



Chemistry

Class-VI

Chapter-6

Sensory Organs

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Worksheet-4

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Topic- Tongue

Unit-1:

The tongue is a muscular organ that helps us talk, taste foods and feel its texture.

The tongue is covered with rough, bumpy, little projections like structures called papillae which contain taste buds. Taste buds are packed deep down in our papillae. Each taste bud has 50-100 taste receptor cells buried inside its surface tissue which respond to different molecules in our foods.

These receptor cells help to make the taste signals and transmit the signals to the brain. The taste area of brain identifies the signals as different tastes and makes senses to release digestive juice in saliva and gastric juice in our stomach to help break down the food.

Taste buds not visible to the human eye. Those little pink and white bumps you do see on your tongue are actually called papillae, hair-like projections that taste buds rest atop.

Most of your taste buds cannot be seen with the naked eye. What you are seeing that appear to be the taste buds are taste papillae.

Exercise-1:

1. You can't see your taste buds. – Analyze it.
2. How can we taste something?
3. What is tongue, papillae and taste bud?

Unit-2:

Taste buds can detect four different flavours: sweet, salty, sour and bitter. The tip of the tongue is responsible for sensing sweet and salty taste. The sides of the tongue detect sour taste while the back of our tongue is more sensitive to bitter tastes. The sides of the tongue are more sensitive overall than the middle.

We grew up believing the tongue had four taste zones: one each for sweet, sour, salty, and bitter, but this is not the case. These tastes, along with a fifth taste called umami (savory), can be sensed on all parts of the tongue. The sides of the tongue are more sensitive overall than the middle.

Taste buds have helped us evolve as humans. In the beginning, the sense of taste helped us test the foods we ate: bitter and sour tastes might indicate poisonous plants or rotting foods. The back of our tongue is sensitive to bitter tastes so we can spit out poisonous or spoiled foods before we swallow them. Sweet and salty tastes let us know foods were rich in nutrients.

Exercise:

1. 'Taste buds are designed to keep us alive.'- Evaluate the statement.
2. You sense different tastes in different areas of the tongue.- explain.

Unit-3:

A bright red tongue may be a sign of folic acid or B12 deficiency and fever.

White spots or a white coating on the tongue could indicate oral thrush (a type of yeast infection).

A black, hairy tongue can be a sign of bacterial overgrowth, and can also occur in people with diabetes or those on antibiotics or chemotherapy.

Painful bumps on the tongue may be sores (mouth ulcers), or oral cancer.

If you have any symptoms or concerns about the appearance of your tongue, see your doctor.

Exercise:

1. 'Your tongue can actually provide clues about your overall health.'- Analyse the statement.
2. How should we take care of our tongue?