

Worksheet 9 Subject: - Science Class: - VII Teacher: - Mrs. Harpreet Kaur

Name: _____ Class & Sec: _____ Roll No. _____ Date: 27.04.2020

Ch2: Nutrition In Animals

- <https://youtu.be/bFczvJp0bpU>
- <https://youtu.be/izfgw8XrNRk>

Q1: Define:

A) Mastication

B) Saliva

C) Enamel

D) Incisors

E) Canines

F) Gut or Alimentary Canal

G) Oesophagus

H) Peristalsis

Q2. Draw a well labelled diagram of Human digestive system

Q3. Name the largest gland of our body.

Q4. Which juice is secreted by liver and pancreas?

Q5. What is the function of saliva in our mouth?

Q6. Name different types of teeth present in our mouth.

THE HUMAN DIGESTIVE SYSTEM

Your body performs the steps of nutrition inside a long tube, called in some places, called the gut or alimentary canal. Its main parts are: the mouth; food pipe or oesophagus; stomach; small intestine; large intestine ending in the rectum and anus.

Salivary glands, liver, gall bladder and pancreas are organs that secrete digestive juices that help convert complex substances in food to simpler substances. Digestive juices are also secreted by the inner walls of the stomach and the small intestine.

Digestion in the mouth

Food is taken in or **ingested** through the mouth. Digestion begins inside your mouth when you chew the food. Think about your favourite food. Does your mouth water? The 'water' in your mouth is a digestive juice called **saliva**. It is secreted by the three pairs of **salivary glands** in your mouth. Chewing breaks down the food into small pieces and mixes it with saliva. This process is called **mastication**. Your teeth cut, tear and grind the food before you swallow it. You have different types of teeth to do these jobs.

A child has only 20 teeth—10 in each jaw. These are known as **milk teeth**. They fall off by the age of ten and are replaced by **permanent teeth**. This set contains 32 teeth, 16 in each jaw. There are 4 incisors, 2 canines, 4 premolars and 6 molars in each jaw (Fig. 2.3). Feel the different shapes of your teeth with your tongue.

Your front teeth are known as **incisors**. These are chisel-shaped and are used for biting and cutting.

Next to the incisors are the **canines**. These are pointed and are used for piercing and tearing pieces of food such as meat.

The teeth at the back of your mouth are broad

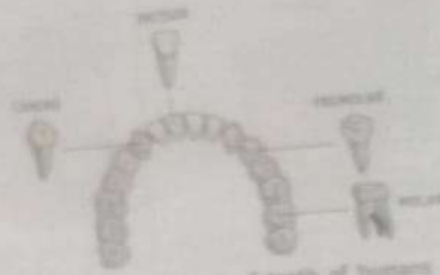


FIG. 2.3 Permanent set of teeth of humans consists of four types of teeth

with an almost flat surface. These crush and grind the food. These are called the **premolar** and **molars**. Molars are larger than premolars. The white substance that covers your teeth is called **enamel**. It is the hardest substance in the body.

The saliva in your mouth helps to break down starch of the food into sugars that are easier to digest. It also makes food easier to swallow by making it wet and slippery.

ACTIVITY 1 (Experimental investigation): To study the effect of saliva on food

You have read that saliva converts starch into sugar. Let us do an experiment. You will need saliva • test tubes • starch • glass slides • iodine solution

Take a little of your saliva in a test tube. In another test tube boil some starch (you can take the starch that is used to starch our clothes). Put a drop of boiled starch on a glass slide. Add to it a drop of iodine solution. It will turn blue-black, showing the presence of starch. Now add some boiled starch to the saliva. Test the resulting solution for starch. Is starch present now? Why?

Your tongue is a muscular organ that helps you to eat food. It pushes food to the teeth. It also helps to mix the food and then enables you to swallow it.

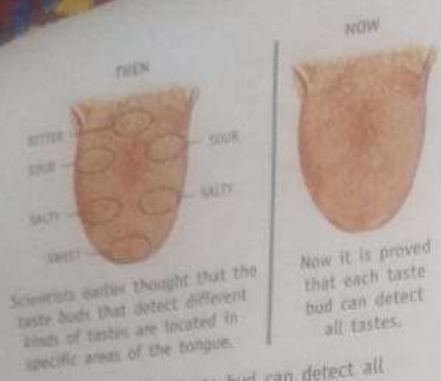


FIG. 2.4 Each taste bud can detect all tastes—sweet, salty, sour and bitter.

Your tongue does another job too. Small taste buds are spread across its surface. Each taste bud can detect all tastes—sweet, salty, sour and bitter. Scientists earlier thought that the taste buds that detect different kinds of tastes are located in specific areas of the tongue (Fig. 2.4). However, this is not considered to be true now.

The tongue also helps you to speak.

Digestion in the stomach

After the food is swallowed, it slides down the pharynx into the **oesophagus** (food pipe). The oesophagus leads from your mouth to the stomach. It is made up of muscles. These muscles gently push food down to your stomach in a wave-like action called **peristalsis** (Fig. 2.5).

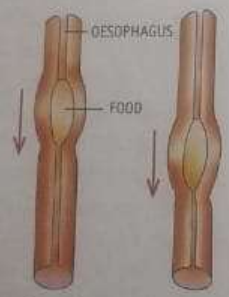


FIG. 2.5 Peristalsis: pushing down of food by muscles

Actually this movement takes place throughout the alimentary canal to push the food forward. Your **stomach** is a J-shaped bag made up of muscles (Fig. 2.6). It can hold up to two litres of food at a time. Food stays in the stomach

from a few minutes to a few hours depending on the type of food eaten. The inner lining of the stomach secretes mucous, hydrochloric acid and digestive juices. The mucous protects the inner lining of the stomach. The acid kills bacteria that enter along with food and helps in digestion of proteins. The stomach muscles squeeze and mix the food with digestive juices. The digestive juices break down proteins into simpler substances. Thus, food gets partially digested in the stomach. Then it goes into the small intestine where most of the digestion occurs.

Digestion in the small intestine

As the food leaves your stomach, little by little, it enters a long winding tube below it called the **small intestine**. The last steps of digestion take place here.

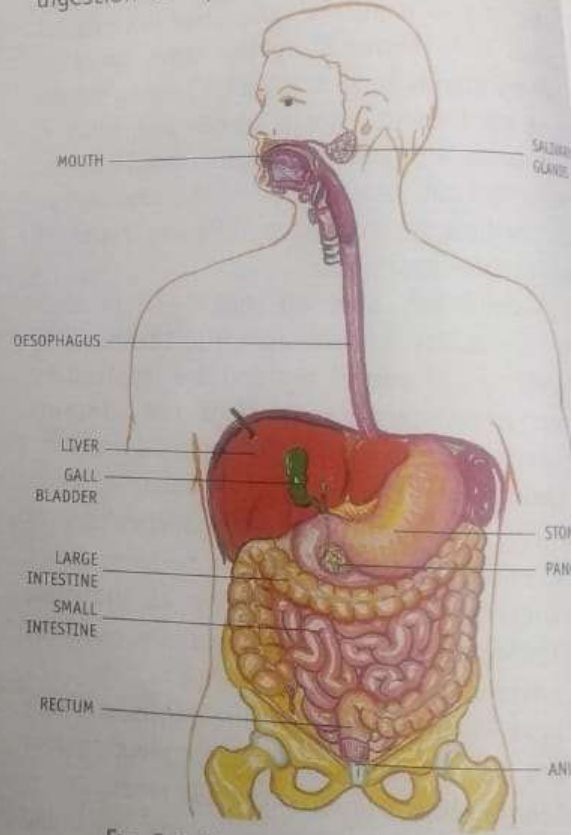


FIG. 2.6 The human digestive system