

Chapter 3: From Tasting to Digesting

Discuss and Write

Question 1:

(Page 23)

Jhoolan's mouth started watering when she heard the word *imli*. When does your mouth water? List five things you like to eat and describe their taste.

Answer:

My mouth waters when I see or think about my favourite food item.

I like to eat the following food items—

Food item	Taste
<i>Pani puri</i>	Spicy
<i>Laddoo</i>	Sweet
<i>Pulao</i>	Salty
<i>Malpua</i>	Sweet
<i>Chole Bhature</i>	Spicy

Question 2:

Do you like only one kind of taste or different ones? Why?

Answer:

I like different types of tastes. It is interesting and exciting to eat foods having different tastes.

Question 3:

Jhoolan put a few drops of lemon juice in Jhumpa's mouth. Do you think we can make out the taste with just a few drops?

Answer:

Yes, a few drops of lemon juice are enough to distinguish its taste as it is sour.

Question 4:

If someone were to put a few seeds of *saunf* (aniseed) on your tongue, would you be able to tell with your eyes closed? How?

Answer:

Yes, we will be able to distinguish *saunf* with our eyes closed as it has a distinct texture and aroma. One can identify its taste only after it is chewed.

Question 5:

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How did Jhumpa make out the fried fish? Can you guess the names of certain things only by their smell, without seeing or tasting them? What are these things?

Answer:

Jhumpa made out the fried fish by its smell.

Yes, some things smell differently when cooked so their smell can distinguish them. Some of them are *halwa*, omelette, chicken curry.

Question 6:

Has anyone ever told you to hold your nose before taking a medicine? Why do you think they tell you to do this?

Answer:

Sense of smell helps us to understand completely the food we eat. Medicines are usually bitter and have a similar smell. Hence, sometimes my mother asks me to hold my nose before I take any medicine so that I may not realise that she is about to give me medicine by identifying its characteristic smell.

Close Your Eyes and Tell

Collect a few food items having different kinds of taste. Play a game with your friends like Jhumpa and Jhoolan did. Tell your friend to taste the food and ask— (Page 24)

Question 1:

How did it taste? What was the food item?

Answer:

Sugar—Sweet

Lemon—Sour

Bitter gourd—Bitter

Question 2:

On which part of the tongue could you get the most taste—in front, at the back, on the left or right side of the tongue?

Answer:

Sugar—in front

Lemon—left and right side

Bitter gourd—back

Question 3:

Which taste could be made out on which part of the tongue? Mark these parts on the picture given.

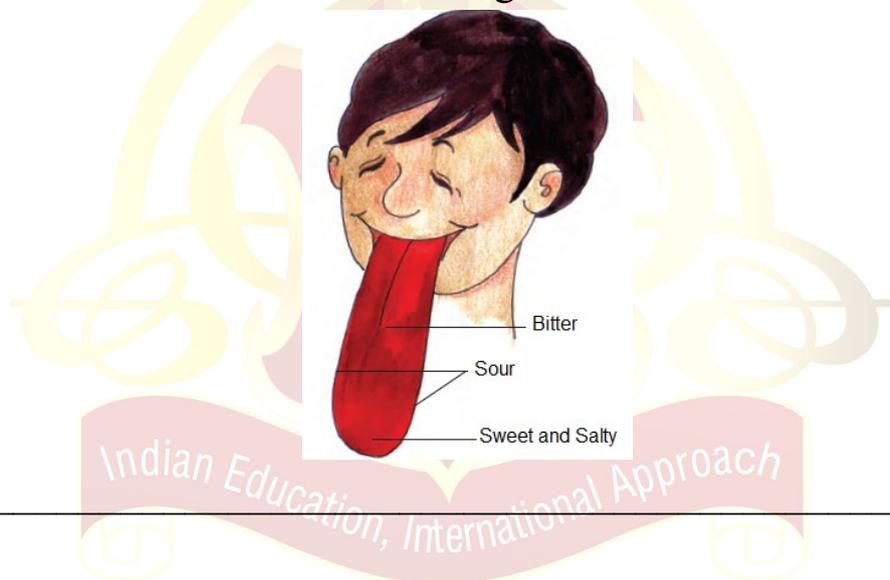
Answer:

Following tastes are detected on different parts of the tongue—

- (i) Salty and sweet on the tip of the tongue.
- (ii) Bitter on the back region of the tongue.
- (iii) Sour on both the sides of the tongue.



Label the parts of the tongue



Question 4:

One at a time put some things to eat in other parts of your mouth—under the tongue, on the lips, on the roof of the mouth. Did you get any taste there?

Answer:

No, I was not able to detect any taste as I placed several food items in other parts of my mouth. However, my mouth watered when these food items were placed in other parts of my mouth.

Question 5:

(Page 25)

Use a clean cloth to wipe the front part of your tongue so that it is dry. Put some sugar or jaggery there. Could you taste anything? Why did this happen?

Answer:

It is necessary for the food to get mixed with the saliva in order to detect the taste of the food. So, in this case, I could not taste the sweetness of the sugar or jaggery.

Question 6:

Stand in front of a mirror and look closely at your tongue. How does the surface look? Can you see any tiny bumps on the surface?

Answer:

The surface of the tongue looks rough.

Yes, I can see tiny bumps on the surface, which makes the tongue look rough.

Tell

Question 1:

(Page 25)

If someone asks you to describe the taste of *amla* or cucumber, you might find it difficult to explain. How would you describe the taste of these—tomato, onion, *saunf*, garlic. Think of words that you know or make up your own words to describe the taste.

Answer:

Food	Taste
Tomato	Sour and juicy with a tangy smell
Onion	Sharp and pungent
<i>Saunf</i>	Sweet with a refreshing smell
Garlic	Bitter and a strong, pungent smell

Question 2:

When Jhumpa tasted some of the things, she said “*Ssssee, sssee, sssee....*” What do you think she may have eaten?

Answer:

She must have eaten a chilli which was spicy and hot.

Question 3:

Why don't you make sounds that describe some tastes? From your expressions and sounds ask your friends to guess what you might have eaten.

Answer:

Expressions and sounds	Food items
Yum	Ice cream, chocolates, pastries
Slurp	Milk, soup
Clicking of the tongue	Lemon pickle
<i>Sssssee...ssssee...ssssee</i>	<i>Panipuri</i>

Chew it or chew it well: What's the difference?

Try this together in class: (Page 26)

- (i) Each of you take a piece of bread or *roti* or some cooked rice.
- (ii) Put it in your mouth, chew three to four times and swallow it.

Question 1:

Did the taste change as you chewed it?

Answer:

No, the taste didn't change much, but the food became softer.

Question 2:

Now take another piece or some rice and chew it thirty to thirty-two times. Was there any change in the taste after chewing so many times?

Answer:

Yes, there was a change in taste. The food started to taste sweet because of the action of saliva on food.

Discuss

Question 1: (Page 26)

Has anyone at home told you to eat slowly and to chew well so that the food digests properly? Why do you think they say this?

Answer:

Yes, my mother always asks me to eat slowly and chew my food well because well-chewed food gets swallowed easily and digested properly. If the food is not chewed properly, it takes a longer time to digest.

Question 2:

Imagine you are eating something hard like a green guava. What kinds of changes take place in it—from the time you bite a piece and put it in your mouth to when you swallow it? Think what the saliva in our mouth does?

Answer:

When I bite a piece of green guava, it is hard and slightly bitter. But, after chewing the piece of hard guava, it becomes soft and sweet.

Question 3:

Think what the saliva in our mouth does?

Answer:

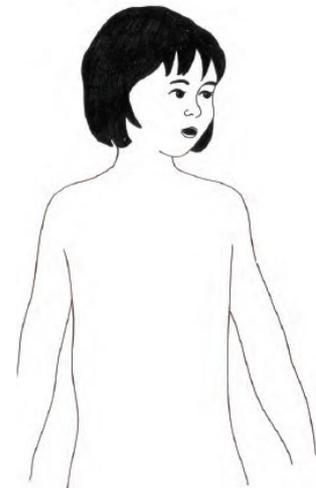
The saliva in our mouth makes the food softer. So, it becomes easier to swallow and digest the food.

Indian Education, International Approach
Straight from the Heart

Question 1:

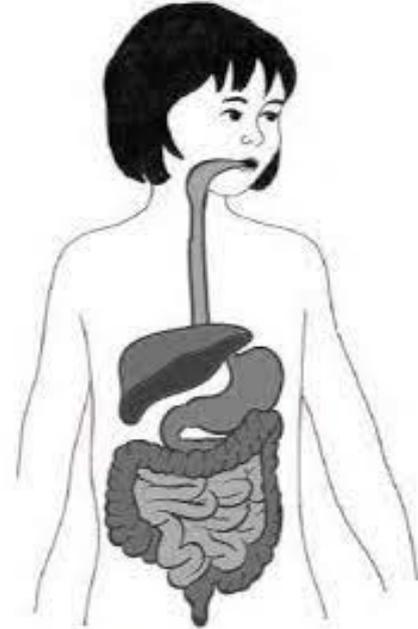
Where do you think the food must be going after you put it in your mouth and swallow it? In the picture given here, draw the path of the food through your body.

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Answer:

Food goes to the stomach after we swallow it. In the stomach, the food is broken down into small pieces. These small food chunks mix with some acidic juices in the stomach and are then transferred to the small intestine, where digestion of food takes place. The digested food is then absorbed in the small intestine, and the undigested food travels to the large intestine. The undigested food passes through the large intestine and moves to the rectum where it is stored for some time and is thrown out of the body through the anus by defecation.



Question 2:

Share your picture with your friends. Do all of you have similar pictures?

Answer:

Yes, all of us have almost similar pictures.

ORCHIDS
The International School

Discuss

Question 1:

(Page 27)

How do you feel when you are very hungry? How would you describe it? For example, sometimes we jokingly say, “I am so hungry I could eat an elephant!”

Answer:

When I am hungry, I feel my stomach making sounds, and I generally say rats are running in my stomach.

Question 2:

How do you come to know that you are hungry?

Answer:

When I am hungry, I feel uneasy, and my stomach makes strange sounds. I feel that I need to eat food immediately.

Question 3:

Think what would happen if you do not eat anything for two days?

Answer:

Food gives us the energy to do work. Not eating for two days would make me feel weak as my body will not gain energy.

Question 4:

Would you be able to manage without drinking water for two days?

Where do you think the water that we drink goes?

Answer:

Water makes 60% weight of our body. Water has vital functions to perform in our body. Hence, it is not possible to manage without water for two days. Water helps in different metabolic activities and the transportation of essential components throughout the body. The water we drink is mostly absorbed in our body, and some amount of water is lost through sweat and urine.

Talk and Discuss

Question 1:

(Page 28)

Do you remember that in Class IV you made a solution of sugar and salt? Nitu's father also made this and gave her. Why do you think this is given to someone who has vomiting and loose motions?

Answer:

Salt and sugar are lost during excessive loose motion and vomiting, which is not good for the body as it causes dehydration. So, a solution of salt and sugar is given to the person suffering from the above-mentioned disorders to maintain the body's salt and sugar levels.

Question 2:

Have you heard the word 'glucose', or seen it written anywhere? Where?

Answer:

Yes, I have heard this word. I have seen it written on the packets of some biscuits like *Parle-G* and also on the packets of glucose powder.

Question 3:

(Page 29)

Have you ever tasted glucose? How does it taste? Tell your friends.

Answer:

Yes, I have tasted glucose. It is sweet.

Question 4:

Have you or anyone in your family been given a glucose drip? When and why? Tell the class about it.

Answer:

Once my brother was suffering from typhoid, and he was hospitalised for the same. Doctors said he was too weak and hence, he was given a glucose drip along with the medicines for a speedy recovery.

Question 5:

Nitu's teacher used to tell the girls to have glucose while playing hockey. Why do you think she did this?

Answer:

Our body utilises a lot of energy while playing. We also sweat a lot which results in the loss of both salt and sugar from the body. The energy reserve in our body that we develop by eating food cannot be used for a long time during vigorous exercise or physical activity. Also, simultaneous loss of salt and sugar makes us weak.

Glucose is a simple carbohydrate that gives us instant energy when required and also replenishes the salt and sugar loss. This is the reason Nitu's teacher must have told the girls to have it while playing.

Question 6:

Look at Nitu's picture and describe what is happening. How is the glucose drip being given?

Answer:

The picture shows a glucose drip being given to Nitu.

The glucose solution is present in the bottle and a tube is attached to it. The tube is then connected to a needle which is inserted into the veins so that the glucose directly travels to our blood-stream.



Think and Discuss

Question 1:

(Page 31)

Imagine, if you had been in place of Dr. Beaumont, what experiments would you have done to find out the secrets of our stomach? Write about your experiments.

Answer:

If I were in place of Dr. Beaumont, I would have done experiments with boiled rice, *chapatti*, and salad. I would have extracted digestive juices from Martin's stomach and kept equal amounts of cooked rice, *chapatti*, and salad in different glasses. I would have noted the time periods, each of those specific food had taken to digest.

Discuss

Question 1:

(Page 33)

Why do you think Rashmi could eat only one *roti* in the whole day?

Answer:

Rashmi is too poor to afford a good meal, and that is why she could eat only one *roti* in the whole day.

Question 2:

Do you think Kailash would like games and sports?

Answer:

No, I think Kailash would not like games and sports. Due to his obese condition, he would not be able to play well. Hence, he would not participate in any physical or sports activities.

Question 3:

What do you understand by 'proper' food?

Answer:

The food which is sufficient for the body and contains the right amount of nutrients required by the body is called proper or balanced food.

Question 4:

Why do you think that the food of Rashmi and Kailash was not proper?

Answer:

Rashmi and Kailash are on opposite ends. Rashmi is not getting adequate food, and so she is malnourished. On the other hand, Kailash is eating too much of junk food which has led to the accumulation of fat in his body, thereby making him obese.

Indian Education, International Approach
Find Out

Question 1:

(Page 33)

Talk with your grandparents or elderly people and find out what they ate and what work they did when they were of your age.

Answer:

My grandparents diet included rice, *dal*, green vegetables, milk and lot of fresh fruits. They did not have too many options for junk food. However, they were involved in a lot of physical activities. They used to walk two miles to go to school, and they used to play games which involved physical activities.

Question 2:

Now think about yourself— your daily activities and daily diet. Are these similar or different from what your grandparents did and ate?

Answer:

Times have changed. We eat rice, *dal*, and vegetables, but we also have a fair amount of junk food. I use the school bus to go to school. A major part of my free time is spent sitting on the sofa, watching TV, or playing computer games. We do fewer physical activities than our grandparents.

Think and Discuss

Question 1:

(Page 34)

Do you know any child who does not get enough to eat in the whole day? What are the reasons for this?

Answer:

Yes, my house help lives in a nearby slum. She is poor and cannot afford proper meals for her children.

Question 2:

Have you ever seen a godown where a lot of grain has been stored? Where?

Answer:

Yes, I have seen a godown in *Anaj mandi* where a lot of grains are stored.

What Have We Learnt

Question 1:

(Page 34)

Why can you not taste food properly when you have a cold?

Answer:

We know that the sense of smell helps to understand the sense of taste completely. In the case of common cold, our nose is blocked because of mucus, swelling, and inflammation, which in turn blocks the sense of smell. That is why we are unable to taste food properly while suffering from cold.

Question 2:

If we were to say that “digestion begins in the mouth”, how would you explain this? Write.

Answer:

Our food comprises carbohydrates, proteins, fats, vitamins, and minerals. The food we eat is placed in our mouth where we chew it, and our tongue helps in getting it mixed with the digestive juice secreted in our mouth called saliva. Saliva contains an enzyme called amylase, which is responsible for the digestion of carbohydrates. Amylase converts carbohydrates into glucose.

Therefore, we conclude that the carbohydrates are digested at the beginning of the digestion process due to the action of salivary amylase in the mouth. Hence, we say that digestion begins in the mouth.
