

# Special Edition

## Ideas for Kids' Activities

As promised, here are some fresh, new ideas to use in and out of the classroom. We hope they will be of some help to you in making your presentations. Feel free to pass them along to your component members.

### **Poetry or Essay Contest:**

Encourage teachers to consider a poetry or essay contest as a class project. Ask students to complete a sentence, such as "My smile is important because..." or "Don't let your smile become extinct because..." Determine the number of words each age group should submit (e.g., first, second, and third graders—25 words, etc.). Seek donors for prizes and determine how prizes should be distributed.

### **Poster Contest:**

Get a local business to sponsor the cost of prizes and conduct a poster contest on oral health issues with local schools. Ask the sponsor to fund a calendar using the winning entries. They can be sold as a fundraiser.

### **Bulletin Board:**

Create a "Healthy Smiles" bulletin board with smile photos that students clip from magazines. Add oral health tips messages: (Brush and floss each day; eat nutritious foods; visit your dentist regularly) Encourage teachers to create bulletin boards at the school

### **Dental Trivia:**

Use the ADA's dental trivia questions (enclosed) as a fun class activity for students to learn more about dental history.

**Of course, the Coloring Contest** sponsored by the Illinois State Dental Society Call 800/475-4737 if you need more information.

### **Discussions:**

Discuss "baby" teeth. Some teeth are supposed to come out. They are called the "baby" teeth or "primary" teeth. After a baby tooth comes out, another tooth will come in. This new tooth must last for many, many years. You must take extra special care by brushing each day.

Have children name three things teeth do: Teeth are important for speaking, eating and smiling. If you didn't have any teeth, it wouldn't be easy to say teeth, toys or toothbrush. It would be hard to sing Twinkle, Twinkle Little Star without teeth.

Have children say the alphabet and tell which sounds are made by using the teeth, tongue and lips.

Name some things you do that keep your body healthy. There are daily health habits that everyone needs to practice, such as eating a proper diet, exercising, bathing and sleeping. Caring for your mouth is as important as caring for the rest of your body. Cleaning teeth and gums removes a sticky film of plaque. Plaque contains harmful bacteria that can cause tooth decay.

Ask children to make a list of the foods that can be eaten without teeth and the foods that must be chewed. Without teeth you couldn't chew crunchy foods like carrots, nuts or apples. Discuss what happens when we eat sweets, (and carbohydrates), and what can be called the "20 minute acid attack". Use a chalkboard, whiteboard, etc. to draw a picture showing a progression of events that occur when we eat. Something like the following:

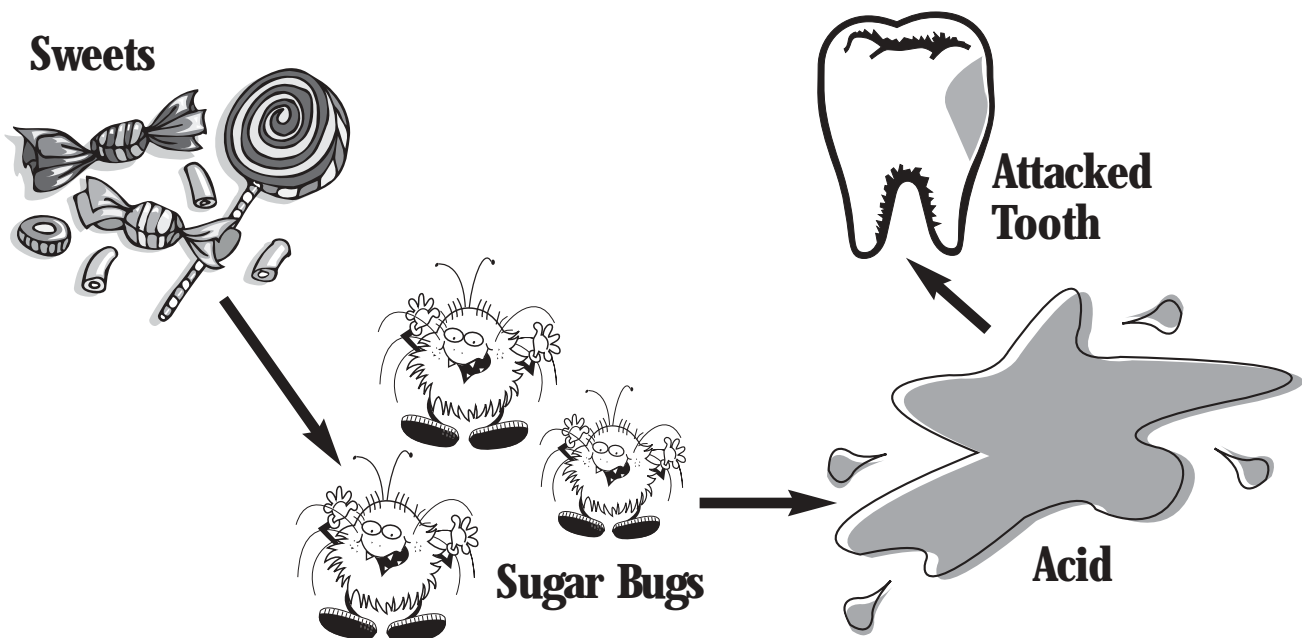
(Please see the attached drawing below)

When we eat sweets, the "sugar bugs" in our mouths turn the sugar into acid, which then attacks our teeth and eventually makes "holes" in our teeth that you might call cavities. Every time you take a bite of a sweet or a sip of pop, this acid attack will occur for about the next 20 minutes!

Of course, it is important to define terms like "sugar bugs," acid, cavities, etc., and do it at a level that is appropriate for the age group to which you are speaking.

This is often very eye opening for both kids and adults to realize what occurs every time they eat a "sweet".

Follow this up with a discussion of good treats vs. bad treats. Put several treats in small bags and pull them out one at a time and have the kids vote (raise hands), on which are good treats and which are not-so-good treats. Include things like fruit, raisins, fruit roll-ups, crackers and cheese, pretzels, etc. Emphasize that some things that are sticky or that sticks to your teeth, are often not good treats. (Example: fruit roll-ups, raisins, etc. are "fruit" but very sticky). This can be fun for the kids and often leads to further discussion.



## Can be followed with a session on “Fun and Nutritious Snacks”

- Raw vegetables – may be eaten with or without dip, spread, yogurt, or cream cheese ... carrots, broccoli, celery, cucumbers, green peppers, cauliflower, tomatoes.
- Fresh fruit – offer these already cut up and ready to eat or have children make their own fruit salad. Apples, oranges, strawberries, bananas, kiwi, honeydew, watermelon, berries, nectarines, cantaloupe, grapes, peaches, pears, or pineapples (offered by themselves or with cottage cheese or yogurt).
- Crackers – any variety, wheat, rye, sesame, graham (low salt, low fat, fat free choices where available). Offer cheese and crackers, peanut butter and crackers, or cream cheese and crackers.
- Canned fruit – packed in its own juice
- Applesauce – no sugar added
- Cheese cubes – any variety
- String cheese
- Bagels – mini size great for children
- Yogurt
- Pretzels
- Bread sticks
- English muffin with melted cheese
- Toasted cheese sandwich
- Dry cereal as a snack (but no sugar coated or frosted ones)
- Rice cakes
- Popcorn, peanuts (for children over age 3) be careful of peanuts allergies
- English muffin pizza – use tomato or pizza sauce and mozzarella cheese and bake in 350 degree F. oven or toaster oven until bubbly.

## Fun Food to Create

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**Create a Crunch** – select favorites from among the following ingredients. Use equal portions of each ingredient. Toss to combine in a large bowl. Store in a covered container. Use popcorn, peanuts, Cheerios, Kix, Crispix, Chex cereals, pretzel sticks, cheese crackers, fish crackers. Use low salt, no salt, fat free choices where available.

**Make a spritzer** – makes 1 serving:

2/3-cup fruit juice

1/3-cup seltzer

2-3 ice cubes or crushed ice

Combine in a glass and serve.

Or ...

Serve a cheddar cheese spread or cream cheese or Neufchatel with bowls of sliced vegetables for unlimited variety in rice cake faces!

**SNACKS TO AVOID** – raisins, dried fruit, fruit roll-ups, dried fruit snacks, caramels, gummy snacks or gum drops. These snacks if eaten alone may promote tooth decay.

### Clowns

Unsalted plain large rice cakes

Peanut butter

Green grapes for eyes

Raisins for pupils

Strawberries for nose

Cheerios for mouth shredded cheddar cheese for hair

# Oral Health Experiments and Activities You Can Try in the Classroom

**Discussion regarding the dental office:** Take samples of clothes that dentists wear, (scrubs, mask, eyewear, gloves, etc.), and pick someone out of the audience to dress up. Ask the students to name things that their dentist wears, and then discuss the reason for these things, putting them on the volunteer as they are discussed. This will often lead to discussion about what dentists do and how they help their patients maintain their health.

**Visiting the Dentist:** The purpose of this activity is to familiarize children with the dental office setting and the procedures followed during a dental visit. Materials needed include pictures of dental equipment, dental instruments and dental team members. Have students discuss why it is important to visit a dentist regularly. Have the children who have been to a dentist describe their experiences. Have them describe the equipment, dental instruments, members of the dental team, and the role of each team member.

**Dental Memory Game:** The purpose of this activity is to reinforce prevention-oriented dental health concepts. Materials needed include index cards and pictures (photocopied in duplicate) of oral hygiene aids, healthy foods, dental equipment and instruments, dental team members, and dental safety tips. Cut out pictures and attach each picture to an index card.

Using the deck of index cards, instruct a small group of children to play a memory game by placing all the cards face down and spreading them out on a table. Each child, in turn, turns over one card and then attempts to locate the card with the matching picture. If two cards match, the child keeps the set and gets another turn. The child with the most matching sets at the end of the game is the winner.

**Tooth brushing Song:** The purpose of this activity is to develop tooth-brushing skills needed for daily plaque removal. You will need a toothbrush for each child.

Demonstrate basic brushing to children. Remember to slowly demonstrate brushing on the outside, the inside, and the chewing surfaces of the top and bottom teeth, using short vibrating strokes. After children have a basic understanding of the technique, you can teach the children the following song to the tune of "Here We Go Round the Mulberry Bush." Have them practice the tooth brushing motions holding their toothbrushes out in front of them while singing. Repeat this activity several times prior to having children brush their own teeth.

This is the way we brush our teeth  
Brush our teeth, brush our teeth.  
This is the way we brush our teeth,  
Cleaning top and bottom.

This is the way we brush our teeth  
Brush our teeth, brush our teeth.  
This is the way we brush our teeth,  
Cleaning in and out.

This is the way we brush our teeth  
Brush our teeth, brush our teeth.  
This is the way we brush our teeth  
Cleaning where we chew.

This is the way we brush our teeth  
Brush our teeth, brush our teeth.  
This is the way we brush our teeth,



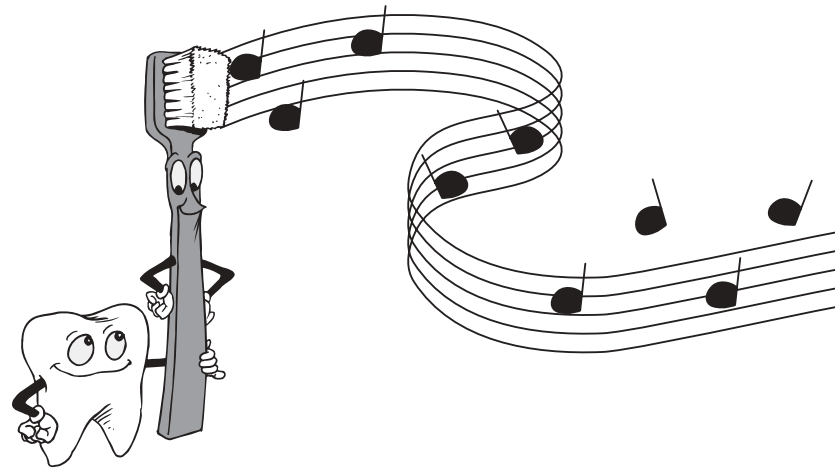
Now we smile all day.

Make a cassette recording of the children singing to serve as a reminder of the brushing pattern that should be followed. Children can also be taught the following song to the tune of "Twinkle, Twinkle Little Star":

White teeth, white teeth, see them gleam,  
When we keep them nice and clean.  
Prevent decay the 'clean 'em way,  
Floss and brush the plaque away.

White teeth, white teeth, see them gleam,  
When we keep them nice and clean.  
Show Mr. Plaque that you're the boss,  
Brush your teeth, use dental floss.

White teeth, white teeth, see them gleam,  
When we keep them nice and clean.



**Making Teeth Strong:** The purpose of this activity is to help the students understand that fluorides and sealants make tooth enamel stronger.

Have students line up in several rows, an arms-length apart. Lead the class in some simple exercises, explaining how each exercise helps the body (e.g. running in place=stronger legs, arm circles=stronger arms, jumping jacks=stronger heart).

With one arm relaxed and dangling, have each student feel his own arm and notice how soft the muscles feel. Flex the arm muscles while tightening the fist. Have the students feel the hardness of their own arm muscles.

Then explain to the children that there are two ways to make our teeth strong. Fluorides, which you cannot see or taste, can be found in water, toothpastes and tablets. Have children practice saying "fluoride." Teeth can also be kept strong and healthy by having sealants placed on the chewing surfaces of back teeth. Ask if any of the children have had sealants applied to their teeth by their dentist or dental hygienist.

**Learning To Floss:** The purpose of this activity is to help students understand the need for flossing. Materials needed include thick tempera paint, a toothbrush, rubber gloves and yarn.

Cover your gloved hand with thick tempera paint. Using a toothbrush, clean off the paint while holding fingers tightly together. Show the students that the brush will not remove the paint from between the fingers. Discuss where plaque accumulates on the teeth and why flossing along with brushing is important for maintaining healthy teeth.

Distribute 12-inch pieces of yarn to the students. Demonstrate how floss should be wound onto the fingers. Allow students to practice this technique. Have students find a partner and practice the flossing technique on each other's fingers.

Depending on the age group, flossing can be demonstrated with a jump rope and students. Pick out several students and have them line up closely side-by-side, (to simulate close contacts between teeth). Have teachers or other students use the jump rope as floss to go between each tooth emphasizing how you must rub the floss along the side of each tooth. (Note: It will be easier if students keep their hands close to their sides, and have long pants on. Don't pick little girls with dresses on for this demonstration!!)

**Floss is the Boss:** What you'll need: a rubber glove, a jar of peanut butter and something to spread it with, a container of dental floss, a toothbrush and some toothpaste.

What to do: Put the glove on one hand and hold your hand with the fingers extended but tightly together, pointing upward (your hand with the glove should look like you're going to give your friend a "high five" or how a policeman holds his hand up to stop traffic). Spread your fingers apart and have someone spread peanut butter between your fingers -make sure to get the peanut butter deep between your finger joints. Tighten your fingers together again. In this experiment, your fingers represent your teeth, and the peanut butter between them is food that gets trapped between your teeth when you eat. With your fingers still tightly together and held upward, use the toothbrush and toothpaste to try and scrub the peanut butter away (remember not to move your fingers apart!). Have someone else try to remove the peanut butter using the dental floss between your fingers. Which does a better job -the toothbrush and paste or the floss?

What will happen: a toothbrush simply can't reach all the places between your teeth. Dental floss can do a much better job of removing food between your teeth. If it's not removed, it can cause gum disease and cavities.

**Progress Of Decay:** The purpose of this activity is to illustrate the way decay spreads in a tooth. Materials needed include an unbruised apple, a paper bag, large nail and a sharp knife.

Take a firm unbruised apple and poke a hole with a nail one inch into the side of the apple. Place the apple in a brown bag and staple it shut. Keep on a shelf in the classroom out of direct sunlight for three weeks. After you remove the apple from the bag, slice in half through the hole. Look inside. What do you see?

Before beginning the results phase, review with the students the predictions they made the day the experiment started.

The hole in the side of the apple is like a cavity in a tooth. The opening is small on the outside and the decay spreads out as it reaches the center of the tooth. As a cavity moves toward the inside of a tooth it travels more quickly because the layers inside a tooth are softer. It is important that we have a dental check-up every year so our dentist can catch our cavities when they are small. The outside of our teeth - the enamel - is the hardest part of our body.

Take a very sharp knife and slice the apple open through the center of the hole on the side of the apple. Let the students look at what happened inside the apple. The students will observe how the brown area spreads out as it reaches the center of the apple. It is a good visual aid showing how a cavity progresses.

**The Power of Fluoride:** This experiment simulates the protection power of Fluoride.

What you'll need:

- 1 bottle of Fluoride rinse solution (available from your dentist, local dental supply company and some pharmacies)
- 2 eggs
- 1 bottle of white vinegar
- 3 containers

What to do:

Pour four inches of Fluoride rinse solution into one of the containers and then place an egg in the solution. Let it sit for five minutes. Remove the egg. Pour four inches of vinegar into each of the remaining two containers. Put the egg that has been treated with the Fluoride into one container of vinegar and the untreated egg in the other container of vinegar.

What will happen:

One egg will start to bubble as the vinegar (an acid) starts to attack the minerals in the eggshell.

Which egg do you think will start to bubble?

**Acid Attack!** This experiment simulates an acid attack on bones (bones are rich with calcium, just like your teeth).

What you'll need:

2 clean chicken bones (ask your parents to save them for you the next time you have chicken for dinner)

1 container

1 bottle of white vinegar

What to do:

Pour several inches of vinegar into the container. Soak the clean chicken bones in the vinegar overnight.

What will happen:

Check out the bones after they've soaked in the vinegar overnight. Are they softer or harder? Be sure to throw the bones away in the garbage after you're finished.

**Hidden Sugar:** This experiment identifies the sugar content in food. Sugar is a major factor in the growth of plaque and tooth decay. Note: an adult must supervise this experiment.

What you'll need:

1 bottle of Benedict's solution (ask the school Science department)

assorted small pieces of food (cookies, crackers, bread, fruit)

several glass test tubes

1 heat source (burner, gas or electric)

tongs

What to do:

Place a piece of food in each test tube and then pour 30 - 40 ml of Benedict's solution over the food.

Heat the test tubes one at a time over the burner, using the tongs to hold the test tubes.

What will happen:

Benedict's solution is blue. The presence of sugar will turn the solution to orange. Are there some foods you thought were sugar-free that have sugar?

### **Tooth Decay Experiment**

Supplies: Large Styrofoam cup (for an auditorium, half of a small Styrofoam cooler) with a tooth drawn on its side, shaker of opaque small confetti (opalescent), squeeze bottle of white Karo Syrup, colored sugar sprinkles shaker, commercial acetone from the hardware store, glass dropper bottle from drug store, protective eyewear. Be sure to read information printed on the commercial acetone container.

[Bacteria Shaker]

On the day you were born – 2 \_ million bacteria moved into your mouth. They sit on your gums and tongue.

[Cup]

They're really happy when the first teeth come in because they have some furniture to sit on.

Every night when you go to bed be sure to brush your teeth and gums. Do a really good job.

[Plaque (white Karo syrup)]

While you sleep, those bacteria climb up on the teeth and gums. They form into a sticky, gooey blanket called plaque. You can't see plaque; it's colorless. When you wake up in the morning you can feel it with your tongue.

When you get up, first brush your teeth, get dressed and go down for breakfast. If you don't brush your teeth, remember the sticky, gooey plaque is still on there. Your breakfast is going to stick.

[Sprinkle Sugar (colored sugar or sprinkles)]

The bacteria are hoping for something sugary like a sugarcoated cereal, a donut, pop tart or syrup on pancakes.

[Dropper Bottle (Commercial Acetone from hardware store)]

They take the sugar and change it into acid. When the acid attacks the teeth, you can see that a hole is formed – the beginnings of tooth decay.

Don't forget to brush your teeth when you get up and go to bed. Watch sugary foods because you can have a twenty-minute acid attack every time you eat something sweet.

### **Plaque and how it can eat through enamel**

What you'll need: hard-boiled egg and vinegar

To show kids how plaque can eat through enamel, have the kids carefully feel the shell of a raw (or hard-boiled) egg and compare it to the feel of a tooth. Then soak the egg overnight in vinegar. The following day, compare the action of the vinegar on the eggshell to plaque on a tooth.

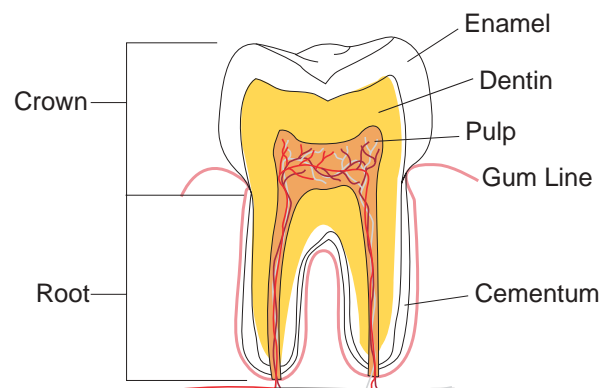
### **How easily teeth can stain**

What you'll need: 2 eggs and dark cola

To demonstrate how easily teeth can stain, place one egg in a jar of water and one egg in a jar of cola. The following day, remove the eggs and compare. Then use a toothbrush and toothpaste to brush away the stain from the cola-tinted egg.

### **A Closer Look**

This hands on activity give kids a detailed look at a tooth. Give your child a golf-ball size portion of Crayola Model Magic to flatten and form into a tooth shape. Let dry overnight. The following day have your child glue the tooth onto a 9" x 12" sheet of poster board. While the glue dries, review the parts of a tooth. (See following diagram). Then have your child use fine tipped markers and draw a gum line and label the crown and roots of his model. Next have your child color and label the pulp, dentin, enamel and cementum. Also, draw nerves and blood vessels in the pulp section. There you have a tooth model, up close and personal! Have fun.



# Tooth Facts

The **crown** is the visible part of a tooth.

The **root** holds the tooth in the jaw.

**Pulp** is the innermost layer of a tooth. It consists of nerves that feel pain and blood vessels that nourish the tooth.

**Dentin** is the yellow substance that surrounds the pulp. It is harder than bone and makes up most of the tooth.

**Enamel** covers the dentin in the crown of the tooth. It is the hardest tissue in the body, and protects a tooth during chewing.

**Cementum**, which is about as hard as bone, surrounds the dentin in the root of the tooth. The cementum and enamel usually meet where the root and the crown join.

**Incisor** – used for biting food has sharp edges, four incisors in each jaw

**Canine** – used for biting and tearing food also called cuspids or dogteeth, has sharp, pointed edges, two canines in each jaw.

**Premolar** – used to crush and grind, has a broad surface with lumps, called cusps, also called bicuspids, four in each jaw.

**Molar** – used to grind food larger than premolars, has three to five cusps, six molars in each jaw.

## Tooth Tasks:

### INCISORS:

8 front teeth, 4 on the top and 4 on the bottom. Shaped for biting and cutting.

### CUSPIDS:

4 teeth located on either side of the incisors. 2 on the top and 2 on the bottom. Shaped for tearing food.

### BICUSPIDS:

8 located behind cuspids. 4 on the top and 4 on the bottom. Shaped for crushing food.

### MOLARS:

8 - Double rooted teeth with bumpy chewing surfaces. 4 on the top and 4 on the bottom. Shaped for grinding food.

Students compare four kinds of teeth--incisors, canines, premolars and molars--with this toothy activity.

Draw lines to the possible tooth types and functions of each tooth:

### Possible Tooth Types

INCISOR

CUSPID

BICUSPID

MOLAR

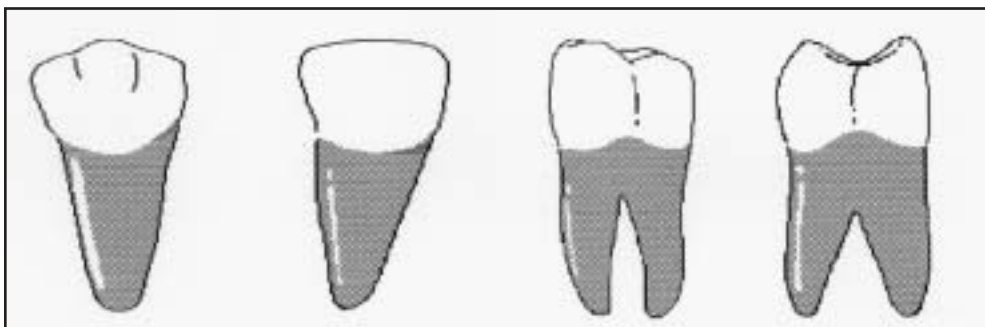
### Possible functions

CUT

TEAR

GRIND

CRUSH



### **Other Tooth Ideas:**

Have children count their own teeth, noting number, size and shape.

Have children with infant siblings tell how many teeth the siblings have and what kinds of foods they are able to eat.

Ask children to say such words as thirsty, thank you, thistle, and sister, being aware of the position of the tongue and lips against the teeth.

Ask children to bring magazine pictures of smiling people to school. Display them, discussing the importance of teeth in facial expression. Then blacken-out some of the teeth with a crayon to demonstrate how the appearance changes with missing teeth.

Have children bite into pieces of cheese or apples and note marks left in the food.

## **For the Older Children**

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### **The Effects Of Soda Pop On Your Teeth** **Observe the decay process over 6 weeks**

The purpose of this activity is to help students understand how pop (both sugar pop and diet pop) affects their teeth.

Materials include: Several small glass containers with covers, teeth (usually available from an oral surgeon, a general or pediatric dentist, or from the students themselves), and a sampling of soft drinks (include a diet soda in your sample).

Pour the pop into the glass containers. (Use one container per brand). Place one tooth in each glass container. Spit in the pop (to add the bacteria required for the decay process.) Label (with brand name and date) and close the containers.

After about six weeks, the teeth placed in sugar pop will be stained, blackened, decayed or broken. If there were food particles on the teeth, there may be some fungus-like buildup. The teeth placed in diet pop may be white or chalky in appearance, the result of decalcification and loss of minerals (due to the acid attack). You should be able to take a dental scaler (or a knife) and scrape off some of the decalcified tooth enamel. Staining may also be evident.

**Sugar pop:** Discuss the ways in which sugar interacts with naturally occurring bacteria in the mouth to form an acid that attacks the teeth for about 20 minutes, and then stops. The twenty-minute attack starts with the first exposure to sugar and lasts until 20 minutes after the last exposure to sugar. So if you sip a can of sugar pop for 30 minutes, the acid attack lasts for 50 minutes (or almost one full hour). Frequent exposure to sugar means frequent acid attacks. If you sip all day, you get decay.

**Diet pop:** Discuss the fact that diet pop is high in acid that attacks the teeth. Diet pop has pH levels that range from about 2.5 to 4.5. (Remember: The lower the number, the worse it is. As a point of comparison, water is neutral with a pH level of 7; the pH level of battery acid is 0. ) The pH levels in your mouth drop after eating or drinking and take from 1 to 2 hours to return to normal. If you sip all day, you get decay.

## **Other discussion topics:**

Pop is basically sugar water. All calories in pop are from sugar. Pop has no nutritional value. There are about 10 tsp. of sugar in a single-serving, 12 oz. can of pop.

Discuss marketing strategies of soda pop distributors: Are kids targeted? Schools are offered sweet financial deals for selling pop to students; container sizes are increasing just enough to encourage consumption of more pop as a single-serving; consumption patterns are increasing; etc.

Sweet preferences develop early. Pop consumption has been linked to diabetes, obesity and osteoporosis.

Both diet and regular pop replace more nutritious foods (often milk).

The average teenage soft-drink drinker gets about 10% of their daily calories from pop.

Discuss ways to reduce the risk of tooth decay.

Note: You may also wish to include apple juice as one of the tested liquids. Even though there are nutrients in juice, it has a high sugar content.

**Malocclusion And Braces:** The purpose of this activity is to help students understand the importance and necessity of orthodontic treatment. Materials needed include study model casts or pictures of the three classes of occlusion.

Using the study model casts, compare and contrast the three classes of occlusion (normal, protruding teeth, prognathic jaw). Explain to the students the importance of orthodontic work, how to properly clean teeth that have braces, and the kinds of conditions that can be corrected with braces. Have students brainstorm about the advantages and disadvantages of wearing braces. Also discuss the many types of braces that are available today.

**Tobacco And Oral Health:** The purpose of this activity is to help students identify the effects tobacco use has on oral health. Materials needed include pictures of oral cancer and pictures of teeth stained by tobacco products.

To help the students brainstorm about the known health hazards of tobacco use, ask the students what effects tobacco may have on oral health. Discuss how tobacco may affect oral health with respect to the use of cigarettes, cigars, pipes, and smokeless tobacco.

**Mouth Protectors:** The purpose of this activity is to help emphasize the importance of mouth protection during contact sports.

The use of mouthguards will help to prevent oral injuries when participating in sports. Anyone who plays any kind of recreational activities should always wear a mouthguard. Mouthguards are required when playing football and hockey, but should even be worn when bike riding or roller blading. A mouthguard is made from a plastic like material and is worn over the teeth to protect them from injury.

### **What is a mouthguard?**

A mouthguard is a protector made of plastic and form fitted to cover the upper teeth. Mouthguards do not prevent but may minimize injury to the mouth area especially the teeth, lips, cheek and tongue.

### **Who should wear a mouthguard?**

You don't need to be professional athlete to benefit from wearing a mouthguard. Any adult or child involved in a recreational activity that poses a risk of injury to the mouth can obtain protection with this important safety device.

### **When should a mouthguard be worn?**

A mouthguard should be worn at all times during recreational or sports activities.

### **What are the advantages of wearing a mouthguard?**

Wearing a mouthguard can help to minimize an injury that may occur to the teeth, tongue, cheeks, and jaw. Without mouth protection, oral injuries may result in chipped, fractured, or loosened teeth.

### **How do I take care of my mouthguard?**

Clean in warm soapy water and rinse in cold water after each use, if the mouthguard is not in your mouth it should be in the case. Examine regularly and replace if necessary. NEVER wear someone else's mouthguard.

### **IF INJURY DOES OCCUR, CONTACT A DENTIST IMMEDIATELY.**

#### **Activities:**

Obtain different types of mouthguards and discuss different ways that mouthguards can be made.

Have students brainstorm about the benefits of mouth protectors. Assign a committee of students to interview physical education or sports coaches about the school's mouth protector program. Determine what sports are included in the mouth protector program. If a program does not exist, encourage students to learn why. Students can then present their findings to the class. Materials needed include samples of mouth protectors and pictures of mouths that have lost teeth due to sports injuries.

**Acid Production:** The purpose of this activity is to illustrate how the acidity of the mouth changes before and after eating different foods. Materials needed include foods such as candy, cake, gum, cookies, apples, carrots, peanuts and popcorn, and pH sensitive paper (litmus paper) that include a 5.0-7.5 range.

Have students test the acidity of their mouths with litmus paper before and after eating different foods. Check the pH every five minutes for one hour. Chart and compare the results. Discuss with the students the way plaque uses sugar to produce the acid that can decay teeth. Have the students identify which foods produce the greatest, as well as the least, amount of acid.

**Periodontal Disease:** The purpose of this activity is to help students identify the causes of periodontal disease and the students' role in preventing the disease. Materials needed include pictures and X-rays of healthy and diseased mouths.

Have students brainstorm and discuss ideas for preventing periodontal disease.

**What Plaque Looks Like:** The purpose of this activity is to illustrate the way plaque builds up in the mouth. Materials needed include sheep's blood agar plates and toothpicks.

Divide the agar plates into four or six sections. Have each student initial his or her section on the edge of the plate. Give students a toothpick and instruct them to find plaque in their mouths. The students should gently rub the plaque on their section of the agar plate. Store plates in a warm, dark place for two days. The bacteria will start to show growth in two days and will continue to grow for one week.

Explain to the students that plaque is a sticky, invisible deposit that builds up on teeth every 24 hours. If plaque is not removed by proper brushing and flossing every day, teeth may decay and gum disease may result.

**Hidden Sugars: Label Reading:** The purpose of this activity is to assist students in identifying hidden sugars by reading food labels. Materials needed include selected food containers with labels (bottles, boxes, bags, etc.).

Have students circle sugars on several food labels. Be sure to include all forms of sugar (sucrose, dextrose, maltose, fructose, lactose, honey, molasses, etc.). Discuss surprising findings with the students, such as catsup, salad dressings and cereals. Explore with students how to minimize the effect of sugar on teeth.

## **OUTSIDE THE CLASSROOM**

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**Baby Toothbrush Drive:** Donate baby toothbrushes with information on infant and toddler care to local hospitals for babies born in February. If possible, present them in person to the new parents.

**Bulletin Board Display:** Put together a National Dental Children's Dental Health Month bulletin board in your office. Display pictures, posters, and oral health-related information.

**Letter-Writing Campaign:** Send letters to parents of young patients, praising the children: "I would like to take this opportunity during National Children's Dental Health Month to compliment (child's name), who is one of my finest young patients."

**Library Session:** Schedule an oral health-oriented session at your public library. Hand out oral health information, stickers, and brochures.

**Toothbrush Exchange:** Hold a toothbrush exchange at a local mall or department store. Ask community members to bring in their used toothbrushes in exchange for new ones.



# Dental Trivia

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- 1. What U.S. city that had the first fluoridated public water system?**
  - A. Oakland, CA
  - B. Grand Rapids, MI
  - C. Cleveland, OH
  - D. Clearwater, FL
- 2. Who is the patron saint of dentistry?**
  - A. St. Theresa
  - B. St. Joseph
  - C. St. Apollonia
  - D. Eva Marie Saint
- 3. Name the historic figure of the old west who was a dentist and lived for a short time in Tombstone, AZ.**
  - A. Roy Rogers
  - B. Wyatt Earp
  - C. John Holliday
  - D. Jesse James
- 4. Where is the National Museum of Dentistry located?**
  - A. New York City
  - B. Chicago, IL
  - C. Baltimore, MD
  - D. Los Angeles, CA
- 5. Name the U.S. president who had oral surgery done in secret to avoid a national panic?**
  - A. Rutherford Hayes
  - B. George Washington
  - C. Grover Cleveland
  - D. Abraham Lincoln
- 6. What invention introduced in 1892 by a dentist came to revolutionize the marketing and retailing of toothpaste?**
  - A. Toothpaste gel
  - B. Collapsible metal tube
  - C. Toothbrush
  - D. Billboards
- 7. From what materials were George Washington's dentures mainly constructed?**
  - A. Lead & ivory
  - B. Wood & human teeth
  - C. Rubber & bone
  - D. Silver & gold
- 8. Name the American patriot and Revolutionary War hero who practiced dentistry?**
  - A. Benjamin Franklin
  - B. Paul Revere
  - C. Thomas Paine
  - D. George Washington
- 9. What piece of equipment invented by a dentist changed how golf was played?**
  - A. Iron club
  - B. Golf cart
  - C. Golf tee
  - D. Gutta percha ball
- 10. Which of the following persons from the ancient world is sometimes called the first dentist?**
  - A. Socrates
  - B. Amonhotep
  - C. Hippocrates
  - D. Hesy-Re
- 11. What is the official color of dentistry?**
  - A. Lilac
  - B. Gold
  - C. White
  - D. Green
- 12. What was the purpose of the ancient Japanese custom of blackening the teeth?**
  - A. Warding off evil spirits
  - B. Beauty
  - C. Relief of toothache
  - D. Promoting healthy gums

## Answers for Dental Trivia

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1. **B. Grand Rapids, Michigan** in 1945.
2. **C. St. Apollonia**, an early Christian martyr, whose suffering included having all of her teeth knocked out.
3. **C. John Holliday**, also known as Doc Holliday because he was a dentist. He was born into a prominent well-to-do family in Griffin, Georgia in 1851 and received his dental degree from the Pennsylvania College of Dental Surgery in 1872. Shortly after receiving his degree, he was diagnosed with tuberculosis and went west on the advice of his physician who thought the drier air would be better for his health. At first he went to Dallas and opened a practice. This is where he first met and became friends with Wyatt Earp. Weakened by the disease, he was unable to maintain much of a dental practice while in Tombstone.
4. **C. Baltimore, MD.**
5. **C. Grover Cleveland** who had cancer of the upper jaw. The operation, which took place aboard a yacht in the East River in NYC, was to remove a malignant growth from the roof of his mouth. It was done in secret to avoid panic because the U.S. was involved in an international monetary crisis.
6. **B. The flexible, collapsible metal tube** was invented in 1892 by Dr. Washington Wentworth Sheffield, a Connecticut dentist who was seeking a more hygienic method for packaging toothpaste than the porcelain pots in use at the time.
7. **A. Lead & ivory.** He actually had several sets constructed for him during his lifetime. They were constructed of a variety of materials including lead, gold, steel, ivory and human and animal teeth. The denture base was either made of ivory or lead (usually ivory). Washington's own teeth or other human or animal teeth were inserted into the base with metal rods or wires. Springs and wires were used to hold the uppers and lowers in place. This question might be a bit confusing in that most of the sets of dentures were constructed with an ivory base with human or animal teeth. But answer B would be wrong because there is no evidence to support the widespread myth that the teeth or any other part of the denture were ever carved out of wood.
8. **B. Paul Revere** was a silversmith and skilled maker of dentures.
9. **C. Golf tee.** William Lowell (1860-1954), a New Jersey dentist, is given credit for the invention of the wooden golf tee in 1920 and its consequent widespread use. Dr. Lowell quit dentistry to invest in the manufacturing and selling of the tee, but it caught on so fast that he actually lost money on the invention. Another dentist, Dr. George Grant of Boston, was the first to receive a patent for the wooden golf tee in 1899. However, Dr. Grant did not attempt to promote or capitalize on his invention so it did not catch on at that point. Another dentist, Dr. Coburn Haskell from Cleveland, OH, invented the first modern mass produced golf ball with a rubber core wrapped in gutta percha (known as the rubber core ball) in 1898. The Rev. James Paterson (a retired missionary) invented the gutta percha ball also known as the gutty in Scotland in 1845. NOTE: Golf balls are historically identified by what makes up their core.

10. **D. Hesy-Re.** All that we know of Hesy-Re was found in his tomb, which dates to Egypt's Old Kingdom (2600 BC). He was a scribe of the pharaoh Zoser. He sometimes called the first dentist because hieroglyphics found on wooden panels in his tomb give him many titles including that of "the greatest of those who deal with teeth and of the physicians."
11. **A. Lilac.** Traditionally each academic discipline or profession has a color associated with it. Lilac is the official color of dentistry for academic dress, as assigned by the American Council on Education. It is also recognized as dentistry's color by many professional dental organizations.
12. **C. Beauty.** The custom known as ohaguro existed in Japan as late as the early 20th century but is no longer practiced. At first, it was used as both a status symbol and as a type of cosmetic among the nobles of medieval Japan. It was believed to add a gentle and tender appearance to one's looks. Eventually, the practice came to be used only by young women who first blackened their teeth when they were ready to find a husband as a way to enhance their appearance. At one time it was customary for young brides to receive ohaguro kits as part of their trousseaus. In ohaguro, a black ink is brushed on the teeth routinely at least once a day. The essential ingredients of the ink are powdered nutgall and rusty water. The nutgall is mixed in a pot of liquid made up of water, vinegar, sake, green tea, and starch to which has been added rusty nails and pieces of iron.

