

# School Activities for Learning About Teeth and Gums

We can help school children in two ways. First, they need treatment now for problems they already have. Second, they need to learn how to prevent problems from hurting them (and their families) later.

Treatment and prevention go together. It is a mistake to emphasize only prevention and to forget about treatment. **In fact, early treatment is the first step to prevention because it usually meets a person's most strongly felt, immediate need.**

As a community dental worker, you can visit a school and find out what the felt needs are. Begin with the teacher. Examine for cavities, bleeding gums, or other problems. Then look at the students.

Chapter 6 tells you how to examine a person. It also helps you decide what treatment to give, and who should give it.

**Then teach how to prevent dental problems.** Give the teacher ideas to help students learn why they have problems, and how to keep the problems from returning. The best way to learn is by doing—through activities, not lectures. This chapter has many suggestions for activities.

The best health practice is to prevent cavities and gum disease from even starting. With these activities, children can **do** something to guard their health.

## Teacher, each day at school:

Suggest ways for your students to eat good healthy kinds of food.

AND

Give your students time to clean their teeth.



### *A Note to Teachers:*

Do not wait for a dental worker. This book, and especially this chapter, is written to help you learn and do things yourself. But do ask your dental worker to work with you. He probably has suggestions that would fit your situation. After examining the children, he can help you follow their progress. You can then find out how much they are learning and how healthy they are becoming.

To begin, talk with your students to find out what they think and what they already know. What are their traditional beliefs? Some may be helpful, and others may need changing. At first it is best simply to discuss.

Ask the kind of questions that get students talking. Later they will take part in discussions more easily.

Add new information as you go along, changing some ideas but usually building upon what the students already know.

This chapter asks nine questions:

- Why do we need teeth and gums?
- Why do some teeth look different?
- What holds the teeth?
- How often do teeth grow in?
- What makes teeth hurt?
- How do germs make holes in the teeth?
- What makes the gums feel sore?
- What does it mean if a tooth is loose?
- How can we prevent cavities and sore gums?



For each question, there is an activity to help students discover answers for themselves. The questions are not in any particular order, nor are they written for any particular grade level. Make your own lesson plan, using the main idea to help you. Shorten the lesson and make it easier for younger children. Add more information for older students and let them do more activities.

## Why Do We Need Teeth and Gums?

### THE IDEA:

Your teeth and the gums around them help you in many ways.

### Teeth are important for:

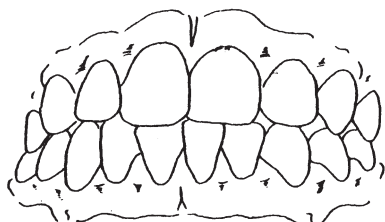
Good **Health**. Infection from a bad tooth can spread to other parts of your body.

Good **Looks**. Healthy teeth that look good help you feel good.

Good **Speech**. Your tongue and lips touching the teeth help you make many sounds.

Good **Eating**. Your teeth break food into small pieces so that you can swallow and digest it better.

Good **Breath**. If you leave food around your teeth, your breath will smell bad.



### Your gums are important too.

They fit tightly around the teeth, and help to keep them strong. Without strong gums, your teeth are of no use. Most old people lose teeth because of bad gums, not bad teeth.

### ACTIVITIES:

1. **Draw or cut pictures of people from magazines.** Make posters to show that healthy teeth make a person happy, while bad teeth make a person sad. Use the posters for discussion.

Hang up a picture of a person the students know and like. Put black on one of her front teeth. Talk about it.

### OR

Leave the picture for a few days. Then put black on some of her teeth before the students come to school. See who notices first.

When someone sees the difference, talk about how the person looks, how teeth can be lost, how to prevent that, and what she can do now.

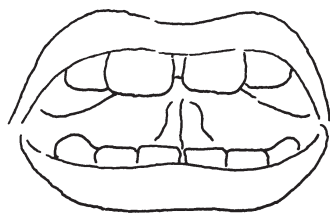




Make a picture of a person who has lost all of his teeth. He looks old.

Talk about how hard it is for him to eat properly or speak clearly.

**2. Have the students say words that use teeth to make sounds.**



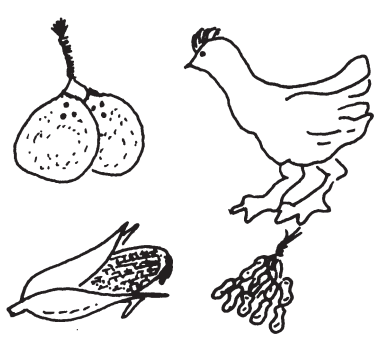
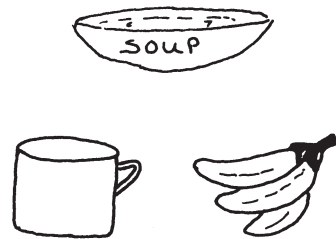
“v” and “f” — friend, fever — the lower lip touches the top teeth.

“th” — the, teeth — the tongue touches the top teeth.

“s” — sun — air goes between the teeth.

Now, try saying the same words again, but do not let the tongue or lips touch the teeth.

**3. Have students draw pictures** of good foods we use our teeth to eat. Then draw foods that we can eat if we lose our teeth.

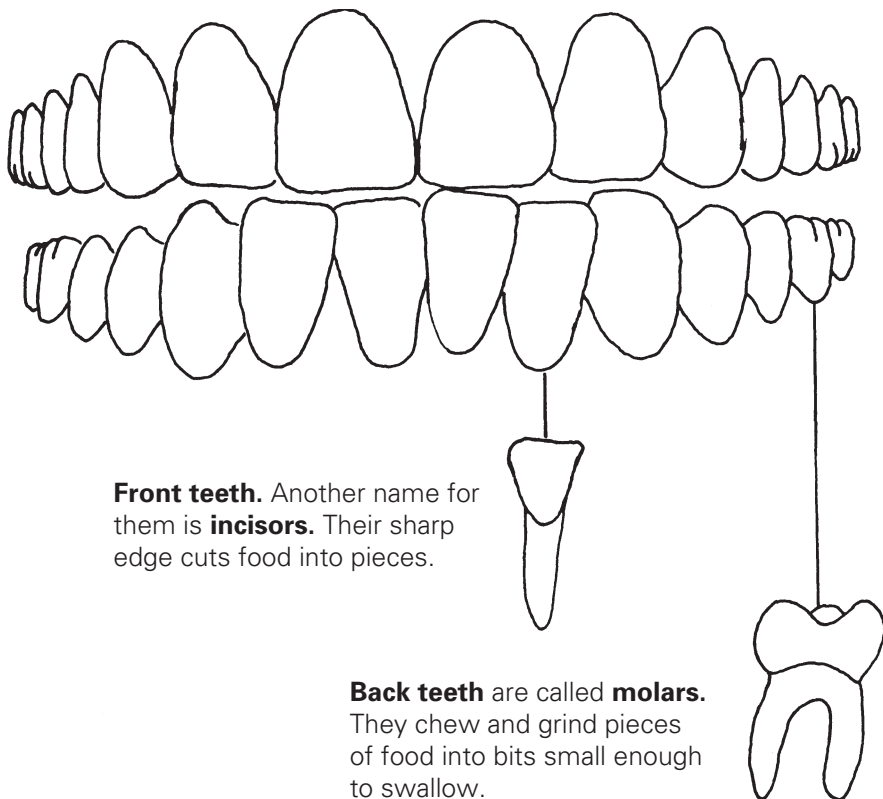
Need Teeth	No Teeth Needed
	
<b>and many more!</b>	<b>but not much more!</b>

Talk about this together. Try to eat a mango or some maize without using your teeth, or using only your front teeth.

## Why Do Some Teeth Look Different?

### THE IDEA:

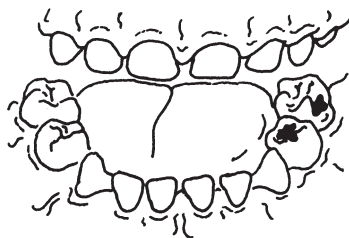
We need two different kinds of teeth to help us eat our food.



The outside of a tooth is the hardest and strongest part of your body. When a tooth is healthy, it can chew hard food, even bone. The shape of a tooth allows us to swallow food when the small pieces can slide down its smooth sides.

Small bits of food often get caught inside deep lines, or grooves, in a tooth.

Look for them on the top and the sides of back teeth.



Food that is not cleaned away from the grooves can make a cavity (hole) in them.

A tooth with a cavity is weak and often hurts.

## ACTIVITIES:

- 1. Ask the students to bring different kinds of food to class.** Bring some yourself.

Eat the food using first the front and then the back teeth.

Bite a guava using only the back teeth.

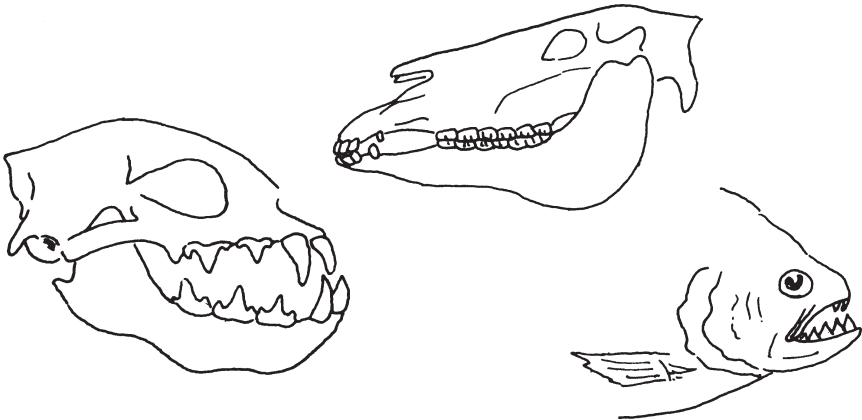
Chew completely a mango or piece of maize, using only the front teeth.

WHICH TEETH DID YOU USE  
TO EAT THE MANGO?

ALL OF THEM!



- 2. Collect teeth from different animals.** Let the students discover from the shape of an animal's teeth the kind of food it usually eats. For instance, a wild cat needs sharp pointed teeth to tear meat, but a goat needs flat teeth to chew grass.



Make a poster to show the animal, its teeth, and the kind of food it likes to eat.

- 3. Have each student take a partner.** Let each look at the shape of the front and back teeth in the other's mouth.

Talk about the many different kinds of food we need to stay healthy. Discuss which teeth we use to chew meat, fish, mango, and other good foods in your area. (For most foods, the answer is both front and back teeth!)

## What Holds the Teeth?

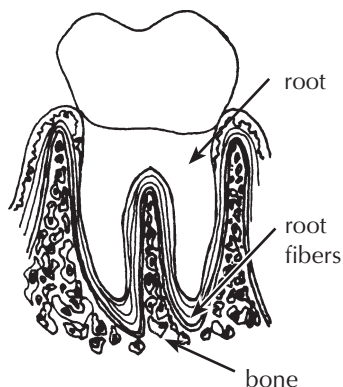
### THE IDEA:

When you look inside someone's mouth, you see only the top part of each tooth. The bottom part, its root, is inside the bone under the gum.



The roots of the tooth hold it in the bone just like the roots of a tree hold it firmly in the ground.

The roots of the tooth do not actually touch the bone. Root fibers connect the root and bone, holding the tooth in place.



The gums do not hold the teeth, but healthy gums will keep harmful germs from getting to the bone and root fibers. When the gums are not healthy, they form deep 'pockets' which collect germs. Soon, these germs will reach the root fibers and bone. The bone pulls away from the tooth in order to get away from the germs. With no bone to hold it, the tooth is lost. This is the most common reason why teeth fall out.

### ACTIVITIES:

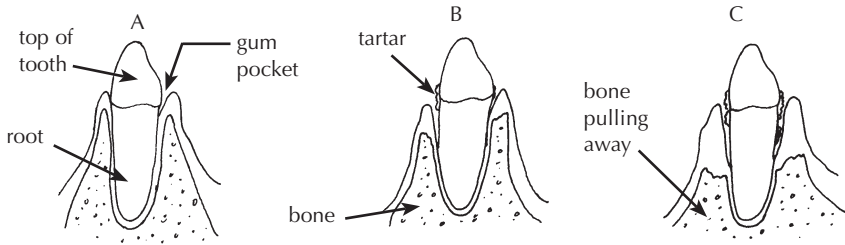
1. **Have the students look for an old jaw bone** from a dog or other animal. Notice that bone goes around every root of every tooth and holds it tightly. Break away some of the bone and look at the roots of the teeth.



Front teeth need only one root because they are used for biting.

Back teeth have 2, 3, or even 4 roots. That makes them strong enough to chew tough meat and even break hard bone.

## 2. Show your students how infected gums can cause teeth to fall out.



- A. When gum disease is beginning, a small red 'pocket' forms where the tooth meets the gum. Germs and food collect in the gum and make acid. This makes the gums sore.
- B. As a result, the gum pulls away and the pocket becomes deeper.
- C. The bone moves away from the infection and no longer holds the tooth.

Try to think of other ways to teach how gum disease pushes the bone away from the tooth. In Jamaica, dental workers ask, "What do you do if someone attacks you with a machete (long knife)?" "I run away!" most people answer. "Exactly," say the dental workers, "and when you have a lot of germs attacking the root of your tooth, the bone 'runs away' and leaves the tooth with nothing to hold it."

Tell a story to show how, when the gum moves away from the top of the tooth, the root and bone are open to attack. For example:



One day, a hen was sitting on the eggs in her nest. The hen was hungry, and when she saw a worm, she left the nest to catch the worm. Just then, a possum came along, saw the fresh, warm eggs, and ate them all up.

Explain to the students that the gums protect the teeth the way a hen protects her eggs. When she leaves the eggs unprotected and exposed, an animal can attack and destroy them. When gums around a tooth are red and sore, the tooth is exposed to germs that can attack not only the top of the tooth, but also the bone and root.



## How Often Do Teeth Grow In?

### THE IDEA:

A child gets two sets of teeth. The first set, **baby teeth**, starts to grow when the child is a baby. The second and last set grows in at school age. They are the **permanent teeth**. Permanent teeth should last a lifetime.

A child grows his first baby tooth at about 7 months of age. It is usually a front one.

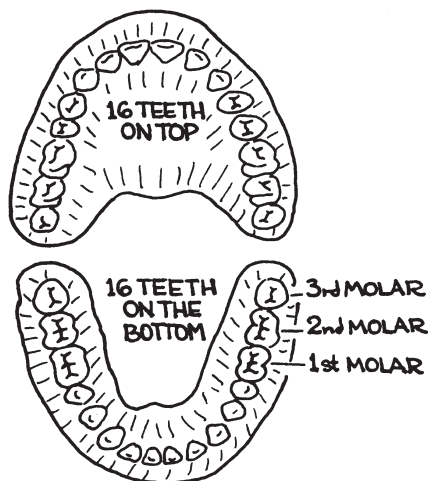


A baby who is poorly nourished, however, may not grow his first tooth until later. Do not wait for the first tooth before giving him the extra soft food he needs to grow and stay healthy.

The remaining baby teeth grow in over the next 24 months. By the time the child is 30 months old, there will be a total of 20 baby teeth in his mouth, 10 on top and 10 on the bottom.

Most permanent teeth form under the baby teeth. When the child is between 6 and 12 years old, the permanent teeth push against the roots of the baby teeth, making them fall out. Not all of the baby teeth fall out at once. One tooth at a time becomes loose, falls out, and then is replaced with a permanent tooth. The new tooth may not grow in immediately. Sometimes 2 or 3 months pass before the new tooth grows into the space.

In the 6 years between ages 6 and 12, the 20 permanent teeth replace the 20 baby teeth. In addition, 8 other teeth grow in behind the baby teeth.



At 6 years, the 4 first permanent molars start to grow in at the back of the mouth. This means an **8-year-old child should have 24 teeth, or spaces for them.**

At 12 years, the 4 second permanent molars grow in behind the first molars. This means a **14-year-old child should have 28 teeth, or spaces for them.**

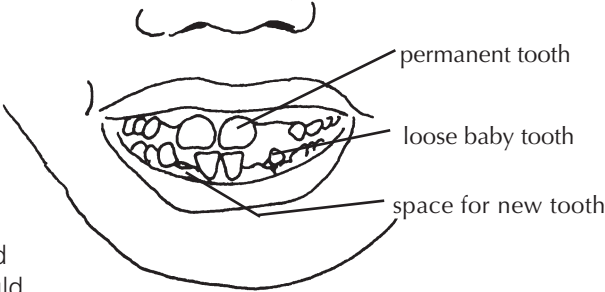
Between 16 and 22 years, the 4 third permanent molars grow in. This means that **an adult usually has a total of 32 permanent teeth: 16 on top and 16 on the bottom.\***

\*(Note: the third molars often do not grow in correctly. This is a very common cause of tooth pain. See page 66.)

# THE ACTIVITY :

**Have the students examine each other.\*** Help them learn which are baby teeth and which are permanent teeth. Look for the important 1st permanent molars at the back.

Show the students how to count the teeth and the spaces that are ready for new teeth to grow in.



Then have them count their friends' teeth, to find out how many teeth should be growing in different age groups. Later, they can do this with their brothers and sisters at home.

- Wash your hands.
- Count the teeth.
- Count the spaces where new teeth have not yet grown in.

TOTAL = teeth + spaces

- Find out the person's age.

Have the students first write their totals on the blackboard. Then make a chart for the children to remember and discuss the results.

Lesson: Number of Teeth We Should Have					
TOTAL = teeth now present (T) + spaces (S)					
	under 6 years	6-8 years	9-11 years	12-16 years	over 16 years
Mita (girl)	20 T 0 S / 20 Total				
Joseph (boy)			18 T 6 S / 24 Total		
Saa (father)					27 T 5 S / 32 Total
Ambun (girl)				26 T 2 S / 28 Total	
Michael (boy)		22 T 2 S / 24 Total			

\* Here the children are only counting the teeth. They can also learn to check for cavities and gum disease (see p. 49 and 53).

Discuss the number of teeth children have at different ages. Young children 6 to 12 years old, for example, have 24 teeth; older students, 28 teeth; and most adults, 32 teeth.

At home, students can count brothers' and sisters' teeth to learn how many teeth small children have. Count only the teeth and not the spaces.

Lesson: Number of Teeth in a Small Child			
	under 1 year	1-2 years old	2-3 years old
Deboi (brother)	/// /3		
Ngosi (sister)		//////// /16	
Chenia (sister)	0 (6 months old) /0		
Michael (cousin)			//////// // /20

Ask the students what other things they saw inside someone else's mouth. This is a good time for students to discover important things about good health practices. Encourage them to learn as much as they can from what they see, and then show them how to use a book like this to answer their own questions. For example, if students see cavities and red bleeding gums, you can start a discussion on tooth decay and gum disease. Use some of the activities on pages 55 to 60.

For another example, if the students see a baby who has only a few teeth, they may have some interesting questions. Show them this book and invite them to read pages 63 to 65 to find answers to questions like these.

- Can Chenia, who is 6 months old and has no teeth, eat soft foods? Should she have more than just breast milk?
- When Chenia's teeth grow in, will they give her diarrhea and fever?
- Will a 2-year-old girl get more baby teeth?
- Why do we care for baby teeth, when we only need them for a few years?

## What Makes Teeth Hurt?

### THE IDEA:

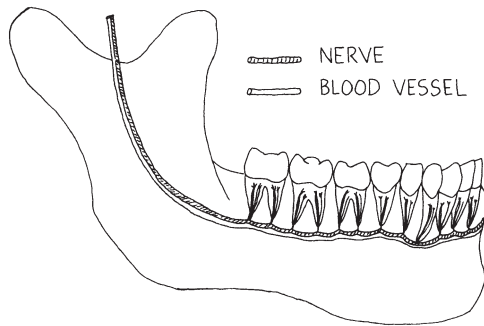
A tooth will hurt if it is broken, loose, or if it has a cavity. Cavities are the usual cause of toothaches.

**Healthy teeth are alive.**

Two thin strings enter each tooth. One, the **nerve**, comes from the brain and carries the message of pain. The other is the **blood vessel**. It comes from the heart and carries blood to the tooth.

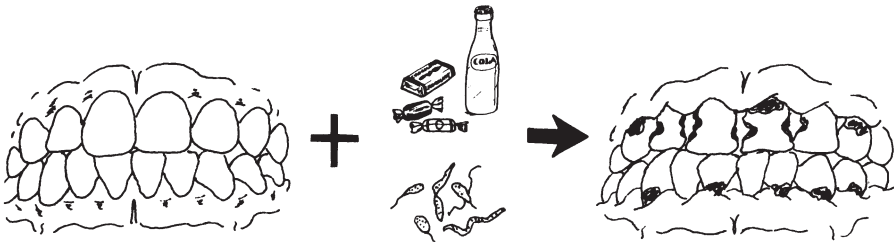
If you could peel away the gum and look inside the bone, you would see that a nerve and a blood vessel go into each one of a tooth's roots.

They give the tooth life and feeling.



The hard cover of the tooth protects the nerve and blood vessel inside it. But when tooth decay eats through that cover, the nerve and blood vessel are unprotected. A cavity lets food, water and air get closer to the nerve, and that can make the tooth hurt.

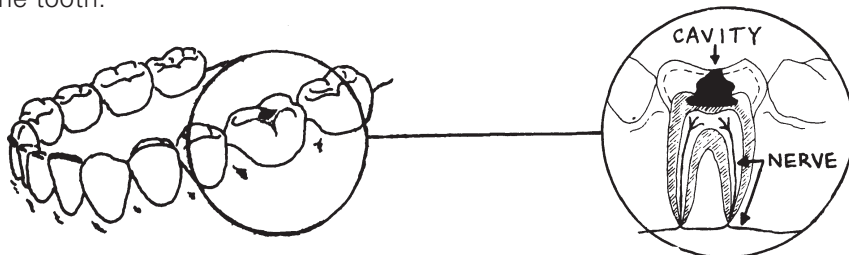
The sugar in food makes tooth decay possible. Sweet food that is also sticky is the worst of all because it glues itself to the teeth. Germs inside your mouth use the sugar to grow and to work harder at making cavities.



See the next section for more discussion of how germs and sugar combine to cause cavities.

A cavity may look small on the outside, but it is much bigger inside. Decay spreads more easily in the soft part under the hard cover of the tooth.

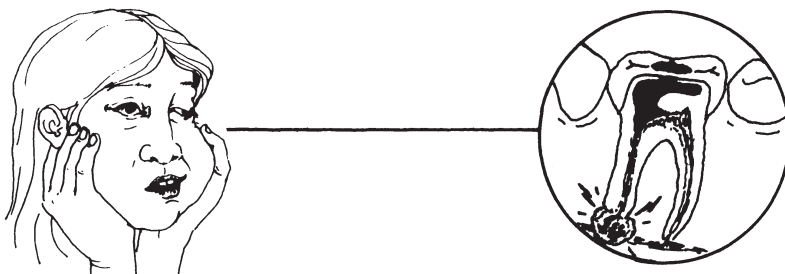
A tooth with a cavity may hurt, but it usually does not hurt all the time. This is because the bottom of the cavity is close, but not yet on the nerve inside the tooth.



**Fill a small cavity and save a tooth.**

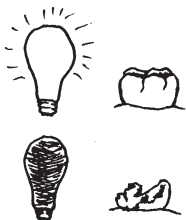
A small cavity that is not treated grows bigger and gets deeper. When the cavity finally touches the nerve, it causes a tooth abscess. Infection from the tooth decay going inside the tooth causes the tooth to ache all the time, even when you try to sleep.

Infection can pass from the tooth to the bone. As it spreads under the skin, there will be swelling of your face.



**A tooth with an abscess must either be taken out or have its nerve treated.**

An abscessed tooth is dying. When it dies the tooth changes color from white to dark yellow, grey, or even black. **Pus** from the end of its root can pass to the gum, making a sore called a **gum bubble**.



A tooth is like a light bulb.

When the bulb is alive from power inside, it is bright and useful.

The little wires inside the bulb are like the nerves inside the tooth. When the bulb burns out, it is dark and not useful any more.

# ACTIVITIES:

**1. Have each student look inside a partner's mouth.** Look for black spots that may be cavities, for dark teeth that are dead, and for sores on the gums, especially near a bad tooth.

**2. Discover how sweet food sticks to teeth.**

- Cut several different kinds of food with a knife.
- Vegetables and meat do not stick to the knife.
- Sweet foods, like chocolate and jam buns, do stick to the knife. They stick to your teeth the same way.



Pour some cola or juice in a dish, and leave it outside overnight.

As water is lost, the juice left in the dish becomes sticky. It attracts flies.

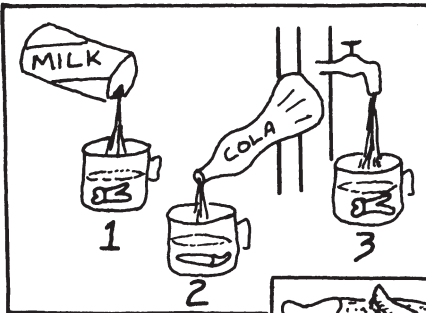
The air you breathe dries the cola and causes a sticky, very sweet coating to form on your teeth. It attracts germs.



Try to find some old teeth. Ask the students to keep their own baby teeth when they fall out. (Note: in some countries this is not acceptable.) Your dental worker can save you some teeth that were taken out at the clinic.



Scrape the outer cover of the root with a knife. Feel how hard and smooth it is.



Then find out what happens when the students leave a tooth in cola, milk, or plain water.

After 3 days scrape each tooth again with a knife. Students will discover that sweet cola drinks make teeth softer and darker in color.



- 3. Look inside a tooth** for the space where the nerve and blood vessel used to be. See how close they were to the tooth's hard outer cover. Look for a small hole at the end of the root. That is the place where the nerve and blood vessel enter the tooth.

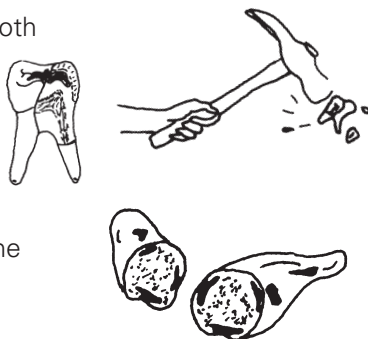
Ask your dental worker to find an old tooth with a cavity and cut it for you.

**OR**

- Take a hammer.
- Gently break open a tooth.
- Look inside.

See how much bigger the cavity is on the inside. It spreads under the hard cover.

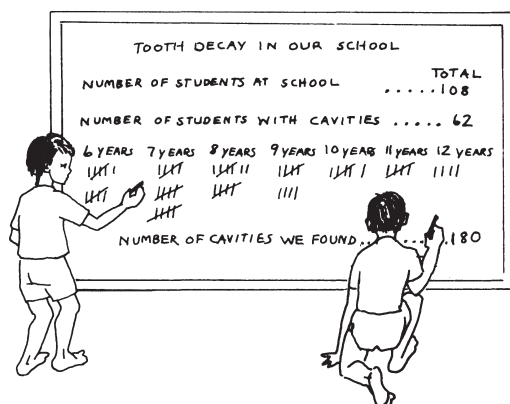
Cut through a rotten yam. See how the rotten part spreads under its skin in the same way.



#### 4. Do a project in class.

- Count the number of students with cavities.
- Count the number of teeth having cavities. Show the students how to look for them on the tops, sides and between the teeth.
- Find out the person's age.

Have the students write on the blackboard what they counted. Then make a chart or graph.



- Decide if tooth decay is a serious problem in your school. Ask your dental worker to look at your results and to come and treat the students, and help you prevent the problem from returning.
- Do the same with brothers and sisters at home. Find out if tooth decay is a problem with these young children. Tell your dental worker what you find.

## How Do Germs Make Holes in the Teeth?

### THE IDEA:

**Acid** makes holes in the teeth. The acid is made when sweet foods mix with germs in your mouth.

It is not possible to prevent cavities or gum problems by trying to kill all of the germs in your mouth. There are too many—and some germs are good for you. The important thing is to **keep the germs from getting together** and making a film or coating on your teeth.

This film on the teeth is called **plaque**, but you do not need to use this word. Every morning we can all feel a 'furry film' on our teeth. This film must not be allowed to stay on the teeth! It will mix with sugar and make acid. Worse, if it stays in a group (or 'colony') for more than 24 hours, it will mix with saliva, harden, and make tartar (see page 52).

The main reason for cleaning teeth is to break up these colonies so they cannot make acid. Also, if you forget to clean your teeth, tartar will form, and you will need a dental worker to scrape it off. This is why it is important to clean your teeth at least every 24 hours, so the tartar can never form on your teeth.

### THE ACTIVITY:

Here is a game called "Scatter!" that students can play outside. You need:

- Five 'bases' (a tree, rock, or the corner of a house can be a base) in a half circle, 12 meters apart. Each base must have a 'monitor' who stays at the base.  
Note: children who cannot run can be good monitors.
- One person with a broom. This person is the 'decolonizer'.



Children in Jocuixtita, Mexico, beginning a game of "Scatter!" The 'decolonizer' is the girl in the center with the broom.

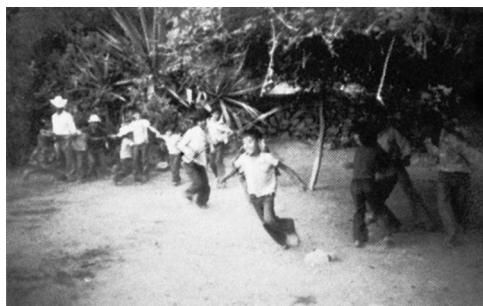
### The Game:

20 students called 'colonizers' stand facing the decolonizer. When the decolonizer says "go!" they try to 'form colonies' around the bases before the decolonizer can touch them with the broom.





The 'decolonizer' (with broom) has lost the game. The children behind him have formed a 'colony'.



Here the decolonizer stops a boy from completing a chain.

### After The Game:

Talk to the students about germs in their mouths and how small they are. Can anyone see germs? No, but they can feel them and taste them. Ask the group what their mouths feel like in the morning when they wake up. You may get these answers:

- My teeth feel mossy.
- My breath is bad.
- I feel a coating on my teeth, but it goes away when I brush them.

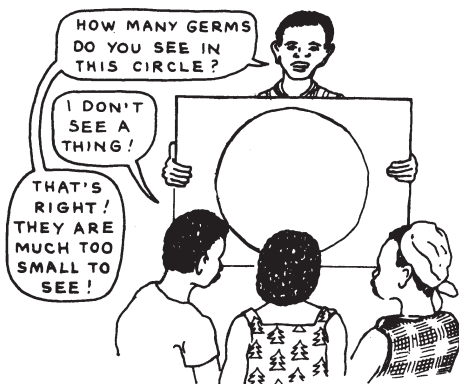
Tell the students that this coating on the teeth is a 'colony' of germs. They are always trying to group together on the teeth or in spaces between the teeth—just as the 'colonizers' did in the game!

The colonizers win if they make a colony. There are two kinds of colonies: **(1)** 15 people touching one monitor at a base, or **(2)** a chain of 12 people holding hands, touching two monitors.

Play two games: one with children trying to form the first kind of colony, one with the second kind. These photos are from the second game.

The decolonizer tries to stop the others by touching them with the broom. When the decolonizer touches a colonizer with the broom, the colonizer must leave the area for one minute. (Give that child a task to do—run around the school-house or lie down and sit up 30 times.)

The decolonizer wins if no colonies form in 5 minutes.



To teach about things too small to see, look at the suggestion on page 11-29 of *Helping Health Workers Learn*.

## What Makes the Gums Feel Sore?

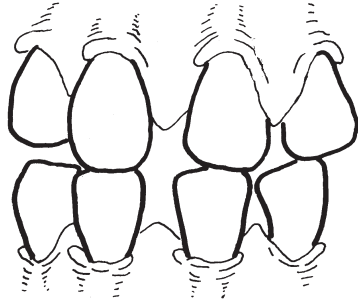
### THE IDEA:

Healthy gums fit tightly around the teeth and help to hold them strongly. Healthy gums also cover and protect the bone under them.

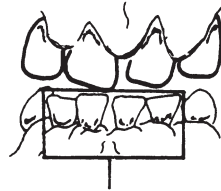
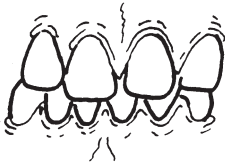
**Healthy gums are pink in color**, or even blue or dark yellow in some people. But healthy gums are **never red**.

**Healthy gums are pointed between the teeth.** This lets food slide away and be swallowed.

**Healthy gums fold under, making a little pocket around the tooth.**



As we saw with the last activity (p. 50), when you have 'colonies' of germs on your teeth, they can make acid that makes holes on your teeth. The same coating of germs can make a different acid that makes the gums sore. This also happens when food mixes with the coating on your teeth. Soft food is the worst kind, because when it mixes with spit it sticks more and stays longer on your teeth. Juice from tea, betel nut, and meat color this food, making the tooth look dark.



Healthy gums become sore because of acid. When the coating on the teeth (p. 50) becomes hard, it is called **tartar**. Tartar can hurt the gums. Also, the 'colonies' of germs can make a coating on top of tartar more easily than on a clean tooth. When the colonies are new, they make more acid which causes tooth and gum problems. After 24 hours, it hardens and makes a new layer of tartar. The tartar gets bigger and bigger.

**Sore gums are infected.**

**Infected gums are red and bleed easily.**

**Infected gums are round and swollen between the teeth.**

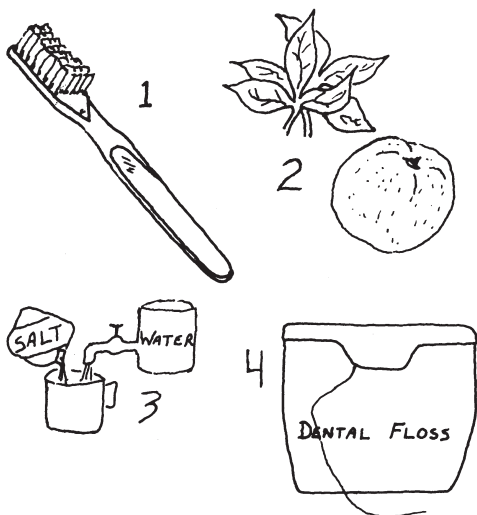
They are also loose instead of tight against the teeth.

Here is a larger picture of the teeth in the box above:



**Infected gums have a deep gum pocket** which catches even more food.

Infection in the gums is called **gum disease**. It is important to treat gum disease early, before it can spread to the root fibers and the bone.



If you have sore, bleeding gums, you can do much to treat the infection yourself.

1. Clean your teeth with a soft brush gently and more often (see pages 69 to 72).
2. Eat more fresh fruits and vegetables.
3. Rinse your mouth with warm salt water.
4. Clean between your teeth with dental floss or string. At first your gums may bleed when you do this. But when the gums are stronger the bleeding will stop (p. 71-72).

#### ACTIVITIES:

##### 1. Have the students look in each other's mouths.

Can they see the coating on the teeth? Usually they cannot. They may see food or 'white stuff,' but this is not the coating that makes acid. However, if someone has been chewing betel nut or eating berries, you will see stains on her teeth **and the stains will be darkest** where she has these colonies of germs on her teeth.



##### 2. Put something on the teeth to stain the colonies of germs.

Try using food dye, betel nut or berry juices. Remember: first wash your hands! Older students can rub berries on the teeth of the younger ones. Have them rinse with a little water and spit it out. After this, the colored areas on the teeth will show where the colonies of germs are forming. Where are they? Usually you will see the dark colors:

- between the teeth.
- in the pits or holes in the teeth.
- on the tops (biting surfaces) of the teeth.

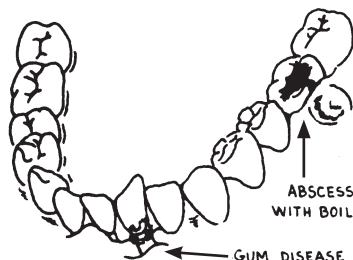
The older students can show the younger ones the best way to clean teeth (see pages 69-72). Have them use a mirror to see if they are getting the colored juice from their teeth. They will learn that it is most difficult to get rid of the color between their teeth. Give them some string, dental floss, or the soft stem from a young palm leaf and show them how to use it between their teeth. Remind them to be gentle, or they will hurt their gums. **Clean between your teeth every day.**

## What Does It Mean if a Tooth Is Loose?

### THE IDEA:

Baby teeth become loose when children are between 6 and 12 years old. This is normal. If a loose baby tooth does not have a cavity, and if the gums around it are healthy, there is probably a permanent tooth growing under it.

But a tooth might be loose because it is broken or because it is sick from an abscess or gum disease. Either can destroy the bone around the tooth's roots.



When bone is lost, the tooth becomes loose. A loose tooth hurts and usually must be taken out.

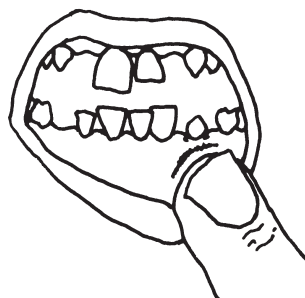
**There is no medicine to make bone grow back around the roots of loose teeth.** All you can do is stop the infection from getting worse.

### ACTIVITIES:

1. **Let the students look into each other's mouth** for loose baby teeth. Look carefully to see why a tooth is loose.

Touch the gum and bone beside the loose tooth. You can feel a bump—it is the new permanent tooth growing.

Save the baby tooth after it has fallen out. Look to see how the permanent tooth has eaten away its root by pushing against it.



2. **Look for teeth that have cavities or gum disease around them.** The students can do this with each other, and then later at home. (Remember: they must wash their hands!)

A tooth that has some of its root showing is probably loose.

Using your fingers or the handles of two spoons, rock the tooth back and forth gently. See how much it moves, and ask how much it hurts.

**Tell the person what he can do to prevent other teeth from becoming loose.** (See the next section.)



## How Can We Prevent Cavities and Sore Gums?

Eating good food and carefully cleaning the teeth prevent both tooth decay and gum disease.

**Food from your own garden and local food from the market is best.**

These foods are good for your body, your teeth, and your gums.



**Vegetables**, especially those with dark green leaves.



**Peas and beans**, like green beans, soybeans, winged beans, and mung beans.



**Oil**, from palm nut kernels, ground nuts, and coconut.



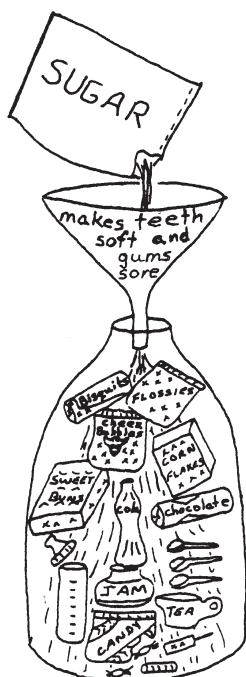
**Fruits**, like banana, guava, oranges, and papaya.



**Fish, meat and eggs.**



**Clean water, coconut water, and milk** are best to drink.



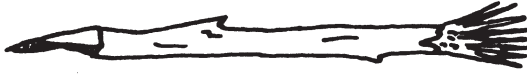
**Soft foods and sweet foods from the store are not good for you.** Soft foods stick to your teeth easily. They can work longer to cause cavities and infected gums. Sweet foods have mostly sugar in them, and it is 'factory sugar,' not the 'natural sugar' that is in the foods in the pictures above.

This kind of sugar is quick to mix with germs and make acid. Remember: natural sugar makes acid slowly; factory sugar makes acid quickly.

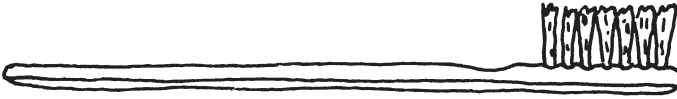
Children who eat a lot of sugar lose their appetite for other foods—the foods that help them grow strong, stay healthy, and learn well in school.

Store foods are also expensive. You can usually get better food, and more of it, for the same money in your garden or in the market.

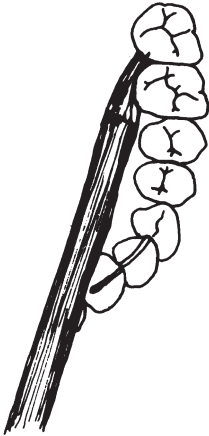
Cleaning your teeth carefully every day is another important way to take care of both teeth and gums. **However, cleaning teeth is like building a house. To do a good job, you need to work slowly and carefully.** Once a day is enough, if you clean your teeth well every day.



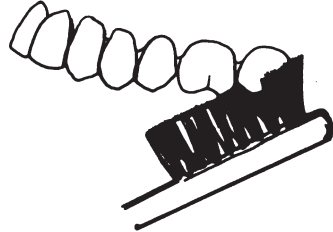
Buy a brush from the store, or make one yourself (see pages 4 and 5). But be sure the cleaning end of the brush is soft so that it won't hurt the gums.



Use your brush to clean all the teeth, especially the back ones with the grooves. Back teeth are harder to reach and so it is easy not to clean them well enough. Cavities start from sweet food and germs left together inside the grooves.



1. Scrub the inside, outside, and top of each tooth.
2. Push the hairs of your brush between two teeth. Sweep the food away.
3. Wash your mouth with water, to remove any loose bits of food.



Small children are not able to clean their teeth carefully enough by themselves. They need help. Look at the pictures on the cover and p.18 to see how you can do this. **Older children can care for younger brothers and sisters at home.**

## ACTIVITIES:

One of the best ways to teach is by example.



Students will believe what their teacher says if they know he eats good food and cleans his teeth.

The reverse is also true. Learning is harder when students know that their teacher does not do those things himself.

Students can be a good example for their community, too. They can:

- draw pictures of foods that are both good and bad for teeth. Use them to make posters and flannel-board stories.
- make puppets and plays to discuss ways people can become healthier.

There are some other ways to make learning meaningful and fun.

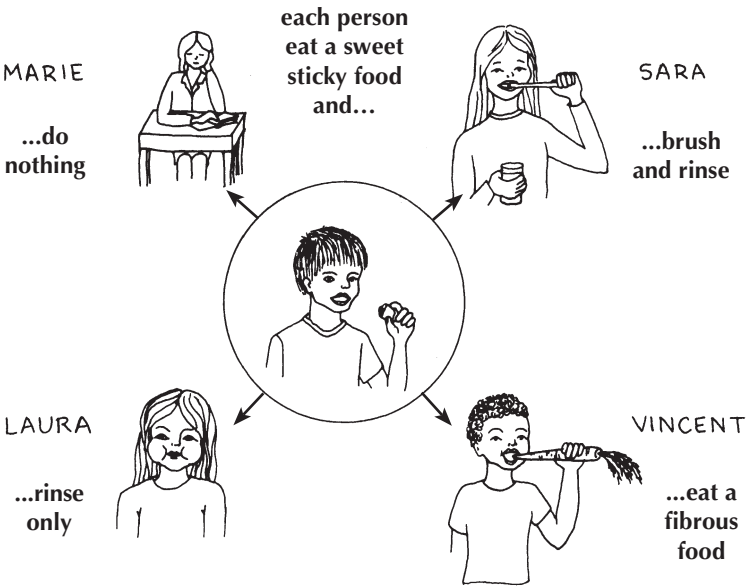
1. **Make a garden at school.** Divide the ground so that each class has its own space to plant a garden.

Use some of the garden's food to prepare a meal for the students, perhaps once a week. Students can bring food from home if there is not enough ready in the garden.

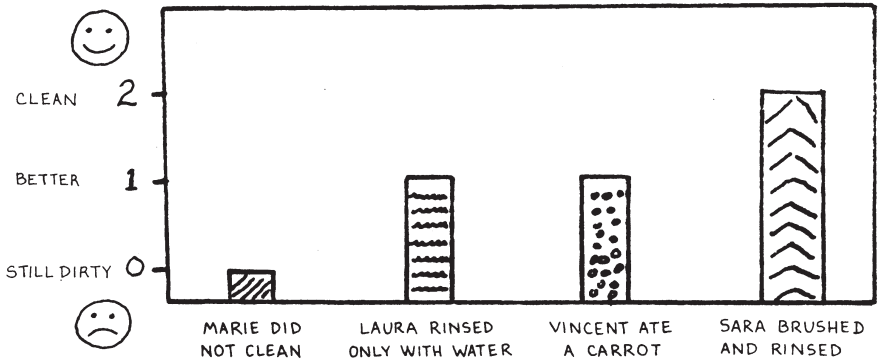
2. **Organize a school lunch program.** Each day the students can bring some good food from home. Cooked yams, or maize, nuts, fruit and fresh vegetables are all good. Often the students will exchange food and talk about the many different foods that can be grown locally.

**3. Find the best way to clean teeth.** Divide the class into groups. They will learn more easily in a small group of 4 to 8 students.

Give all the students something to eat that is sweet, sticky and dark in color, such as sweet chocolate biscuits. Ask the students to look in each other's mouth, to see how easily the biscuit sticks to the teeth. One or two of the students in a group can then try to clean away the pieces of biscuit, using a different method.

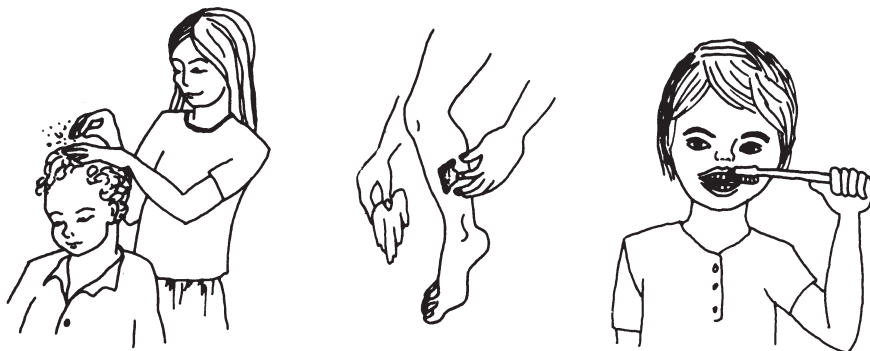


When they are finished, the students can look at the teeth to decide if they are clean or not. Put your findings on a chart and talk about what you have learned.



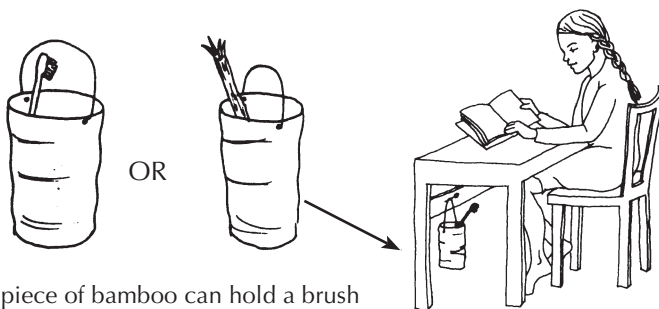


- 4. Make cleaning part of a daily health activity.** Older students can look after younger students. They can first check their hair for lice, then sores for infection, and teeth for old food or germs. (To see the coating of germs on the teeth, try the activity on page 53.) One partner can point out to the other where washing and brushing can be done better.



## CLEANLINESS CAN BEGIN AT SCHOOL

At school, students can wash their hands before lunch and brush their teeth with flouride toothpaste afterward. Encourage them to keep a piece of soap and a toothbrush or brushstick (p. 4). A program in the Philippines called Fit for School combines this with deworming 2 times a year to keep children healthier, develop good habits, and keep them in school.

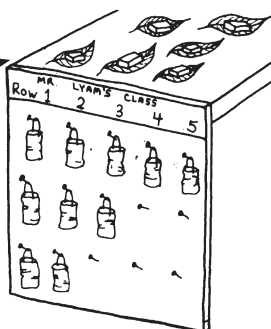


The student can keep the brush at her own desk...

A piece of bamboo can hold a brush nicely. Make two holes near the top for some grass string, to hang the bamboo brush holder.

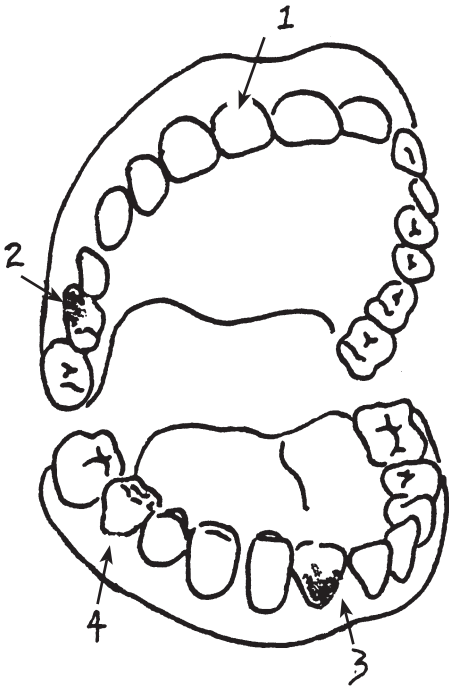


Let each student look after her own soap and brush.



... or on a rack at the back of the room.

Have the students score each other's progress. Do not make it hard to judge, or they will not do it. In the example below, the tooth is either clean or not clean.



SCORING TEETH

Pick 4 teeth, a back tooth and a front tooth—two on top and two on the bottom.

Use the same 4 teeth for each person. Look for food on each tooth near the gums.

A clean tooth = 2 points.  
A dirty tooth = 0 points.  
Total possible points each day is 4 teeth x 2 = 8 points.

In this example the score is:  
Tooth 1 = 2 points  
Tooth 2 = 0 points  
Tooth 3 = 0 points  
Tooth 4 = 2 points  

---

Total = 4 points

Have each student put his daily score on a chart. At the end of the month he can see how much he has improved.

