

LESSON VI-4: Food and Dental Health

Student Learning Objectives:

- VI-9. Students will summarize the tooth decay process.
- VI-10. Students will explain how carbohydrates impact dental health.
- VI-11. Students will classify snack foods as being harmful or helpful to their teeth.

Preparation

- Gather the needed materials.
- Use the food models to select several samples of the following types of foods: high sugar foods, sticky food, crunchy foods, and high calcium foods. They will be used for Activity 2.
- Duplicate enough copies of the Student Worksheet, Chain of Decay, so that each student will have one.

Materials

Resources

- Food Models, National Dairy Council
- Teacher Reference: *Caring For Your Teeth and Gums* OR *Taking Care of Your Teeth & Gums*, pamphlet, American Dental Association
- Student Worksheet: Chain of Decay
- Teacher Key: Chain of Decay

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- Pencils or pens

Time: 35 minutes

Lesson Procedure

Introduction: 2 minutes

Connect this lesson on the impact of food on dental health with the previous lesson on the nutrients in food.

1. Share with the students:

We have been learning about some of the nutrients in food. Who can tell me what three nutrients we tested for during our last health lesson? [protein, fat, carbohydrates (sugar and starch)]

What are the other three nutrients? [water, vitamins, minerals]

We need all of these nutrients in our diet, but one of these nutrients can be harmful to our teeth if we're not careful. Who can guess which one? [carbohydrate—because it is sugar]

If you need a hint, what were you eating the last time your parents told you to brush your teeth?

Call on several students to list the foods that prompted a reminder to brush their teeth.

2. Explain:

Many of the foods that are considered harmful to teeth are carbohydrates. Today's lesson will focus on the chain of decay and how foods affect tooth decay.

Activity 1: 10 minutes

Explain how carbohydrates interact with plaque to form acid on the teeth.

1. Write the chain of decay (plaque + sugar = acid, acid + teeth = tooth decay) on the chalkboard and share:

These equations represent the chain of decay, or how tooth decay happens.

Plaque is a thin layer of germs (bacteria) that sticks to teeth. Everyone has germs in his or her mouth all the time. These germs cannot grow and multiply if there is no food left on or between teeth after eating.

Carbohydrates (sugars and starches) can promote cavities because the plaque uses them to grow. As the bacteria (plaque) grow, they give off acid which eats away at the tooth and can cause cavities. The longer carbohydrate foods are in contact with teeth, the more bacteria grow, and the more acid is produced.

If the plaque is not removed daily, it may lead not only to tooth decay, but may cause the gums (tissue around the teeth) to become inflamed (red, swollen) and to bleed when brushed. This is called gingivitis, which means inflammation of the gingiva (gums).

The plaque may harden to form calculus. This can result in the loss of the supporting structures of the teeth, a condition known as periodontal disease, which can lead to tooth loss.

2. Distribute the Student Worksheet, Chain of Decay, to each student.
3. Ask the students to match the words with their correct definitions at the top of the sheet. Save the bottom half of the worksheet to use with the next lesson.

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| Teacher's Note: Refer to the American Dental Association pamphlet, <i>Caring For Your Teeth and Gums</i> OR <i>Taking Care of Your Teeth & Gums</i> , page 3 for more information. |
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