

LESSON 1: NORMAL ANATOMY OF THE HEALTHY MOUTH

FOCUS:

Humans usually start adult life with a full complement of from 28–32 teeth. This Positively Aging® lesson will help strengthen students’ awareness of the anatomy, development, and function of the teeth.

OBJECTIVES: Students will:

- ▶ label the structures of the oral cavity
- ▶ identify types, position, and function of teeth
- ▶ identify parts of the tooth

PRE-ACTIVITY 1A: ORAL HEALTH SLIDE SHOW

The slide show consists of 20 color slides of different mouths with accompanying descriptions (Oral Health Slide Show Teacher Script). The slides are intended to supplement the lessons as illustrations of good oral health and various oral health problems, such as caries and periodontal disease. Of particular interest is slide 2 – this slide shows the teeth of a 90-year-old woman with no cavities or gum disease. The point is, if you take care of your teeth, you may retain them well into old age.

ACTIVITY 1A: THE MOUTH

Go over the parts of the mouth with the students. Give them the worksheet “The Mouth” for them to use as you discuss the parts. When you are finished have them work the coloring activity, so that they can locate the parts of the mouth. The mouth includes the lips, tongue, teeth, and the hard and soft palates. There are also three sets of glands that secrete saliva. The teeth cut, tear, crush and grind food. The tongue acts as a taste organ and it also mixes saliva with food and moves it toward the rear of the mouth. The hard and soft palate is what we call the roof of our mouth.

ACTIVITY 1B: THE KINDS OF TEETH

Give each student the worksheet “Kinds of Teeth.”

- A.) Read about the different kinds of teeth and their functions.
- B.) Have the students record the kinds of teeth and how many of each are found in a person’s mouth. Discuss with the students the position of each kind of tooth found in the mouth. You may want to mention that children have 20 “baby teeth.” This activity looks at an adult mouth with its full complement of 32 teeth. Teens probably do not have all 32 permanent teeth; wisdom teeth usually penetrate the gums in the late teen years or in early adulthood.

C.) Now have the students look at the profile drawings below their charts and have them identify/label the kinds of teeth by color coding each tooth found.

Incisors—red

Cuspids—orange

Bicuspid—blue

Molars—green

From looking at the position of the teeth, have the students discuss the function of each kind of tooth found in the mouth.

D.) Have students observe the function of the different kinds of teeth in relation to different consistencies of food by participating in the mechanics of chewing activity.

1B EXTENSION 1: ANIMAL TEETH

The teacher can provide, or have students look for, pictures of analogous teeth in other animals. For example, incisors in dinosaurs, baboons, cats, rabbits, and molars in cattle, horses, and deer.

1B EXTENSION 2: TOOTH MATH

Have students calculate fractions and percentages of each of the kinds of teeth in the mouth.

ACTIVITY 1C: THE PARTS OF THE TOOTH

Hand each student a picture of the cross-section of a tooth titled “The Parts of the Tooth.” Place a transparency of “The Parts of a Tooth” on the overhead and have the students label the parts of the cross-section of a tooth. Next discuss the functions of each part. Students take notes on the parts of a tooth and their function.

ACTIVITY 1D: THE MECHANICS OF CHEWING

Hand out the worksheet “Mechanics of Chewing.” Using different samples of food, have the students record the process of how their teeth bit into and chewed the food. Be sure the students use the proper names of the teeth they used on the various foods. Some foods that can be sampled are: bananas, nuts, peanut brittle, cheese, apples, carrots, and celery.



Oral Health Slide Show

The slides and their descriptions.

1. **Healthy 18-year-old female**, without dental decay (caries) or gingival (gum) problems.
2. **Healthy 90-year-old female**, without dental decay (caries) or gingival (gum) problems.
3. **91-year-old female**, without dental decay (caries). Has had periodontal problems causing the loss of some teeth in the back of the mouth. Patient is wearing a lower partial denture.
4. **Sealants**. This patient has had sealants placed to help prevent dental decay (caries). See page 9-24.
5. **Demineralization**. This washboard appearing enamel surface could have been caused by sucking limes/lemons, acid candy, and/or too many soft drinks.
6. **Demineralization**. These dished out areas of teeth could have been caused by sucking limes/lemons, acid candy, and/or too many soft drinks.
7. **Fixed bridge** to replace missing teeth.
8. **High caries risk assessment**. 18-year-old male with active dental decay (caries) and some gingivitis (gum disease). Caries has been caused by acid candy or acid given off by bacteria living in plaque on the teeth. Has this person taken care of his teeth?
9. **High caries risk assessment**. Much dental decay (caries).
10. This person has had major problems with dental decay (caries) and periodontal disease.
11. **Periodontal disease**. This is caused by an infection of the gums (gingiva and bone). This can be prevented.
12. **Teeth worn from grinding**. These are the teeth of a person who grinds/ clenches his/her teeth. This can occur during sleep or while the person is awake. The person is not always aware that they are grinding their teeth. As you can see, this action wears away part of the teeth, and can make chewing more difficult. This condition can be treated.
13. **Teeth with plaque, before chewing disclosing tablet**.
14. **Teeth after chewing disclosing tablet, showing stained plaque**.
15. **Edentulous mouth (all teeth missing)**.

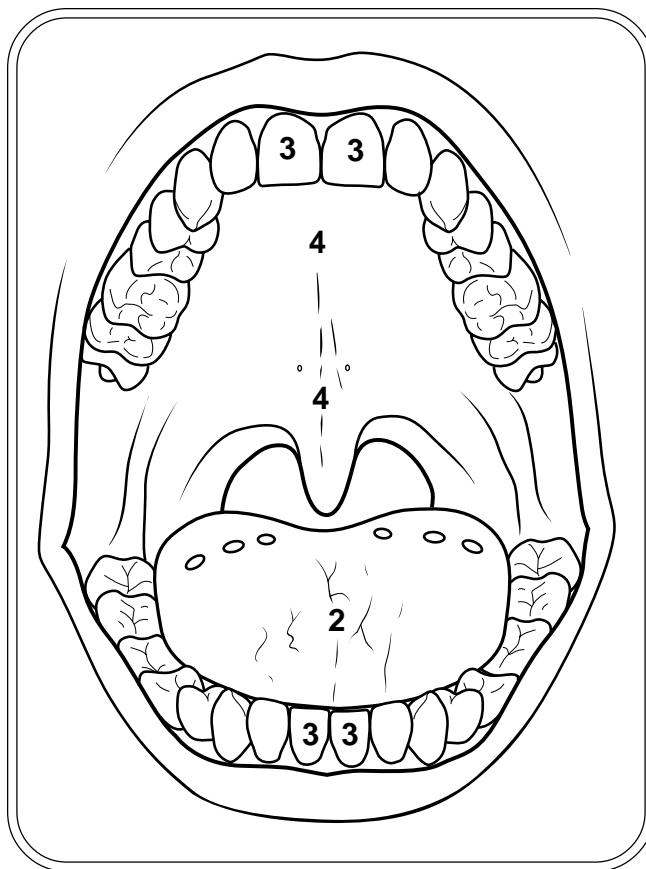
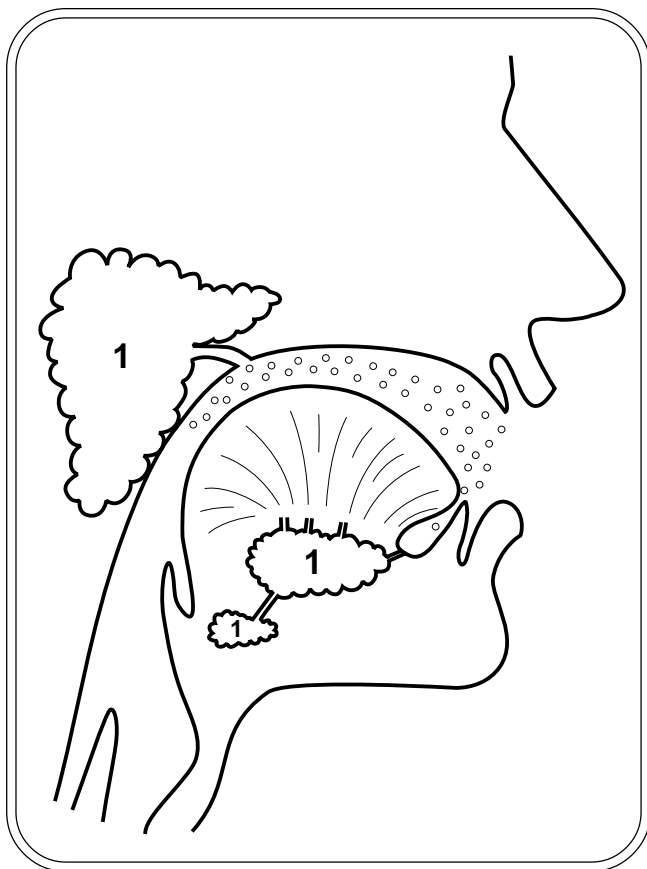


Oral Health Slide Show

16. **Full upper and lower dentures.**
17. **Lower partial denture.** A person may only be missing a few teeth. When this occurs, the missing teeth can be replaced with a partial denture. Can you tell which teeth the person has had removed?
18. **Implants.** Some people who are edentulous have chosen to have implants to aid in holding their upper and/or lower denture in place. This slide shows a patient who has had four implants inserted in their lower jaw. These hold the lower denture in place while eating and talking. This is an expensive and time-consuming process.
19. **High caries risk assessment.** This slide is showing a 50-year-old male with some missing teeth and much decay (caries) in all the remaining teeth. What could be some reasons for all this decay?
20. **Radiographs (X-rays).** X-rays are used to examine teeth for hidden decay (caries).

THE MOUTH

Color the parts of the mouth as indicated below.



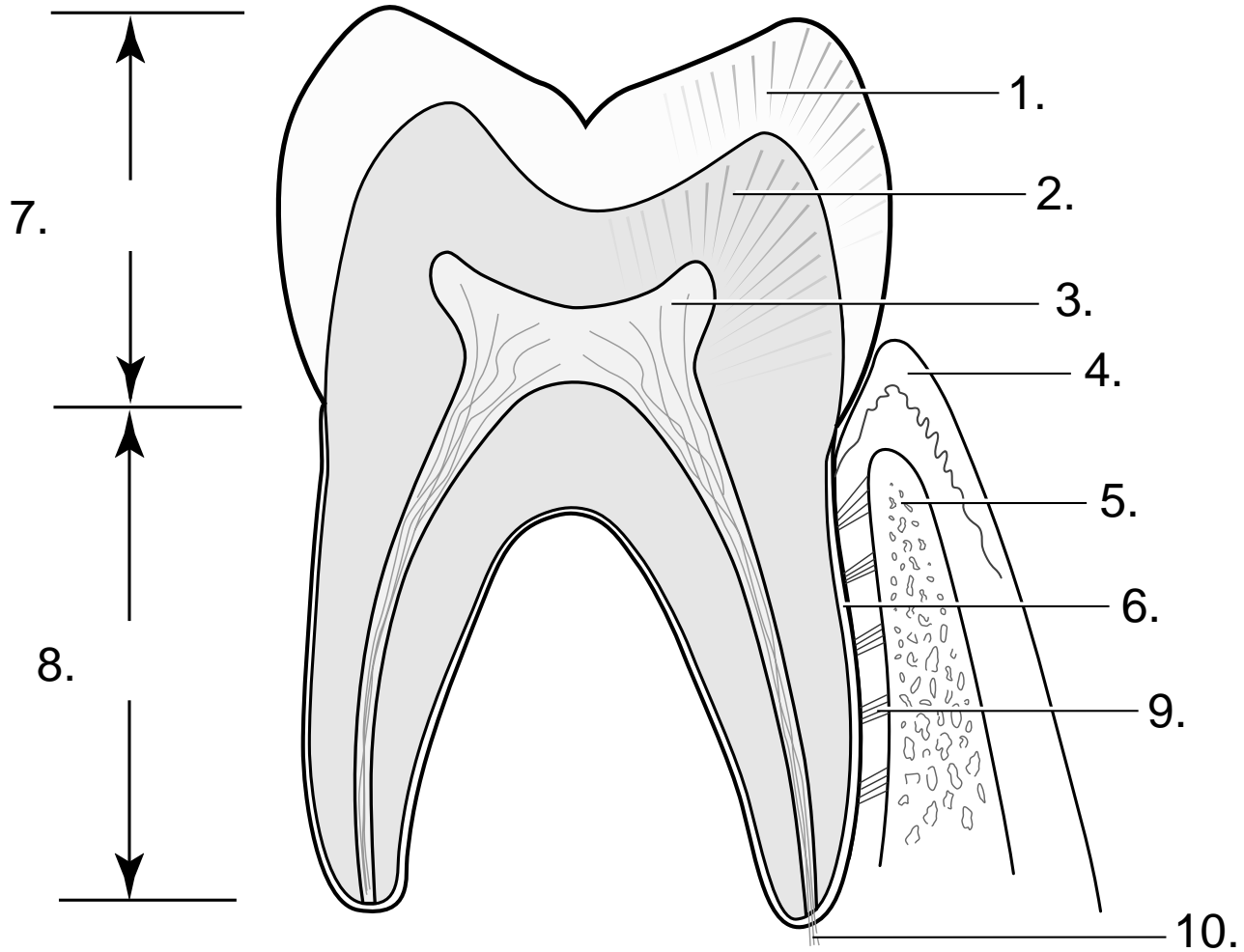
1. Salivary glands—secrete saliva to aid in chewing food. (green)
2. Tongue—acts as a taste organ and it also mixes saliva with food and moves it toward the rear of the mouth. Important for speech. (pink)
3. Teeth—cut, tear, crush and grind our food. They are important for speech. (white)
4. Hard and soft palates—the roof (top) of the mouth. (light blue)

THE PARTS OF THE TOOTH WORKSHEET



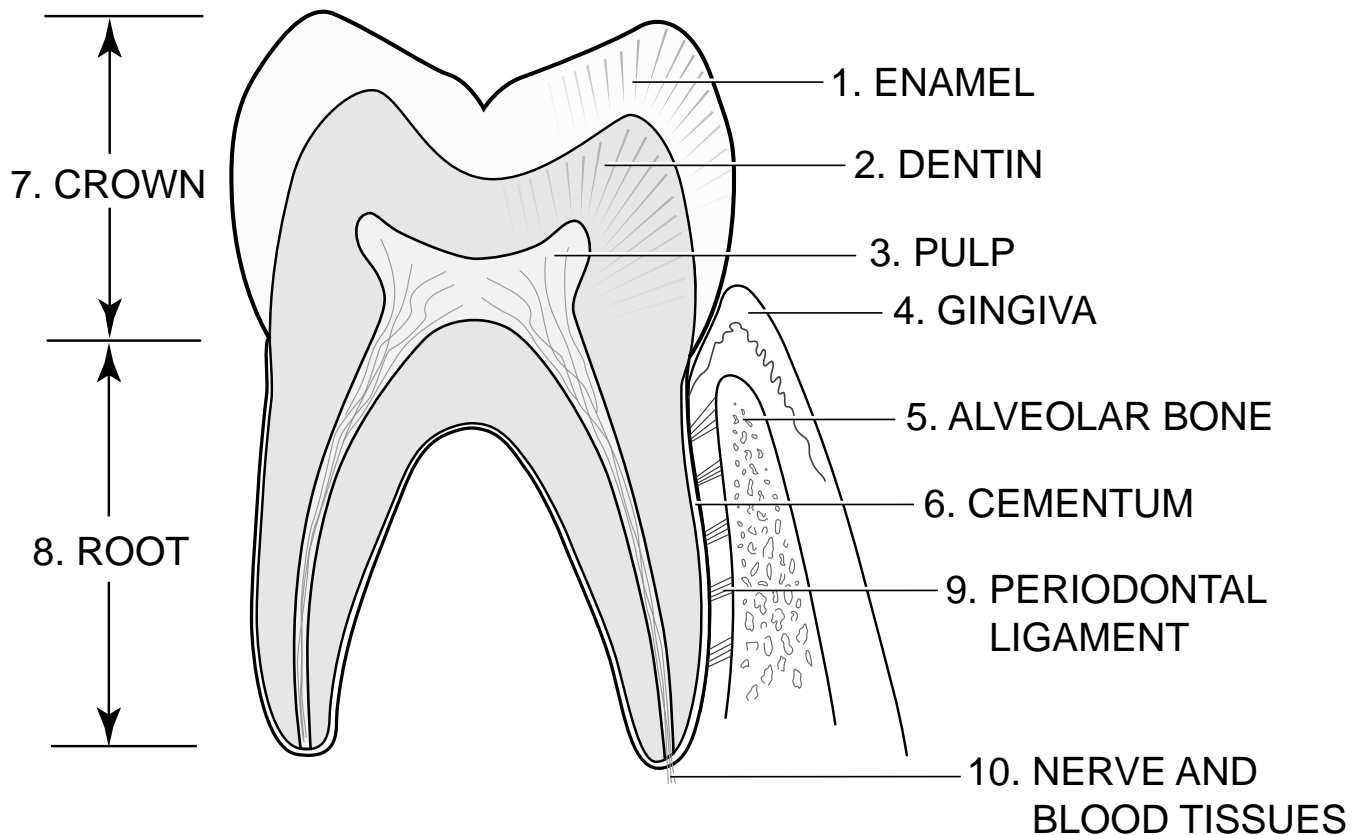
Directions: Look at the transparency
“The Parts of a Tooth” to label the following tooth structures.

- | | |
|---------------|-------------------------|
| ENAMEL | CEMENTUM |
| DENTIN | CROWN |
| PULP | ROOT |
| GINGIVA (GUM) | PERIODONTAL LIGAMENT— |
| ALVEOLAR BONE | NERVE AND BLOOD VESSELS |



THE PARTS OF THE TOOTH

Teacher Answer Sheet



1. **ENAMEL**—The hardest tissue in the body. It covers the crown.
2. **DENTIN**—The bone-like tissue that supports the enamel.
3. **PULP**—Contains nerve and blood vessels.
4. **GINGIVA**—The gums
5. **ALVELOAR BONE**—The bone that supports and surrounds the roots of the teeth.
6. **CEMENTUM**—The thin, bone-like tissue that helps to connect the root to the jawbone.
7. **CROWN**—The part of the tooth you can see.
8. **ROOT**—Anchors tooth in jawbone.
9. **PERIODONTAL LIGAMENT**—Fibrous tissue which connects the roots to the bone.
10. **NERVES AND BLOOD VESSELS**—The nerves are sensory devices that act as pain receptors; blood vessels supply blood to the tooth.

KINDS OF TEETH



A. INCISORS, CUSPIDS, BICUSPIDS, AND MOLARS

Incisors are the large, thin, rectangular-shaped teeth located in the front of your mouth. These teeth cut food for your mouth like sharp scissors.

Canines/cuspids are next to the incisors, and are sharp and pointed. These teeth tear food.

Premolars/bicuspids are the teeth behind the canines. They tear and crush food.

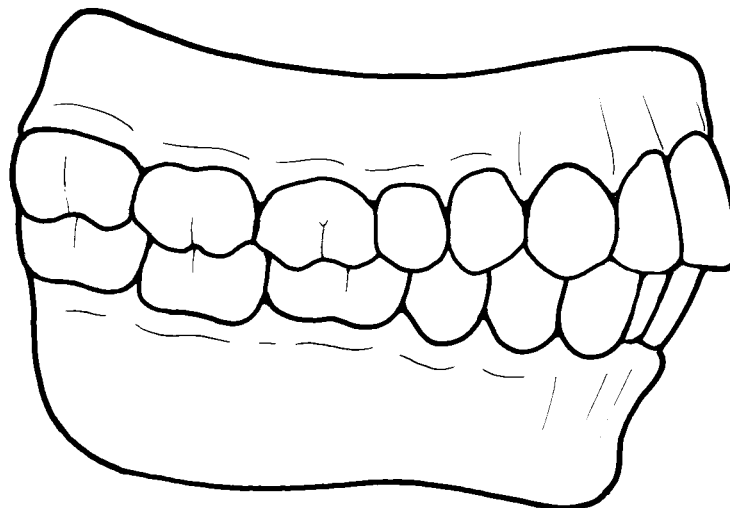
Molars are the teeth located in the back of your mouth. They are flatter and wider than the other teeth. The word molar means “millstone,” since these teeth work similar to a millstone, grinding food.

B. TEETH AND THEIR POSITION AND FUNCTION:

Kinds of Teeth	Number in Mouth	Position	Function
Incisors	Eight	Front of Mouth	Cut Food
Cuspids	Four	Behind Incisors	Tear Food
Bicuspids	Eight	Behind Cuspids	Tear/Crush Food
Molars	Eight to Twelve	Back of Mouth	Grind Food

C. PROFILE DRAWINGS OF TEETH:

Locate the kinds of teeth by color coding each tooth found. Incisors—red; Canines—orange; Premolars—blue; Molars—green



MECHANICS OF CHEWING

Using different samples of food, record the process of how your teeth bit into and chewed the food. Be sure to use the proper names of the teeth you used on the various foods.



FOODS I SAMPLED:

WHAT MY TEETH DID:

PEANUTBRITTLE

BANANAS

NUIS

APPLE

CHEESE

CARROIS

CELERY

