

## Environmental Studies

### (Chapter – 3) (From Tasting to Digesting) (Class – 5)

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**Discuss and write:**

**Question 1:**

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 1:**

Things	Taste
Chat	Sour-sweet
Samosa	Salty-spicy
Pickles	Sour
Ice-Cream	Sweet
Chocolate	Sweet

**Question 2:**

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

**Answer 2:**

I like different types of taste because I get bored of only one kind of taste.

**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 3:**

Yes. A few drops of sour things like lemon is enough to make out the taste.

**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 4:**

Perhaps, because even if we do not taste, we can recognize it by its smell.

**Question 5:**

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 5:**

Jhumpa made out the fried fish by its smell. We can, of course, guess some things only by their smell, without seeing or tasting them providing they have a strong smell. For example, egg, orange, lemon, curd, sweets, samosa, etc.

**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 6:**

We get the complete taste of food only when we are able to smell it. So, sometimes we are told to close our nose before taking a medicine which does not taste good.

**Close your eyes and tell:****Question 7:**

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–  
\* How did it taste? What was the food item?

**Answer 7:**

The taste was sweet. The food item was sugar. (Suppose sugar is given)



**Question 8:**

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 8:**

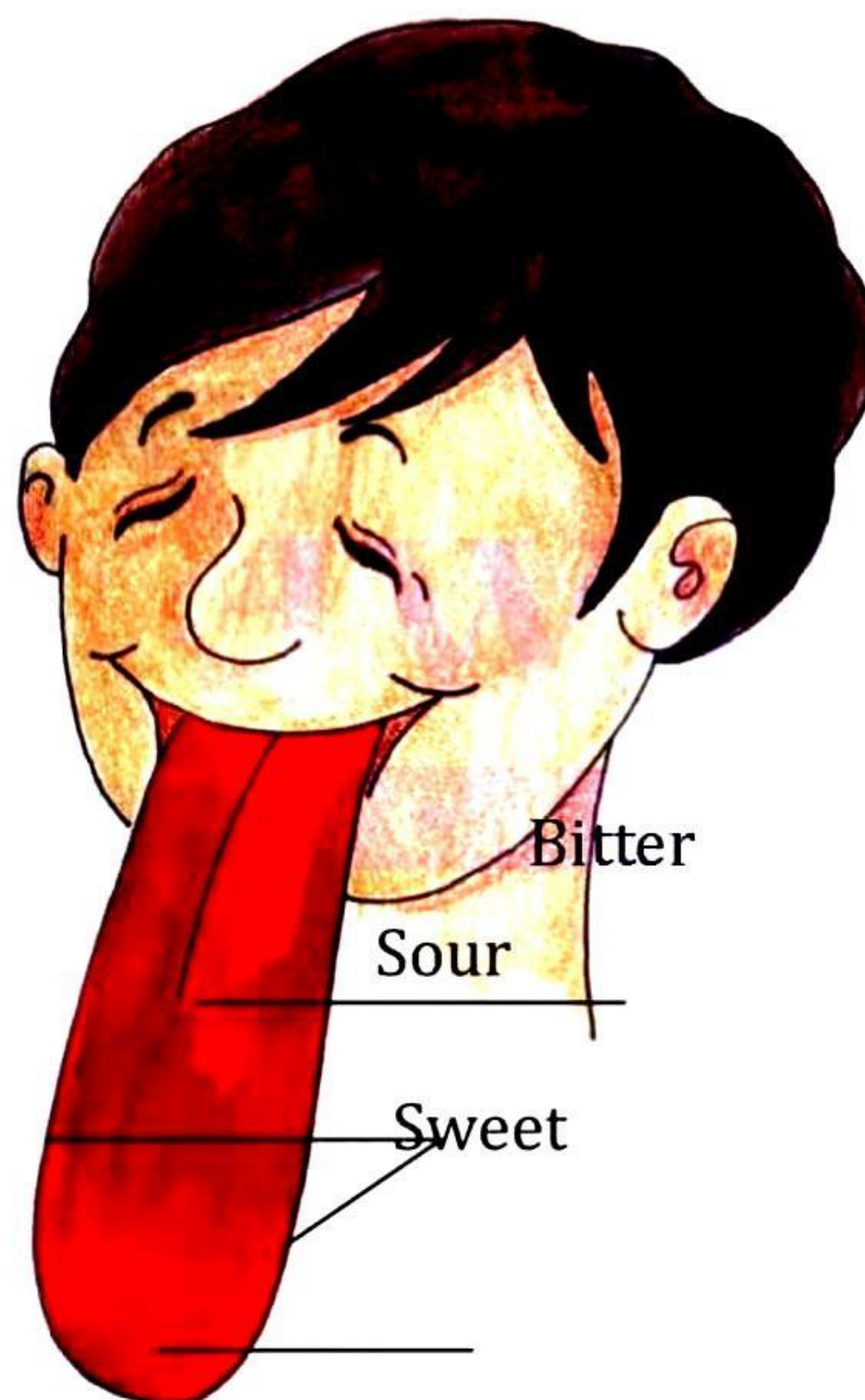
In the front side. (Suppose sugar has been tasted)

**Question 9:**

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

**Answer 9:**

In front side. (Suppose sugar has been tasted)





**Question 10:**

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 10:**

No

**Question 11:**

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 11:**

No, I could not taste anything. It is because we get the taste only when the food mixes up with saliva and reaches taste buds present on the tongue.

**Question 12:**

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 12:**

The surface looks rough. Yes, I can see tiny bumps on the surface of the tongue.

**Tell:****Question 13:**

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 13:**

Food	Taste
Tomato	Sweet-sour and juicy
Onion	Pungent
Saunf	Sweet-aromatic
Garlic	Pungent-aromatic

**Question 14:**

When Jhumpa tasted some of the things, she said “Sssee, sssee, sssee...”

**Answer 14:**

She may have eaten a chili.

**Question 15:**

What do you think she may have eaten? 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 15:**

Expression and sound	Food
Yum-yum	Sweet-sour and juicy
The sound made by liking something	Pickle, tamarind, etc.
The sound made by eating something very cold	Ice



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

### **Question 16:**

Try this together in class:

- \* Each of you take a piece of bread or roti or some cooked rice.
- \* Put it in your mouth, chew three to four times and swallow it.
- \* Did the taste change as you chewed it?

### **Answer 16:**

Not much. It's almost the same.

### **Question 17:**

- \* 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 17:**

Yes, there was change in taste. It started tasting sweet.

## **Discuss:**

### **Question 18:**

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 18:**

Yes, my mother often tells me eat slowly and chew well. It is because if the food is properly chewed up, it will be digested early and we will get its maximum nutrition.

### **Question 19:**

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 does the saliva in our mouth do?



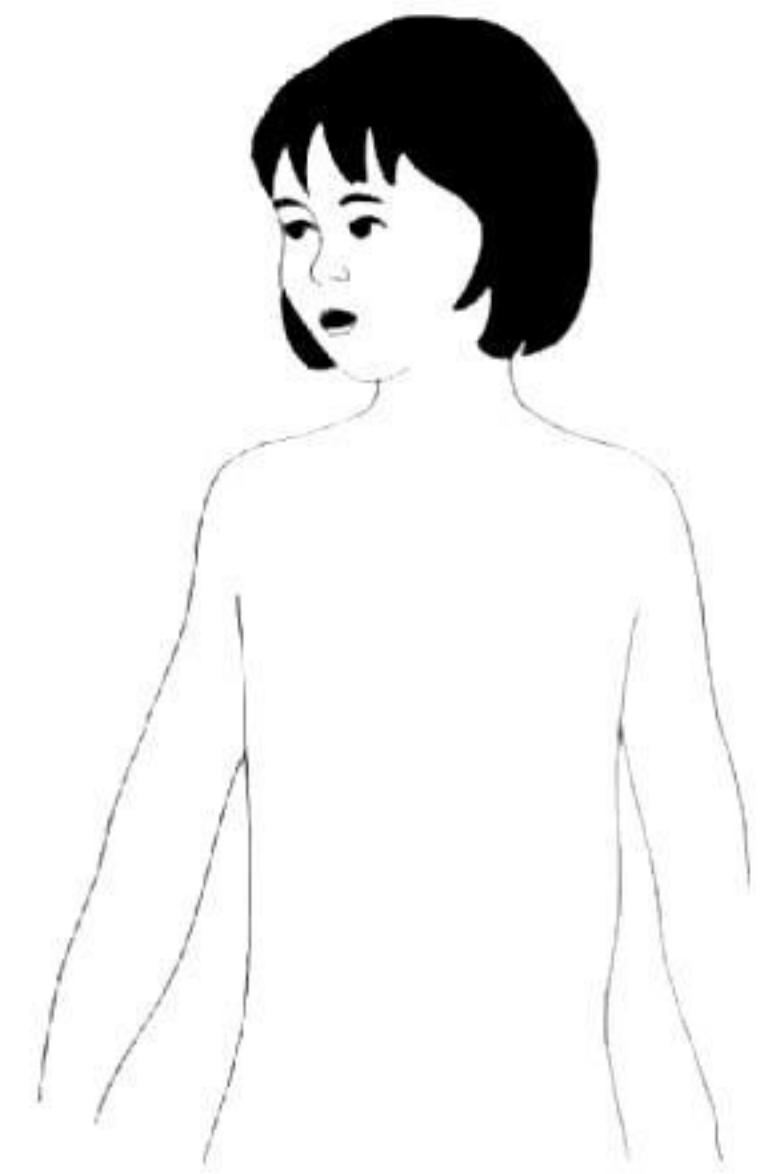
**Answer 19:**

When I bite a piece of green guava, it is hard and may even taste a bit bitter. However, after chewing it properly, it becomes soft and sweet. Saliva makes the food soft and also helps in its digestion.

**Straight from the heart:**

**Question 20:**

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



**Answer 20:**

I think the food we eat would first go to the stomach and then to the intestines.



Yes, all of us drawn up almost similar pictures.

**Question 21:**

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 21:**

I feel a bit tired when I am very hungry. Besides, I feel an empty sensation in the stomach and want to eat something immediately.

**Question 22:**

How do you come to know that you are hungry?

**Answer 22:**

When my stomach feels empty and I have a strong urge to eat something, I come to know that I am hungry.

**Question 23:**

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

**Answer 23:**

If I do not eat anything for two days, I will become weak and fall ill.

**Question 24:**

Would you be able to manage without drinking water for two days? Where do you think the water that we drink goes?

**Answer 24:**

No, I will not be able to manage without drinking water for two days. Water is essential for life. The water we drink is used in various metabolic activities within our body and some water is excreted out of the body through urine and sweat.

**Talk and discuss:****Question 25:**

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 25:**

The quantity of water, salts and sugar in our body decreases when we have vomiting and loose motions. To replenish this loss a solution of sugar and salt is given.

**Question 26:**

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

**Answer 26:**

Yes, I have heard the word glucose and seen it written on glucose packet. I have seen it in various advertisements on TV and in newspapers etc.

**Question 27:**

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

**Answer 27:**

Yes, I have heard the word glucose. It is sweet in taste.

**Question 28:**

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

**Answer 28:**

Yes, Once I had vomiting and loose motions. Doctor said my stomach was upset. My body was not keeping any food and water and I became very weak. Then I was given glucose drip that gave me some strength quickly even without eating.

**Question 29:**

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



**Answer 29:**

While playing a lot of sweating occurs which causes loss of water and salt from the body. Also a lot of energy is used. Since glucose solution provides instant energy, that is why the teacher used to tell the girls to have glucose while they were playing hockey.

**Question 30:**

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

**Answer 30:**

In the picture glucose drip is given to Nitu. The glucose bottle is hanging on a stand and from there drop by drop glucose is being given using a tube and a needle.

**Think and discuss:****Question 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 31:**

If I were in place of Dr. Beaumont, I would have done experiments with milk and milk product. That is, I would have taken out some digestive juices from Martin's stomach and kept equal quantities of these juices in three different glasses. Then I would have mixed an equal quantity of milk, curd and cheese in all the three glasses and checked out which digested first. I would also have done experiments with different types of milk available, i.e., cream, standard and toned.

**Discuss:****Question 32:**

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

**Answer 32:**

Rashmi belongs to a poor family. That is why she could eat only one roti in the whole.

**Question 33:**

Do you think Kailash would like games and sports?

**Answer 33:**

No, I don't think so. Because had he been interested in sports, his body would not have been fat and flabby.

**Question 34:**

What do you understand by 'proper' food?

**Answer 34:**

Proper food means adequate and nutritious food according to one's body requirement.



**Question 35:**

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

**Answer 35:**

On one hand, while Rashmi is not getting adequate quantity of food, on the other, Kailash is taking much more food than his requirement. Further, instead of home-cooked food like dal-rice, vegetables and roti, he is eating chips, burger, pizzas and soft drinks, which are harmful for the body.

**Find out:****Question 36:**

Talk with your grandparents or elderly people and find out what they ate and what work they did when they were of your age. Now think about yourself – your daily activities and daily diet. Are these similar or different from what your grandparents did and ate?

**Answer 36:**

My grandparents were working much more than what we do today. They used to go to school miles away from their home. They were also doing much physical work like working in fields, kitchen, taking care of cattle, etc. They used to eat dal-rice, green vegetables, roti, milk and milk products.

Today our daily activities and diet are far different from our grandparents. We do very less physical work and prefer chips, burger, pizzas and soft drinks than to home-made foods. We spend most of our time in watching TV and playing.

**Think and discuss:****Question 37:**

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