and Oral Health**

#### **CONTENT AREA III: MENTAL HEALTH**

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:**

The student will be able to describe the consequences of poor oral hygiene and an unhealthy mouth as they relate to overall health and self-esteem.

### **IV. Injury Prevention**

#### **CONTENT AREA IV: Preventing Injuries**

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicators:**

- A. The student will be able to explain the relationship between positive health behaviors and the prevention of injuries, specifically oral injuries related to participation in sports.
- B. The student will be able to identify and develop safety strategies to prevent injuries, specifically oral injuries.

**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicator:**

The student will be able to respond appropriately to emergency dental situations, including the use of first-aid procedures for the mouth and teeth.

**Learning Standard 6:** Use goal-setting and decision-making skills to enhance health.

**Student Performance Indicator:**

The student will be able to use an age-appropriate decision-making process to reduce the risk of harm to self and others.

## VI. Oral Health and Tobacco Use

### CONTENT AREA VI: Alcohol, Tobacco, and Other Drugs

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:**

The student will be able to identify the short- and long-term effects of the use of smokeless tobacco on one's oral health and general health.

**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicator:**

The student will be able to assess the personal risks of smokeless tobacco use.

**Learning Standard 4:** Analyze the influence of personal beliefs, culture, media, technology, and other factors on health.

**Student Performance Indicator:**

The student will be able to recognize the influences of peers and family on behaviors related to the use of smokeless tobacco.

**Learning Standard 5:** Use interpersonal communication skills to enhance health.

**Student Performance Indicator:**

The student will be able to describe skills and strategies he or she could utilize in order to avoid tobacco use, particularly smokeless tobacco.

**Learning Standard 7:** Demonstrate the ability to advocate for personal, family, and community health.

**Student Performance Indicator:**

The student will demonstrate strategies to influence and/or support others in making the healthy choice concerning the use of tobacco, particularly smokeless tobacco.

# Content Target Area Matrix

## Content Area I

### Personal Health and Wellness

**RATIONALE:** Seven of the ten leading causes of death are related to personal behavior and lifestyle choices. Physical wellness and personal responsibility for the practice of health-enhancing behaviors are basic components of health in today's world. Students learn personal health skills best within an environment that supports the development and maintenance of positive health behaviors as well as understanding the causes, effects, treatment, and prevention of diseases.

<b>LEARNING STANDARDS</b>	<b>ORAL HEALTH STUDENT PERFORMANCE INDICATORS FOR GRADES K–8</b>
1. Students will comprehend health promotion and disease-prevention concepts.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• identify personal practices that promote a healthy lifestyle (e.g., washing hands, brushing teeth, using fluoride, getting proper nutrition);</li> <li>• identify the structure and functions of the major body systems (e.g., describe a healthy mouth, the function of teeth, and the process of losing teeth);</li> <li>• identify oral health problems that should be detected and treated early;</li> <li>• describe how lifestyle behaviors, environment, genetics, and medical care influence oral health; and</li> <li>• describe how oral health problems can affect overall health.</li> </ul>
2. Students will access valid health information, products, and services.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• identify sources and services that promote oral health and prevent oral health–related diseases.</li> <li>• describe what happens during a visit to the dentist and will recognize the importance of regular dental checkups.</li> </ul>
3. Students will demonstrate the ability to practice behaviors that enhance health and reduce risks.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• determine and demonstrate strategies to improve or maintain personal health, with an emphasis on oral health care.</li> </ul>
6. Students will use goal-setting and decision-making skills to enhance health.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• access personal oral health strengths and weaknesses and</li> <li>• develop and implement a personal health and wellness program with specific goals related to oral health.</li> </ul>

**Content Area II**  
**Nutritional Choices**

**RATIONALE:** An effective nutrition-education program contributes to lifelong health. Diverse nutrition practices and changing nutritional needs throughout the life cycle require balancing daily food intake. Healthy eating habits reduce the risk of one’s developing chronic diseases and other health problems.

<b>LEARNING STANDARDS</b>	<b>ORAL HEALTH STUDENT PERFORMANCE INDICATORS FOR GRADES K–8</b>
3. Students will demonstrate the ability to practice behaviors that enhance health and reduce risks.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• select foods that will have a positive impact on their oral health as well as general health,</li> <li>• demonstrate the ability to make age-appropriate nutritional choices based on valid information (e.g., Food Pyramid, Dietary Guidelines for Americans),</li> <li>• explain the relationship between food selection and oral health, and</li> <li>• demonstrate the ability to make nutritive comparisons of different food products.</li> </ul>
5. Students will use interpersonal communication skills to enhance health.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• use effective communication skills to explain what foods are beneficial to oral health.</li> </ul>
6. Students will use goal-setting and decision-making skills to enhance health.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• make healthy nutritional choices,</li> <li>• predict the effects of positive and negative nutritional choices on oral health,</li> <li>• develop a personal dietary plan that benefits their oral health as well as general health, and</li> <li>• determine the consequences of poor nutritional choices and the benefits of positive choices.</li> </ul>

## Content Area III

### Mental Health

**RATIONALE:** A positive self-image is an important component of mental health. Emotional health includes the ability to express needs, wants, and feelings; to handle emotions in positive ways; to manage anger and conflict; and to deal with frustration. Stress management provides the coping skills for maintaining positive mental health. Interpersonal communication skills promote the individual's network of social support by helping him or her build and maintain healthy relationships.

<b>LEARNING STANDARD</b>	<b>ORAL HEALTH STUDENT PERFORMANCE INDICATORS FOR GRADES K-8</b>
1. Students will comprehend health promotion and disease-prevention concepts.	By the end of grade eight, students should be able to <ul style="list-style-type: none"><li>• describe characteristics and behaviors that promote sound mental health and</li><li>• identify ways that poor oral health can affect a person's self-esteem.</li></ul>

**Content Area IV**  
**Preventing Injuries**

**RATIONALE:** Whether measured in the number of deaths, the dollar costs for treatment, or the potential years of life lost, injury ranks the highest among health problems affecting children and youth. Violent and self-destructive behaviors significantly contribute to this leading cause of death among the school-aged population. Effective safety education promotes beliefs and practices that enable students to avoid or reduce the risk of injuries that occur on streets and highways; in the community, the workplace, and the home; and at school.

<b>LEARNING STANDARDS</b>	<b>ORAL HEALTH STUDENT PERFORMANCE INDICATORS FOR GRADES K–8</b>
1. Students will comprehend health promotion and disease-prevention concepts.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• explain the relationship between positive health behaviors and the prevention of injuries, specifically oral injuries related to participation in sports and</li> <li>• identify and develop safety strategies to prevent injuries, specifically oral injuries.</li> </ul>
3. Students will demonstrate the ability to practice behaviors that enhance health and reduce risks.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• demonstrate strategies for avoiding or minimizing unsafe situations and</li> <li>• be able to respond appropriately to emergency dental situations, including the use of first-aid procedures for the mouth and teeth.</li> </ul>
6. Students will use goal-setting and decision-making skills to enhance health.	By the end of grade eight, students should be able to <ul style="list-style-type: none"> <li>• use an age-appropriate decision-making process to reduce the risk of harm to self and others.</li> </ul>

## Content Area VI

### Alcohol, Tobacco, and Other Drugs

**RATIONALE:** Substance abuse pervades our society, and students must understand its lifelong physical, emotional, and economic consequences. They must develop skills for resisting peer, social, and media influences on their personal choices.

<b>LEARNING STANDARDS</b>	<b>ORAL HEALTH STUDENT PERFORMANCE INDICATORS FOR GRADES K–8</b>
1. Students will comprehend health promotion and disease-prevention concepts.	By the end of grade eight, students should be able to <ul style="list-style-type: none"><li>• identify the short- and long-term effects of the use of smokeless tobacco on one’s oral health and general health.</li></ul>
3. Students will demonstrate the ability to practice behaviors that enhance health and reduce risks.	By the end of grade eight, students should be able to <ul style="list-style-type: none"><li>• assess the personal risks of tobacco use and</li><li>• explain how they can avoid the risks of smokeless tobacco use.</li></ul>
4. Students will analyze the influence of personal beliefs, culture, media, technology, and other factors on health.	By the end of grade eight, students should be able to <ul style="list-style-type: none"><li>• recognize the influences of peers and family on behaviors related to the use of smokeless tobacco.</li></ul>
5. Students will use interpersonal communication skills to enhance health.	By the end of grade eight, students should be able to <ul style="list-style-type: none"><li>• describe skills and strategies they could utilize in order to avoid tobacco use, particularly smokeless tobacco, and</li><li>• use effective verbal and nonverbal communication skills to express the healthy choice concerning the use of smokeless tobacco.</li></ul>
7. Students will demonstrate the ability to advocate for personal, family, and community health.	By the end of grade eight, students should be able to <ul style="list-style-type: none"><li>• demonstrate strategies to influence and/or support others in making the healthy choice concerning the use of tobacco, particularly smokeless tobacco.</li></ul>





# Oral Health Activities

## Activity 1

### CONTENT AREA I: PERSONAL HEALTH AND WELLNESS

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicators:**

- A. The student will be able to identify the structure and functions of the major body systems (e.g., describe a healthy mouth, the function of teeth, and the process of losing teeth).
- B. The student will be able to describe how oral health problems can affect overall health.

Factual Information	Materials	Lesson
<p>Students should be able to identify the six main parts of the tooth:</p> <ul style="list-style-type: none"> <li>• <b>enamel</b>—the hard, glossy, white covering of the tooth (the hardest substance in the human body);</li> <li>• <b>pulp</b>—the center portion of the tooth that contains nerves, blood vessels, and connective tissue;</li> <li>• <b>dentin</b>—the hard calcified tissue that forms the bulk of the tooth and gives it its shape;</li> <li>• <b>crown</b>—the exposed part of the tooth above the gum line;</li> <li>• <b>root</b>—the part of the tooth that extends below the gum line, anchors the tooth to the jaw, and provides nourishment;</li> <li>• <b>gum</b>—the firm, fleshy tissue covering the jaw and enveloping the teeth, and</li> <li>• <b>cusp</b>—the peak or point of a tooth.</li> </ul>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• copies of the “Main Parts of a Healthy Tooth” handout</li> <li>• student oral health journals</li> </ul>	<p>Use the “Main Parts of a Healthy Tooth” handout, , below, to show and explain the parts of the tooth. Then ask the students to label and define the different parts.</p> <p>Discuss with students the connection between general health and oral health. Ask students to respond in their oral health journals to one of the following two questions:</p> <ul style="list-style-type: none"> <li>• What health conditions manifest themselves in the mouth and can be detected by an oral health exam?</li> <li>• What are some ways that poor oral health can affect one’s general health?</li> </ul>

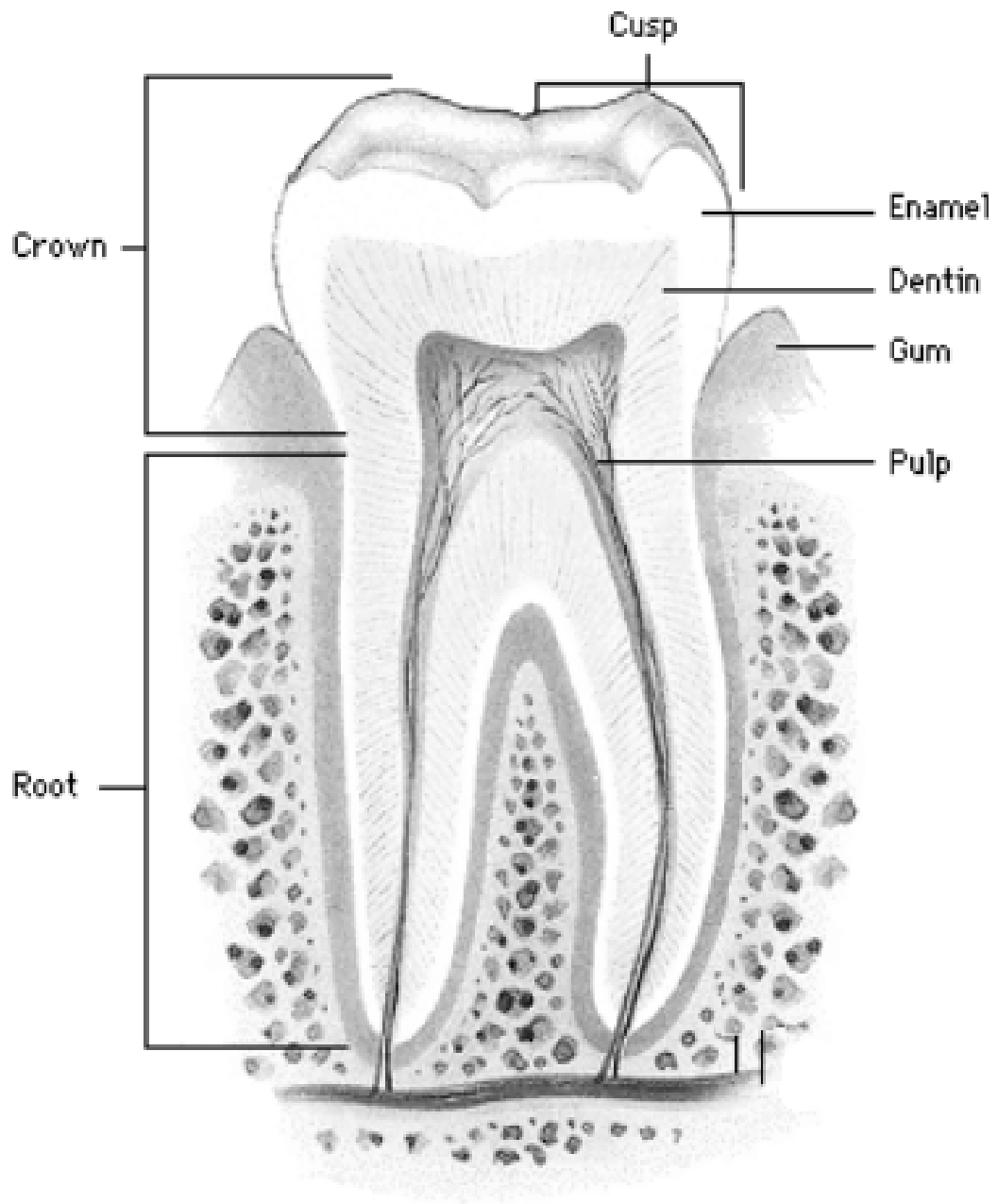
Factual Information	Materials	Lesson
<p>General health is directly linked to and affected by oral health. Many oral health infections, if left untreated, can lead to more serious medical conditions. Additionally, many health conditions manifest themselves in the oral cavity.</p> <p>Poor oral health directly affects one's general health. In fact, 75 percent of all oral cancers can be attributed to alcohol and tobacco use. This kind of cancer is preventable. Other unhealthy oral conditions are cavities, gingivitis, periodontal diseases. An unhealthy mouth can make eating difficult and can therefore prevent one from enjoying a varied and balanced diet.</p> <p>One of the most important function of teeth is to aid in digestion. Each permanent tooth has a certain job to perform and a certain shape to help it perform that job:</p> <ul style="list-style-type: none"> <li>• <b>Eight incisors</b>, located in the front of the mouth, are chisel-shaped and are used to cut food.</li> <li>• <b>Four cuspids</b>, on the other side of the incisors, are sharp and pointed and are used to break or tear food.</li> <li>• <b>Eight bicuspids</b>, between the cuspids and the six-year molars, have two peaks each and are used for tearing,</li> </ul>		

Factual Information	Materials	Lesson
<p>grinding, and crushing. The bicuspid appear between the ages of eleven and thirteen.</p> <ul style="list-style-type: none"> <li>• <b>Twelve permanent molars</b>, located beside the bicuspid, include the wisdom teeth. Each molar has four or more cusps and is used for grinding food.</li> </ul> <p>For more information on the different types of teeth refer to the “Additional Resources” section of the guide.</p>		

**Evaluation:**

Ask students to draw a mouth, including and labeling the different types of teeth.

# Main Parts of a Healthy Tooth



## Activity 2

### CONTENT AREA I: PERSONAL HEALTH AND WELLNESS



**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicator:**

The student will be able to determine and demonstrate strategies to improve or maintain personal health, with an emphasis on oral health care.

Factual Information	Materials	Lesson
<p>Almost everyone has the ability to have better health. The actions that we take every day promote either a healthy lifestyle or an unhealthy one.</p> <p>Poor health choices include using tobacco, eating a high-fat diet, living a sedentary lifestyle, and abusing drugs and alcohol.</p> <p>Oral health is also affected by poor choices such as eating un nourishing foods, not brushing and flossing regularly, not visiting the dentist consistently, and using tobacco and alcohol.</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• magazines, scissors, glue</li> <li>• two pieces of poster board</li> <li>• student oral health journals</li> </ul>	<p>Ask students to give examples of healthy and unhealthy lifestyle choices.</p> <p>Ask students to list several ways people neglect their oral health. Have them discuss the long-term effects of such neglect based on the information from previous lesson on the link between oral health and general health.</p> <p>Have students cut out magazine pictures representing healthy and unhealthy lifestyle choices. Then have students to create two collages—one with healthy lifestyle choices and the other one with unhealthy lifestyle choices. These can be expanded to include various foods and other products.</p>

**Evaluation:**

Have students list in their oral health journals the effects of poor oral health choices, three ways they can improve their overall health, and three ways they can improve their oral health.

**Extension:**

For classroom discussion, ask students to consider the question “Do advertisers promote positive lifestyle choices?” If not, what are some ways that advertisers do not promote positive choices, and *why* do they not do so?

### Activity 3

#### CONTENT AREA 1: PERSONAL HEALTH AND WELLNESS

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicators:**

- A. The student will be able to identify personal practices that promote a healthy lifestyle (e.g., washing hands, brushing teeth, using fluoride, getting proper nutrition).
- B. The student will be able to describe how lifestyle behaviors, environment, genetics, and medical care influence oral health.

**Learning Standard 6:** Use goal-setting and decision-making skills to enhance health.

**Student Performance Indicator:**

The student will be able to develop and implement a personal health and wellness program with specific goals related to oral health.

Factual Information	Materials	Lesson
<p>There is an emphasis on health in our country because of the social effects of poor health as well as rising health care costs.</p> <p>An individual makes a conscious decision to be healthy. One does this by being informed of the effects of the positive and negative choices discussed in the previous lesson.</p> <p><b>Examples of healthy habits:</b></p> <ul style="list-style-type: none"> <li>• brushing teeth</li> <li>• eating nutritious foods</li> <li>• going to the doctor and the dentist regularly</li> <li>• staying out of the sun</li> <li>• wearing a hat outside</li> <li>• wearing sunglasses and sun protection</li> <li>• getting enough sleep</li> </ul> <p><b>Examples of healthy products:</b></p> <ul style="list-style-type: none"> <li>• vitamins and nutritious foods</li> <li>• sunscreens and moisturizers</li> </ul>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• paper, pencils</li> <li>• copies of the “General Health and Oral Health Improvement Plan” sheet, below</li> </ul>	<p><b>Commit to Your Health</b></p> <p>Divide the class into two or three groups, each with a leader and a recorder. Have students list health habits (oral health and general health) that help prevent disease and products that help prevent oral disease.</p> <p>Extend by having them discuss how to incorporate these habits and products into their daily lives.</p> <p>Finally, have students prioritize a list of specific behaviors that they can commit to implementing in their own lives.</p> <p>Have students agree to integrate two positive behaviors and/or products into their current lifestyle—one for general health and one for oral health. Have students write up and agree to follow an oral health and general health improvement plan. Refer to the “General Health and Oral Health Improvement Plan” sheet.</p>

Factual Information	Materials	Lesson
<ul style="list-style-type: none"><li data-bbox="207 191 574 289">toothbrush, fluoride toothpaste, and dental floss</li></ul> <p data-bbox="207 327 604 579">Toothpaste is a substance used for cleaning teeth. The most important ingredient in a good toothpaste is fluoride. It binds with teeth and helps them resist decay.</p>		



## GENERAL HEALTH AND ORAL HEALTH IMPROVEMENT PLAN

To help improve my **general health** I, \_\_\_\_\_,  
(name)

will \_\_\_\_\_

\_\_\_\_\_

and \_\_\_\_\_.

To help improve my **oral health** I will \_\_\_\_\_

\_\_\_\_\_

and \_\_\_\_\_.

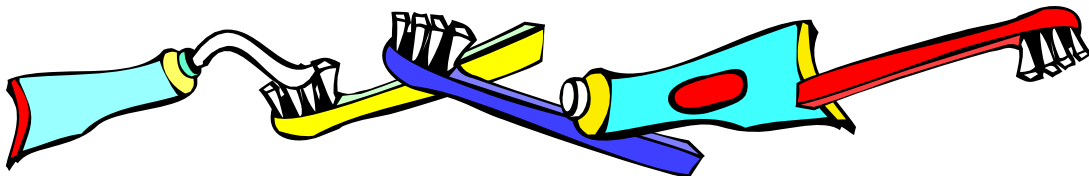
**These are some things I can do to help me be successful in my plan** (check those that apply to you):

- |   |       |
|---|-------|
| Brushing and flossing teeth               | _____ |
| Eating nutritious foods                   | _____ |
| Going to the doctor and dentist regularly | _____ |
| Staying out of the sun                    | _____ |
| Wearing a hat outside                     | _____ |
| Wearing sunglasses and sun protection     | _____ |
| Getting enough sleep                      | _____ |

\_\_\_\_\_  
Sign your name.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent's/guardian's signature (optional)





### Activity 3 (continued)

Factual Information	Materials	Lesson
<p>Examples of how to improve oral health could include</p> <ul style="list-style-type: none"> <li>• agreeing to brush teeth twice a day for at least five minutes each time,</li> <li>• flossing teeth once a day,</li> <li>• using a fluoride rinse,</li> <li>• deciding not to use smokeless tobacco, and</li> <li>• limiting sugar intake.</li> </ul> <p><b>Additional tips to share with students:</b></p> <ul style="list-style-type: none"> <li>• Replace your toothbrush when the bristles become frayed (about every three to four months).</li> <li>• Rinse your toothbrush thoroughly after each use.</li> <li>• Air dry your toothbrush in a rack or upright in a glass to keep its bristles firm.</li> <li>• Use a toothbrush with a straight handle that is long enough to ensure a good grip, a head that is about an inch long, and a flat brushing surface that has soft nylon bristles with rounded ends.</li> </ul>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• paper, colored pencils, markers</li> </ul>	<p>Have volunteer students share their health plans and describe how their plans will help improve their overall health and their oral health.</p> <p>Have cooperative groups design an advertisement for an oral health product or habit. Then have them present their ads to the class.</p>

**Evaluation:**

At the end of the week, have students share the progress they have made on the “General Health and Oral Health Improvement Plan” sheets and explain what effect their plans may have on their future lifestyle choices.

## Activity 4

### CONTENT AREA I: HEALTH AND WELLNESS

**Learning Standard 2:** Access valid health information, products, and services.

**Student Performance Indicator:**

The student will be able to identify sources and services that promote oral health and prevent oral health–related diseases.

Factual Information	Materials	Lesson
<p>There are community resources for health care. All health services, including dental services, should be selected carefully. One should look for the following conditions when selecting a dentist:</p> <ul style="list-style-type: none"> <li>• the office and the staff are neat and clean;</li> <li>• the staff wear masks, protective eye wear, and gloves;</li> <li>• the staff use protective procedures to prevent the transmission of infectious diseases;</li> <li>• the staff provide information on home oral health care; and</li> <li>• the support staff maintain an updated medical history on each patient.</li> </ul> <p>Some people are fortunate enough to have perfectly straight teeth. However, an estimated 65 percent of the general population has less than perfect tooth alignment. (For some common causes of poorly aligned teeth, see the “Additional Resources” section of this guide.)</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• several phone books</li> <li>• paper, pencils</li> <li>• the “Brace Yourself! Get the Facts on Orthodontics” sheet, below, which could be used to make an overhead transparency</li> </ul>	<p>Have students look through the Yellow Pages, and generate a list of health care resources. Have them pay particular attention to oral health care services.</p> <p>Use factual information and the “Brace Yourself! Get the Facts on Orthodontics” sheet to discuss with students why people visit an orthodontist. If possible, have a dental hygienist or a dental student visit the class to explain how braces and retainers work and why it is important to correct positional problems.</p> <p>Ask student volunteers to describe their experiences at the dentist’s or the orthodontist’s office. If the other students do not visit the dentist regularly or are getting ready to visit an orthodontist, this information could be helpful to them.</p>

Factual Information	Materials	Lesson
<p>Going to an orthodontist is a good choice for many people. Orthodontics is the branch of dentistry that deals with the diagnosis and treatment of poorly aligned bites, crooked teeth, and jaw deformities.</p> <p>Common conditions that can benefit from orthodontic treatment are crowded teeth, cross-bite, under-bite, protruded teeth, and receding jaw. If not corrected, these conditions can lead to</p> <ul style="list-style-type: none"> <li>• speaking difficulties,</li> <li>• chewing difficulty that impacts nutrition,</li> <li>• strain on jaw muscles that causes pain,</li> <li>• facial deformities that lead to emotional and psychological problems, including diminished self-esteem; and</li> <li>• difficulty brushing and flossing that can lead to plaque accumulation and thus to tooth decay, gum disease, and tooth loss.</li> </ul> <p>Some people begin orthodontic treatment as early as age four or five; however, the average age that people begin treatment is nine.</p> <p>Even adults are now undergoing orthodontic treatment, due in part to the development of “invisible” braces that can be placed on the back of the teeth. An</p>	<p><b>For the experiment:</b></p> <ul style="list-style-type: none"> <li>• stick</li> <li>• coffee can full of dirt</li> <li>• several small rocks</li> </ul>	<p>Conduct the “How Orthodontics Works” experiment.</p> <p>Have students design a three-fold brochure defining what orthodontics is and explaining why some people need to have orthodontic work. Have them define the term <i>orthodontics</i>, explain how braces work, name some common conditions that need orthodontic treatment, and list some of the problems that can result if a person does not receive this kind of treatment.</p>

Factual Information	Materials	Lesson
<p>individual with braces can lead a normal life and can even participate in sports with a proper mouth guard.</p> <p>The way orthodontics works is to apply pressure that forces teeth in a new direction. When this movement occurs, space is created on one side and new bone grows to support the structure. This new bone is what stops the corrected teeth from becoming crooked again after the braces are removed.</p>		

**Evaluation:**

Completion of the brochure is part of the evaluation. Then have students write in their oral health journals about how they feel when they visit the dentist or the orthodontist.



# Brace Yourself!

## Get the Facts on Orthodontics



- An estimated 65 percent of the general population has less than perfect tooth alignment.
- Orthodontics is a branch of dentistry that deals with the diagnosis and treatment of poorly aligned bites, crooked teeth, and jaw deformities.
- Common conditions that benefit from orthodontic treatment include crowded teeth, cross-bite, under-bite, protruded teeth, and receding jaw.

### **What are some of the problems that can occur if a person who needs orthodontic treatment does not receive?**

- speaking difficulties,
- chewing difficulty that impacts nutrition,
- strain on jaw muscles that causes pain,
- facial deformities that lead to emotional and psychological problems, including diminished self-esteem; and
- difficulty brushing and flossing that leads to plaque accumulation and thus to tooth decay, gum disease, and tooth loss.

### **When can you start being treated by an orthodontist?**

- Some people begin treatment as early as four or five; however, the average age to begin treatment is nine.
- Even adults are now undergoing orthodontic treatment, due in part to the development of “invisible” braces that can be placed on the back of the teeth.

### **How will braces affect my lifestyle?**

- An individual with braces can lead a normal life. Some modifications in diet might need to be made such as avoiding sticky foods and biting into apples and corn on the cob and staying away from hard candy. A person can even participate in sports with a proper mouth guard.

### **How does orthodontics work?**

- Pressure is applied, forcing teeth in a new direction. When the teeth move, space is created on one side and new bone grows to support the structure. This new bone is what stops the corrected teeth from becoming crooked again when the braces are removed.

## Experiment: How Orthodontics Works

This activity demonstrates the principle of orthodontics.

Materials needed:

- stick
- coffee can full of dirt
- several small rocks

1. Insert the stick at an angle into the dirt in the coffee can.
2. Push the top of the stick forward so that the stick is moved into an upright position.
3. Notice that a space has been created in the dirt and that the stick now wobbles.
4. Place some of the small rocks in the space.
5. The stick is now stable in its new position.

**What do the stick, the dirt, the pressure, and the rocks represent in this demonstration?**

**stick** = tooth

**dirt** = supporting structure of the tooth, gum tissue, periodontal membrane, and bone

**pressure** = orthodontic appliance

**rocks** = new bone that is formed



## Activity 5

### CONTENT AREA II: NUTRITIONAL CHOICES

**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicators:**

- A. The student will be able to explain the relationship between food selection and oral health.
- B. The student will demonstrate the ability to make nutritive comparisons of different food products.

**Learning Standard 5:** Use interpersonal communication skills to enhance health.

**Student Performance Indicator:**

The student will be able to use effective communication skills to explain what foods are beneficial to oral health.

Factual Information	Materials	Lesson
<p>Proper nutrition and good oral health are directly related. A balanced diet has foods from each of the four main food groups:</p> <ul style="list-style-type: none"> <li>• meats, eggs, and legumes;</li> <li>• fruits and vegetables;</li> <li>• milk and dairy products; and</li> <li>• breads, cereals, and grain products.</li> </ul> <p>Other foods not included in these groups are sweets, fats, oils, chips and other processed snack foods, alcohol and other beverages, and condiments. Foods high in carbohydrates such as pasta and bread also contain high amounts of sugar.</p> <p>Certain foods help teeth grow and maintain healthy gums. These include foods rich in calcium, phosphorus, and vitamin D (milk and dairy products); foods rich in vitamin C (citrus fruits, broccoli, and strawberries);</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• food labels that students bring from home</li> <li>• paper, pencils, markers</li> </ul>	<p>Discuss the relationship between nutrition and oral health. Have students bring in two or three food labels from the foods they are eating at home.</p> <p>Have students work in groups to compare labels, looking at the ingredients and focusing on the sugar and carbohydrate content.</p> <p>Ask students to prepare a report for the class that summarizes their group's food choices and explains whether or not those particular foods help teeth grow and help maintain healthy gums.</p> <p>The students' food choices results could then be illustrated on a chart or other type of graphic.</p>

Factual Information	Materials	Lesson
<p>and foods rich in vitamin A (dark leafy vegetables, carrots, and yellow squash).</p> <p>Refer to information on healthy and unhealthy foods in the “Additional Resources” section.</p>		

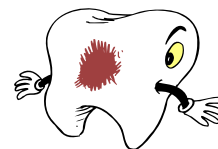
**Evaluation:**

The students’ group reports on the food labels will be the primary assessment.



## Activity 6

### CONTENT AREA II: Nutritional Choices



**Learning Standard 6:** Use goal-setting and decision-making skills to enhance health.

**Student Performance Indicators:**

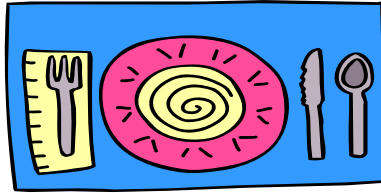
- A. The student will demonstrate the ability to select foods that have a positive impact on oral health as well as general health.
- B. The student will be able to develop a personal dietary plan that benefits his or her oral health as well as general health.
- C. The student will be able to determine the consequences of poor nutritional choices and the benefits of positive choices.

Factual Information	Materials	Lesson
<p>Good dietary choices can have a positive effect on one's health. For example, limiting sugar intake can help reduce cavities and control weight. On the other hand, poor nutritional choices can result in such problems as tooth decay and weight gain.</p> <p>Tooth decay is caused when bacteria in the mouth combines with food to leave a sticky film called plaque. The plaque then combines with the sugar in the food and forms an acid. Each time we eat a food high in sugar or carbohydrates, this acidity process begins again—a fact that makes eating sweets between meals more harmful to our teeth than eating them <i>with</i> meals. Over time, the acid can eat a hole, or cavity, in the tooth's enamel. As the cavity gets bigger and bigger, the decay spreads, invading the tooth's dentin (the bonelike material surrounding the pulp).</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• paper, pencils</li> <li>• a copy of the “Diet Diary” sheet for each student</li> </ul>	<p>Share with students the information on what causes tooth decay. Review good nutritional choices.</p> <p>Have students use the “Diet Diary” worksheet and keep a record of all the foods they eat for three days. Then have them exchange their diary with a partner, who should make an “X” next to the foods that contain high amounts of sugar. When their partners return their charts, students should review the marks and say whether they agree or disagree with their partner's choices.</p> <p>Review again the effect of a high-sugar diet and ask students to think of alternatives to their high-sugar choices.</p> <p>Ask students to keep a food diary for two more days. Then have them compare the two charts and see if they have made different choices.</p>

**Evaluation:**

Each student's “Daily Diet Diary” will be the assessment focus.

# Daily Diet Diary



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

Dates of diary: \_\_\_\_\_

List what you eat and drink for	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
breakfast							
snacks							
lunch							
snacks							
supper							
snacks							

## Activity 7

### CONTENT AREA II: NUTRITIONAL CHOICES

**Learning Standard 6:** Use goal-setting and decision-making skills to enhance health.

**Student Performance Indicator:**

The student will be able to develop a personal dietary plan that benefits his or her oral health as well as general health.

Factual Information	Materials	Lesson
Refer to the previous lesson.	<b>For classroom activity:</b> <ul style="list-style-type: none"><li>• paper, pencils</li></ul>	After evaluating the results of the student reports on food labels and their diet diaries, have students make some decisions and recommendations about the foods they are currently consuming. Are they making good choices, or is there room for improvement?

**Evaluation:**

Based on the previous lesson, ask students to write up a sample diet for a week that promotes good oral health and ask them to agree to follow it for one week.



## Activity 8

### CONTENT AREA I: PERSONAL HEALTH AND WELLNESS

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:** The student will be able to identify the structure and functions of the major body systems (e.g., describe a healthy mouth and unhealthy mouth, the parts and function of teeth, and the process of losing teeth).

### CONTENT AREA III: MENTAL HEALTH

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:**

The student will be able to describe the consequences of poor oral hygiene and an unhealthy mouth as they relate to overall health and self-esteem.

Factual Information	Materials	Lesson
<p>An unhealthy mouth can affect how a person looks, talks, and eats—all of which can directly affect his or her self-esteem.</p> <p>An unhealthy mouth can have</p> <ul style="list-style-type: none"> <li>• red, swollen, and bleeding gums;</li> <li>• sores;</li> <li>• missing, broken, and crooked teeth;</li> <li>• decayed teeth; and</li> <li>• bad breath.</li> </ul> <p>A healthy mouth has pink gums, straight teeth with no cavities, no missing teeth, and fresh breath.</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• paper, colored pencils</li> </ul>	<p>Invite a dental hygienist to the class to share and discuss information on oral diseases and their effect on general health and self-esteem.</p> <p>Then have students fold a piece of paper in half and ask them to draw a detailed picture of what a healthy mouth looks like on one half of the paper and contrast that by drawing a detailed picture of an unhealthy mouth on the other half of the paper.</p>

**Evaluation:**

Have students share their drawings and then discuss how an unhealthy mouth can affect how a person is perceived by others and therefore affect the person's self-esteem.

## Activity 9

### CONTENT AREA III: MENTAL HEALTH

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:**

The student will be able to describe the consequences of poor oral hygiene and an unhealthy mouth as they relate to overall health and self-esteem.



Factual Information	Materials	Lesson
<p>The term <i>self-esteem</i> refers to the way a person perceives or sees him- or herself. Poor oral hygiene can directly lead to lower self-esteem.</p> <p>Some consequences of poor oral hygiene are tooth decay, bad breath, gum recession, and possible tooth loss.</p> <p>Good personal hygiene is important because it makes one feel good about how one looks and feels. Clean healthy teeth add to a person's smile and also enable him or her to chew food and to speak clearly.</p> <p>A healthy smile reflects good health, which can contribute importantly to a sparkling personality and a sense of personal well-being.</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• paper, pencils</li> <li>• student oral health journals</li> </ul>	<p><b>Here's Looking at You!</b></p> <p>Have the class define the term <i>self-esteem</i>. Ask the students such questions as these:</p> <ul style="list-style-type: none"> <li>• What role does appearance play in self-esteem?</li> <li>• How does it make you feel if someone laughs at you?</li> <li>• How could poor oral health lead to poor self-esteem?</li> <li>• If a person has poor oral health, how could it affect how others perceive him or her?</li> </ul>

**Evaluation:**

Students will write a paragraph response in their oral health journals to the question "How could poor oral health affect a person's self-esteem?"

## Activity 10

### CONTENT AREA IV: Preventing Injuries

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:**

The student will be able to identify and develop safety strategies to prevent injuries, specifically oral injuries.

**Learning Standard 6:** Use goal-setting and decision-making skills to enhance health.

**Student Performance Indicator:**

The student will be able to use an age-appropriate decision-making process to reduce the risk of harm to self and others.

Factual Information	Materials	Lesson
<p>Students need to learn how to prevent oral injuries. By becoming familiar with common safety rules, individuals can prevent injuries to themselves and their teeth. Refer to the "Safety Rules to Help Prevent Oral Injuries" sheet, below.</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"><li>• paper, pencils</li><li>• copies of the "Safety Rules to Help Prevent Oral Injuries" handout</li></ul>	<p>Have students brainstorm some specific ways to prevent injuries specifically oral injuries. List these on the board.</p> <p>Have students work in pairs to create television advertisements promoting oral-injury prevention and including such details as wearing mouth guards. Have the class refer to the "Safety Rules to Help Prevent Oral Injuries" handout for additional ideas.</p>

**Evaluation:**

The students will present their television advertisements to the class.

## Safety Rules to Help Prevent Oral Injuries



- A. When participating in vigorous activities and contact sports, always wear a properly fitted helmet and mouth guard.
- B. Wear a catcher's mask when receiving pitched balls.
- C. Keep your skateboard under control, and do not push or shove other skateboarders.
- D. Use a ladder to climb out of the pool.
- E. Do not run alongside a pool or engage in horseplay around a pool area.
- F. Do not push, hit, or throw things at people while they are drinking from a water fountain.
- G. Always wear a seat belt when riding in a car.
- H. Be extra cautious when riding a bike in rainy weather. Watch out for trees, stumps, and other objects in your path.
- I. Remain seated in a swing, and do not jump from or walk under a moving swing.

## Activity 11

### CONTENT AREA IV: Preventing Injuries

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:**

The student will be able to explain the relationship between positive health behaviors and the prevention of injuries, specifically oral injuries related to participation in sports.

Factual Information	Materials	Lesson
<p>Wearing protective equipment while playing sports can help prevent injury. Mouth guards help prevent injury to the mouth area, especially the teeth, lips, cheeks, and tongue. They can also help protect against head and neck injuries.</p> <p>Sports that mouth guards are recommended for include ice hockey, boxing, handball, soccer, football, skiing, basketball, baseball, wrestling, skateboarding, martial arts, bicycling, wrestling, and rugby.</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• pictures of sports safety equipment and/or actual examples of equipment</li> <li>• paper, pencils</li> </ul>	<p>Gather some pictures of sports safety equipment to show students and/or actual sports safety equipment for demonstration.</p> <p>Examples of protective equipment:</p> <ul style="list-style-type: none"> <li>• <b>baseball:</b> catcher's masks, chest guards, mitts, batting helmets</li> <li>• <b>football:</b> pads, face masks, helmets</li> <li>• <b>rollerblading:</b> knee and elbow pads, helmets</li> <li>• <b>biking:</b> helmets</li> <li>• <b>soccer:</b> shin guards</li> </ul> <p>Invite a coach or athlete to speak to the class about his or her experience with oral injury and the importance of protective equipment such as a mouth guard.</p> <p>Initiate a class discussion with specific questions:</p> <ul style="list-style-type: none"> <li>• Have you ever had an oral injury?</li> <li>• What were the circumstances? Could your injury have been avoided?</li> <li>• Why do athletes wear protective equipment?</li> </ul>

**Evaluation:**

The students will be assessed by writing thank you notes to the coach or athlete, citing three specific things they learned from his or her presentation.



## Activity 12

### CONTENT AREA IV: Preventing Injuries

**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicator:**

The student will be able to respond appropriately to emergency dental situations, including the use of first-aid procedures for the mouth and teeth.

Factual Information	Materials	Lesson
<p>Responding properly to an oral injury greatly reduces the harm that can be suffered. For specific information, refer to the “Dental First Aid” and the “Dental First Aid Supplies” sheets, below.</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• assign students dental first aid supplies to bring to school</li> <li>• copies of the “Dental First Aid” handout</li> </ul>	<p>Using the “Dental First Aid” handout, discuss with the class the proper responses to dental emergencies.</p> <p>Using the “Dental First Aid Supplies” handout, discuss with the class the contents of a dental first aid kit.</p> <p>Assemble dental first aid supplies for your classroom, the school’s main office, and the guidance office.</p> <p>Have students work in groups to develop a presentation to give to other classes and/or to school administrators on the proper way to respond to a dental injury. The presentation could also include information on dental first aid supplies.</p>

**Evaluation:**

The student presentations to other classes and/or administrators are the assessment focus.

# Dental First Aid

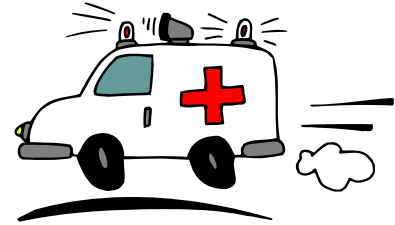
Despite safety precautions and mouth guards, oral injuries do occur. These are the basic steps to take when a child sustains such an injury:

1. Clean any dirt and debris from the injured area with warm water.
2. Place cold compresses on the child's face next to the injured area to minimize swelling.
3. Take the child to the dentist as soon as possible.

## RESPONDING TO SPECIFIC INJURIES

### Permanent Tooth Knocked-Out

1. Find the tooth but do not handle it by the roots.
2. Rinse it gently with water.
3. Have the child place the tooth back in the socket and hold it with a finger or tissue. If the child is unable to do this, place the tooth in a glass of milk or place it in saliva. As a last resort, place the tooth in a glass of water. The tooth must not dry out!
4. Take the child to the dentist immediately.



### Tooth Loosened or Chipped

1. Clean the area and avoid moving the tooth.
2. Apply a cold compress to minimize swelling.
3. Take the child to the dentist immediately.

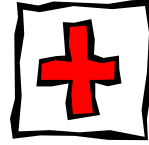
### Tooth Pushed into Gums

1. Wash the area with warm water.
2. Do not attempt to move the tooth.
3. Take the child to the dentist immediately.

For additional information, see the “Dental First Aid Supplies” sheet.

**Always remember to follow OSHA guidelines when you are dealing with an injury that may involve blood.**

## Dental First Aid Supplies



The following items should be kept on hand for dental emergencies:

- **cotton swabs**—to stop bleeding, to clean the injury
- **tea bags**—to stop bleeding by pressing wet tea bag on bleeding injury
- **dental floss**—to remove objects from between teeth
- **interdental cleaner or toothpicks**—to remove objects wedged between teeth
- **dental wax (or paraffin)**—to protect cheeks or gums from a chipped tooth or protruding orthodontic wire
- **ice pack**—to reduce swelling
- **handkerchief**—to immobilize a broken jaw
- **milk**—to store a tooth that has been knocked out until the person can get to a dentist

## Activity 13

### CONTENT AREA VI: Alcohol, Tobacco, and Other Drugs

**Learning Standard 1:** Comprehend health promotion and disease-prevention concepts.

**Student Performance Indicator:**

The student will be able to identify the short- and long-term effects of the use of smokeless tobacco on one’s oral health and general health.

Factual Information	Materials	Lesson
<p>There are two kinds of smokeless tobacco: <b>chew</b> is a shredded tobacco that is placed between the cheek and teeth, and <b>snuff</b> is a powdered tobacco that is placed between the lip and the teeth.</p> <p>Smokeless tobacco use has lasting effects on oral health and general health.</p> <p>Some short-term effects of smokeless tobacco use include bad breath, tooth discoloration, tooth decay, decreased ability to taste and smell, abrasion or the wearing away of tooth enamel, and gum recession. Gum recession occurs when the roots of the teeth become exposed, causing teeth to be more sensitive to hot and cold.</p> <p>Researchers have also found a link between the use of smokeless tobacco and cancers of the oral cavity. In addition, smokeless tobacco is responsible for nicotine addiction, increased heart rate and blood pressure, and reduced stamina.</p>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• paper, pencils</li> <li>• copies of the “Smokeless Tobacco True/False Quiz”</li> <li>• information from the American Cancer Society</li> </ul>	<p>Assess your students’ level of understanding about smokeless tobacco by having them complete the “Smokeless Tobacco True/False Quiz,” below. Discuss the short- and long-term effects of tobacco use, particularly smokeless tobacco.</p> <p>Divide the class into groups and select one tobacco product such as cigarettes, chew, snuff, or cigars for each group to investigate.</p> <p>Have students write a report to present to the class taking into consideration the following questions:            (1) What are some of the harmful effects of the tobacco product you are researching?            (2) What is the law in South Carolina regarding the sale of tobacco products to minors?            (3) Is it easy for minors to obtain tobacco products?            (4) What steps are being taken to deter minors from purchasing tobacco products?            (5) What can <i>you</i> do within your peer group to deter the use of this tobacco product?</p>

**Evaluation:**

Student participation in compiling the team reports will be the primary assessment tool.

**Extension:**

For additional discussion, have students consider the following facts:

- More than one in ten high school students (11.4 percent) in the United States had used smokeless tobacco during the thirty days prior to responding to a 1995 survey.
- Nearly one in five male students (19.7 percent) had used smokeless tobacco during the thirty days before the survey was conducted. State prevalences for students varied from 3 percent to 25 percent.

(Source: Centers for Disease Control, "Youth Risk Behavior Surveillance—United States, 1995," *Morbidity and Mortality Weekly Report, CDC Surveillance Summaries*, September 1996.)

- Among American high school seniors who had ever used smokeless tobacco, almost three-fourths of them began in the ninth grade.

(Source: *Preventing Tobacco Use among Young People: A Report of the Surgeon General*. Washington, DC: U.S. Dept. of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994.)

- In 1991, young American males were 50 percent more likely than older men to be regular smokeless tobacco users.

(Source: Centers for Disease Control, "Surveillance for Selected Tobacco-Use Behaviors—United States, 1900–1994" *Morbidity and Mortality Weekly Report*, November 1994.)

## Smokeless Tobacco True/False Quiz

Read the following statements and label them T (true) or F (false).

- \_\_\_\_\_ 1. Using smokeless tobacco can cause cancer of the pharynx, larynx, and esophagus.
- \_\_\_\_\_ 2. The harmful effects of smokeless tobacco use are not as great as those of cigarette use.
- \_\_\_\_\_ 3. Smokeless tobacco causes bad breath, discolored teeth, and tooth loss.
- \_\_\_\_\_ 4. Smokeless tobacco is not as addictive as cigarette smoking.
- \_\_\_\_\_ 5. When trying to quit using smokeless tobacco, many users begin smoking cigarettes to satisfy their dependency on nicotine.



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### Answers

- 1. True.
- 2. False. Like smoking, smokeless tobacco contains nicotine and carcinogens, which damage the body.
- 3. True.
- 4. False. It can be more addictive than smoking.
- 5. True.

## Activity 14

### CONTENT AREA VI: Alcohol, Tobacco, and Other Drugs

**Learning Standard 3:** Demonstrate the ability to practice behaviors that enhance health and reduce risks.

**Student Performance Indicator:**

The student will be able to assess the personal risks of smokeless tobacco use.

**Learning Standard 7:** Demonstrate the ability to advocate for personal, family, and community health.

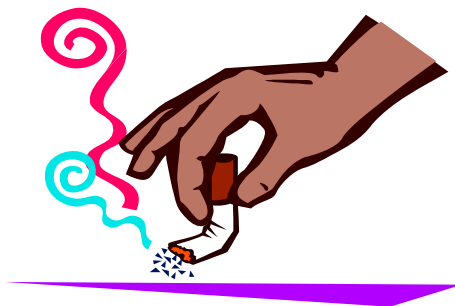
**Student Performance Indicator:**

The student will demonstrate strategies to influence and/or support others in making the healthy choice concerning the use of tobacco, particularly smokeless tobacco.

Factual Information	Materials	Lesson
Refer to the previous lesson.		Have students discuss specific consequences they have seen from the use of tobacco products. Do they have relatives or friends who smoke or use smokeless tobacco products?  Have a representative from the American Cancer Society share information and pictures showing the effects of tobacco use, particularly smokeless tobacco use, and/or visit one of the smokeless tobacco Web sites listed in the "Additional Resources" section of this guide.

**Evaluation:**

Have students write a letter to someone who uses tobacco persuading them **not** to use it. Encourage them to cite at least three reasons **not** to use tobacco.



## Activity 15

### CONTENT AREA VI: Alcohol, Tobacco, and Other Drugs

**Learning Standard 4:** Analyze the influence of personal beliefs, culture, media, technology, and other factors on health.

**Student Performance Indicator:**

The student will be able to recognize the influences of peers and family on behaviors related to the use of smokeless tobacco.

**Learning Standard 5:** Use interpersonal communication skills to enhance health.

**Student Performance Indicator:**

The student will be able to describe skills and strategies he or she could utilize in order to avoid tobacco use, particularly smokeless tobacco.

**Learning Standard 7:** Demonstrate the ability to advocate for personal, family, and community health.

**Student Performance Indicator:**

The student will demonstrate strategies to influence and/or support others in making the healthy choice concerning the use of tobacco, particularly smokeless tobacco.

Factual Information	Materials	Lesson
<p>There are ways to resist peer pressure regarding the use of tobacco products.</p> <p><b>Six ways of saying no:</b></p> <ul style="list-style-type: none"> <li>• Give a reason.</li> <li>• Change the subject.</li> <li>• Suggest another activity.</li> <li>• Delay.</li> <li>• Give a compliment.</li> <li>• Make an excuse.</li> </ul>	<p><b>For classroom activity:</b></p> <ul style="list-style-type: none"> <li>• index cards with role-play scenarios to distribute to student volunteers</li> <li>• paper, colored pencils</li> </ul>	<p><b>Just Say “No Thanks”!</b></p> <p>Have student volunteers role play responses to the following comments from peers based on the six ways of saying no:</p> <ul style="list-style-type: none"> <li>• “You’re a baby if you don’t try it.”</li> <li>• “Chewing this will not hurt you. It’s not as bad as a cigarette.”</li> <li>• “Everybody on the team does it.”</li> <li>• “Girls think it’s cool if a guy chews.”</li> </ul> <p>Share with students services that can help them quit using tobacco. Refer to information found on the smokeless tobacco Web sites listed in the “Additional Resources” section of this guide.</p>

**Evaluation:**

Have students work in pairs or individually to design a cartoon depicting a conflict that could occur as one student tries to pressure another to use a smokeless tobacco product.





# Additional Resources

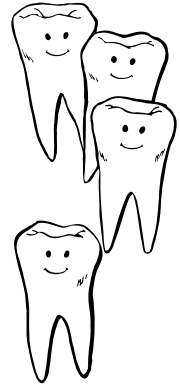


## General Causes of Crooked and Poorly Aligned Teeth

Approximately three quarters of all cases of improper bites and crooked and poorly aligned teeth are the result of heredity, and the remaining quarter are the result of certain habits or pressure improperly applied to the teeth and bones by the individual. Particularly when a person is young, the bones bend in response to pressure.

Pressure can be caused by

- thumb sucking after the age of about five,
- habitually resting the hand on the jaw,
- lip biting or lip sucking,
- tongue thrusting,
- sleeping with a closed fist between face and pillow,
- certain allergies that cause a child to breathe through the mouth, and
- early loss of primary teeth, which causes other teeth to drift and new teeth to erupt out of position.



Any sustained, even pressure on bone can cause teeth to move and become crooked. Such pressure is also the main reason that orthodontics works.

## Foods to Avoid While Wearing Braces

Orthodontists attach braces to your teeth with a small amount of cement. This cement is designed to hold the brackets and bands against your teeth during normal orthodontic treatment. When it is time to remove the braces, this cement scrapes off your teeth easily without leaving any permanent marks. It does not take much force to remove or “break” the braces off your teeth. That is good because it allows for easy removal when the time is right. However, it can also be bad for you because any heavy force put on your braces could break them off and extend the treatment time.

Hard and sticky foods will break off brackets, bend wires, and loosen bands—and, in turn, will extend your treatment time. Foods high in sugar content could cause ugly stains on your teeth, calculus buildup, and cavities.

So what can you do? For one thing, you can limit your diet to soft and healthy foods. This does not mean that you must eat only broccoli and mashed potatoes while wearing braces. There are, however, certain types of food that you do need to avoid.

### Try to avoid eating the following:

- **hard foods**

A person wearing braces should not try to chew anything that is hard. Remember, braces are fragile, and strong forces from hard foods can break them off. Damaged appliances will extend your treatment time, and extended treatment time will increase the risk of cavities and stains on your teeth.

- **sticky foods**

Braces can be pulled apart with sticky foods. Again, this could extend your treatment time.

- **anything high in sugar**

Braces make it harder to keep your teeth clean. Sugar will feed the bacteria that cause cavities. If you do eat any foods high in sugar, brush your teeth immediately afterward.

### Examples of what to avoid:

- ice
- nuts
- peanut brittle
- hard pizza crust
- corn on the cob
- ribs
- caramel candy
- beef jerky
- suckers
- Doritos, corn chips, hard tacos, Cheetos, Fritos
- popcorn
- hard pretzels
- hard rolls and bagels
- raw carrots
- bubble gum

This is just a short list. Remember, nothing hard, sticky, or sweet!

(Source: “Dr. Cusack’s Orthopage” at <<http://www.greatsmiles.net>>.)

## Diet and Oral Health

Sugar is found in many different forms in food, all of which promote tooth decay under certain circumstances. Foods that are high in carbohydrates—such as breads, cereals, potatoes, noodles, rice, and beans—are broken down into sugars during digestion.

Sugars such as honey, molasses, and brown sugar are as harmful to teeth as table sugar. Sugars are also added to food to enhance its flavor and act as a preservative.

The process of tooth decay begins when a person eats sugar in any form. The bacteria in plaque feeds off of the sugar and carbohydrates in food, attacking the teeth for twenty minutes or so. Each time we eat such food, acids are produced for twenty minutes afterward—in other words, each sugary or starchy snack we eat begins another twenty-minute acid cycle. After a number of such attacks, the tooth enamel may break down and a cavity may eventually result.

The longer that the acids are in contact with teeth, the greater the potential for decay. Habits such as sucking on lemons or hard candy and the excessive consumption of high-sugar drinks promote tooth decay. Snacking on sticky, high-sugar foods is not healthy for teeth. On the other hand, some foods such as cheese actually may help protect the teeth and help to neutralize these acids.

The bottom line: the foods you choose to eat directly affect your oral health, and how often you eat foods high in sugar or carbohydrates is an important factor in tooth decay. The more frequently these foods are eaten, the greater the acid exposure and therefore the greater the chance of tooth decay.



## Healthy and Unhealthy Food for Our Teeth and Bodies

Some foods that are considered healthy for teeth may be high in salt or fat and are therefore unhealthy for the human body as a whole.

### Nutritionally and dentally healthy:

milk, plain yogurt, cheese, cottage cheese  
raw fruits and vegetables  
unsweetened fruit and vegetable juices  
tossed salads  
plain muffins  
pizza  
crackers  
breads, cereals, rolls  
hard-boiled eggs  
nuts and seeds  
sandwiches  
meat, chicken, fish, and eggs



### Nutritionally healthy but dentally unhealthy:

milk puddings  
milk shakes  
chocolate milk  
flavored yogurt  
frozen yogurt and sherbet  
raisins or other dried fruits  
sweetened fruits and fruit juices



### Nutritionally unhealthy but dentally healthy:

french fries  
popcorn  
potato chips  
sugar-free soft drinks  
sugarless gum and candies



### Nutritionally and dentally unhealthy:

beverages with sugar  
honey, jams, and jellies  
baked goods (cookies, pies, cakes, etc.)  
candy bars and hard candy  
caramel popcorn  
marshmallows



## The Harmful Effects of Smokeless Tobacco

**TOOTH ABRASION.** The grit and sand in smokeless tobacco products scratch teeth and wear away the hard surface, or enamel. Premature loss of tooth enamel can cause added sensitivity and may require corrective treatment.

**GUM RECESSION.** Constant irritation to the spot in the mouth where a small wad of chewing tobacco is placed can result in permanent damage to periodontal tissue. It also can damage the supporting bone structure. The injured gums pull away from the teeth, exposing root surfaces and leaving teeth sensitive to heat and cold. Erosion of critical bone support leads to loosened teeth that can be permanently lost.

**INCREASED TOOTH DECAY.** Sugar is added to smokeless tobacco during the curing and processing to improve its taste. The sugar reacts with bacteria found naturally in the mouth, causing an acid reaction that leads to decay.

**TOOTH DISCOLORATION AND BAD BREATH.** Common traits of long-term smokeless tobacco users are stained teeth and bad breath. Moreover, the habit of continually spitting can be unsightly and offensive.

**NICOTINE DEPENDENCE.** Nicotine blood levels achieved by smokeless tobacco use are similar to those from cigarette smoking. Nicotine addiction can lead to an artificially increased heart rate and blood pressure. In addition, it can constrict the blood vessels that are necessary to carry oxygen-rich blood throughout the body. Athletic performance and endurance levels are decreased by this reaction.

**UNHEALTHY EATING HABITS.** Chewing tobacco lessens a person's sense of taste and ability to smell. As a result, users tend to eat more salty and sweet foods, both of which are harmful if consumed in excess.

**ORAL CANCER.** With the practice of "chewing" and "dipping," tobacco and its irritating juices are left in contact with gums, cheeks, and/or lips for prolonged periods of time. This can result in a condition called leukoplakia, which appears either as a smooth, white patch or as leathery-looking wrinkled skin. It results in cancer in 3 to 5 percent of all cases.

**OTHER CANCERS.** All forms of smokeless tobacco contain high concentrations of cancer-causing agents. These substances subject users to increased cancer risk not only of the oral cavity but also of the pharynx, larynx, and esophagus.

**DANGER SIGNS.** If you use smokeless tobacco, or have in the past, you should be on the lookout for some of these early signs of oral cancer:

- a sore that does not heal,
- a lump or white patch,
- a prolonged sore throat,
- difficulty in chewing,
- restricted movement of the tongue or jaws, or
- a feeling of something in the throat.

Pain is rarely an early symptom. For this reason, all tobacco users need regular dental checkups.

## Oral Health–Related Web Sites

### Tobacco Use

<http://www.quit tobacco.com>

This site has information on how to quit smoking and how to break the chewing tobacco habit. There are some interesting facts and graphic photos depicting the harms of smokeless tobacco.

<http://dontdip.tamu.edu/index1.html>

This site is sponsored by the Texas Cooperative Extension, the Texas 4-H, and the Texas Cancer Council. It provides practical information about the harmful effects of smokeless tobacco use from a youthful perspective.

<http://www.cancer.gov/cancerinfo/wyntk/oral>

This National Center Institute site has information about symptoms, detection, diagnosis, and treatment of oral cancers.

<http://www.quitsmokeless.org>

This “Quit Smokeless” site offers suggestions and support for those who want to stop using smokeless tobacco.

<http://familydoctor.org/handouts/177.html>

This site has handouts and information on how to quit using smokeless tobacco. The handouts are available in Spanish as well as English.

<http://www.cdc.gov/tobacco/edumat.htm#factsheets>

This Centers for Disease Control site has a variety of educational materials relating to tobacco use and cessation, including such publications as *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction*.

<http://www.nstep.org>

This is the site of Oral Health America’s National Spit Tobacco Education Program, which seeks not only to prevent people, especially young people, from starting to use spit tobacco but also to help all current users quit.

<http://www.tobaccofreekids.org>

The Campaign for Tobacco-Free Kids is fighting to free America's youth from tobacco use and to create a healthier environment. The Campaign is one of the nation's largest nongovernmental initiatives ever launched to protect children from tobacco addiction and exposure to secondhand smoke.

### Braces

<http://www.bracesinfo.com/dental/>

This site has practical information about braces as well as fun facts and an archive of jokes on the subject.

<http://www.braces.org>

This is the Web site of the American Association of Orthodontists.

<http://www.goodortho.com/survive.html>

This site has a braces survival guide that tells you what foods to avoid and what to expect when you wear braces. There are before-and-after pictures to see as well.

<http://www.greatsmiles.net>

“Dr. Cusack’s Orthopage” offers comprehensive information on braces through links such as “The ‘Parts’ of Braces and Ortho Terms,” “Rubber Bands and Headgear,” and “Discomfort or Emergencies.”

## General Oral Health

<http://www.smiles4ever.com>

<http://www.kidshealth.org>

<http://www.healthfinder.gov/kids>

<http://www.nidcr.nih.gov>

<http://www.healthteacher.com>

<http://www.acadsportsdent.org>

This is the home page of the International Academy for Sports Dentistry. The Academy was founded in 1983 in San Antonio, Texas, as a forum for dentists, physicians, trainers, coaches, dental technicians, and educators interested in exchanging ideas related to sports dentistry and the dental needs of athletes at risk of sports injuries. Activities include the collection and dissemination of information of dental athletic injuries and the encouragement of research on the prevention of dental injuries to athletes.





## Technical Assistance Contact Information

### **For specific oral health–related questions:**

Oral Health Division  
South Carolina Department of Health and Environmental Control  
P.O. Box 101106  
Columbia, SC 29211  
Phone: 803-898-0194  
Fax: 803-898-2065

### **For curriculum-related questions:**

SC Healthy Schools  
SC Department of Education  
Rutledge Building Room 906-C  
1429 Senate Street  
Columbia, SC 29201  
Phone: 803-734-8500  
Fax: 803-734-2780

### **For additional information on harmful effects of tobacco on oral health:**

#### **South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS)**

101 Business Park Blvd.  
Columbia, SC 29203-9498  
Phone: 803-896-5555  
Toll-free: 1-888-SC-PREVENTS

#### **South Carolina Tobacco Control Program**

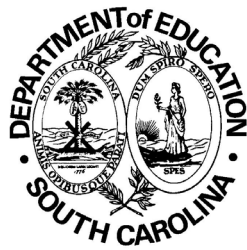
Contact: Sharon R. Biggers  
South Carolina Department of Health and Environmental Control  
Phone: 803-898-0926  
Fax: 803-253-4001  
E-mail: [biggersr@columb61.dhec.state.sc.us](mailto:biggersr@columb61.dhec.state.sc.us)

#### **Tobacco Use Prevention and Control Program**

Funding: National Cancer Institute's Project ASSIST (American Stop Smoking Intervention)  
Regional Network: Southeastern Tobacco Prevention Network (SToP)  
Contact: Thomas F. Gillette  
South Carolina Department of Health and Environmental Control  
P.O. Box 101106  
Columbia, SC 29211  
Phone: 803-898-0740  
Fax: 803-253-4001  
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[www.scdhec.gov](http://www.scdhec.gov)

*Promoting and protecting the health of the public  
and the environment.*