

SNBP International & Senior Secondary School, Chikhali, Pune.

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Grade - IV

Subject: Science

Prepared by: Ms. Shweta N. LESSON-2. Teeth and digestion

Q1. Keywords:

1. permanent 9. plaque 2. incisors 10. digestion 3. canines 11. salivary 4. premolars 12. gland 5. enamel 13. oesophagus 14. intestine 6. dentine 7. nourishment 15. pancreas 8. fluoride 16. cavities

Q2. Pre Activity:

Draw the four main types of teeth and label them.

Q3. Name the following:

1. Name the four kinds of teeth in the mouth.

Ans: Molars, Premolars, Incisors and Canines

2. Name the organs that form the digestive system.

Ans: Mouth (Teeth, Salivary Glands and Tongue), Stomach (Food Pipe) and Intestines (Small Intestine, Large Intestine, Liver and Pancreas)

3. Name the part that connects the crown and root of a tooth.

Ans: Neck

4. Name the three layers of the tooth.

Ans: Enamel, Dentine and Pulp

Q4. Short Answer Questions:

1. Write two things about the molars.

Ans: Molars or grinding teeth are used to grind the food. They are broader than the premolars and are located at the extreme ends next to the premolars. There are six molars in each jaw; twelve in all.

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- 2. How many permanent teeth does a person have? At what age do they start to develop? Ans: Starting from the age of six, a child begins to lose the milk teeth. The gaps left behind by the milk teeth are filled in by a new set of teeth called the permanent teeth. A person can have maximum of 32 permanent teeth. Both the upper and lower jaws have 16 teeth each.
- 3. What is the role of the small intestine in the process of digestion?

Ans: The food is pushed from the stomach into a long, thin, and coiled tube called small intestine. The walls of the small intestine produce more juices that further mix well with the food and break it down into even smaller pieces.

4. What is the importance of salivary glands in the process of digestion?

Ans: The mouth consists of salivary glands. These salivary glands present in the mouth produce liquid called saliva which helps in the process of digestion. When we chew the food, the saliva gets mixed with the food and makes it soft and moist. Saliva also changes the insoluble starch in food to soluble sugar.

Q6. Long answer questions:

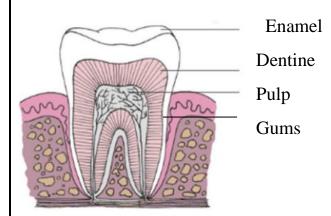
- 1. What are the uses of molars and premolars? How many of each do we have? Ans: We use the molars and premolars to crush and grind the food. There are six molars in each jaw; twelve in all. There are four premolars in each jaw; eight in all.
- 2. What are the different layers of the tooth?

Ans: There are three layers of a tooth:

- 1. Enamel is the outer layer of the tooth. The tooth is protected from the wear and tear of chewing by the enamel. Enamel is the hardest substance in our body.
- 2. Dentine is placed just below the enamel. The enamel on the teeth is supported by the dentine. It is a bone-like material that is yellow in colour.
- 3. There is a soft pulp inside the dentine. This pulp consists of nerves and blood vessels. A hole in the root connects the nerves to the gum. The pulp helps us in two ways: it provides the tooth with nourishment and it sends signals to the brain.
- 3. Explain the structure of a tooth with the help of a diagram.

Ans: Our teeth grow out of a pinkish structure close to the white teeth known as gums. The visible part of the tooth is known as crown. The part of the tooth that is inside the gum is known as the root. The root keeps the tooth in its place. The crown meets the root at a region called the neck.

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- 4. How do we develop cavities in our teeth? Can we avoid them? Give any 4 ways to do so. Ans: The food that we eat breaks down into small pieces in our mouth. Sometimes, these small pieces of food get caught in the teeth. This results in the formation of a yellowish and sticky layer of bacteria and food particles known as plaque. The food particles stuck in the teeth are further broken into acid by bacteria. This acid is very harmful as it harms the tooth enamel causing holes called cavities. The cavities grow bigger with time and reach the nerves in the pulp. As a result, the tooth starts paining. Four ways in which we can prevent cavities are:
- 1. We must rinse our mouth with water after every meal to remove any food stuck between the teeth.
- 2. We must brush our teeth twice a day; first, in the morning after we wake up and second, at night before we go to bed.
- 3. We must use toothpaste which has fluoride in it as it is good for removing plaque.
- 4. We should use dental floss occasionally in order to clean the gaps between teeth and remove the food stuck there.
- 5. Explain the process of digestion in your own words.

Ans: The process of breaking down the food particles into smaller and simpler substances is known as digestion. The process of digestion can be divided into three stages:

Stage 1- Inside the Mouth:

The process of digestion begins in the mouth. The food is broken down into small pieces with the help of teeth. The mouth consists of salivary glands. These salivary glands present in the mouth produce liquid called saliva which helps in the process of digestion. When we chew the food, the saliva gets mixed with the food and makes it soft and moist.

Stage 2- Inside the Stomach:

After the food is broken down into small pieces, we swallow it. Our tongue helps us to push down the food through a tube called the food pipe or oesophagus. The food pipe connects the mouth to the stomach. Stomach is a big hollow muscle. When the food reaches the stomach, it is churned into a fine paste. There are juices released in the stomach which mix well with the food. They break down the proteins present in the food into simpler form. The acid in these juices kills harmful germs called bacteria.

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Stage 3- Inside the Intestines:

Next, the food is pushed from the stomach into a long, thin, and coiled tube called small intestine. The walls of the small intestine produce more juices that further mix well with the food and break it down into even smaller pieces. Liver and pancreas, two important organs of our body, also pour in juices. The bile juice produced by the liver breaks fats in the food into tiny droplets. By this time, the food is almost like a liquid. This food is taken to all parts of the body by the blood.

Q7. HOTS.

- 1. What would happen in the following situations?
- a) You eat chocolates everyday but do not brush your teeth.

Ans: This will lead to the formation of plaque and cavities.

b) There are no bacteria present in your mouth.

Ans: In the absence of harmful bacteria, we would be free of tooth decay and plaque. But in the absence of useful bacteria that protects our teeth and gums and aid in digestion, our body will not be able to function properly.

2. Neetu ate an ice cream. Her tooth started hurting. What do you think is the problem with her tooth?

Ans: There could be plaque and cavities formed in Neetu's teeth.

3. Indigestion and Diarrhoea are some common problems related to the digestive system. How do they happen? Are there ways in which we can take care of our digestive system? Does eating a balanced diet help in better digestion? Find out.

Ans: Eating a balanced diet helps in better digestion. Exercising also helps in better digestion. Eating healthy food items as opposed to junk food is also helpful.

Q8. Post Activity:

Draw the digestive system and label it.

Subject Teacher H.O.D. Co-ordinator Principal

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