CHAPTER: FROM TASTING TO DIGESTING

Grade: **5**
Board: **CBSE**
Book: **NCERT**

1.

Chapter Summary and Placement

Read through the following to understand the gist of the lesson.

The students have learnt about different food in the previous grades. This chapter allows them to understand different tastes and the role of tongue in identifying taste. The activities that happen in stomach before and after having food is discussed in detail.

2.

LEARNING OUTCOMES

<On completion of the chapter, students will be able to:>

1. Identify the food by taste and smell
2. Identify and mark the areas of taste such as sweet, sour, bitter and salty.
3. Explain the activities in stomach after having food.
4. Explain the importance of food

3. PREVIOUS KNOWLEDGE REQUIREMENT

<The below points should be refreshed before introducing the chapter:>

1) Recognize the taste of different food substance like spicy, sweet, sour etc
2) Recall how our senses work when we are hungry

4. TEACHING PLAN

Follow this section for getting ideas on teaching the content covered in the chapter. The subtopic given in the first column with the matching learning outcome can be explained using instructions and resources listed subsequently

Subtopic and Learning Objective #1

LO: Identify the food by taste and smell

Identify and mark the areas of taste such as sweet, sour, bitter and salty.

Teacher Activity

1. The teacher can introduce the chapter by asking a few questions to the students like:
    - Which food do you like?
    - Why do you like this food?
    - Is it the taste of the food or the smell or both good?
2. After the Q&A session the teacher can introduce the different tastes:
    - Sweet: Taste of sugar or jaggery
    - Salty: The taste of snacks
    - Bitter: The taste of bitter gourd
    - Sour: The taste of tamarind /curd
3. Perform Activity 1
4. Ask the students whether they have observed their tongue. Explain them how tongue helps in experiencing the taste. Explain the parts of tongue where the taste is felt. Explain the meaning of the term taste bud. Refer Resource 1.
5. Perform Activity 2.

6. Explain the role of saliva in understanding the taste and also whether to just chew or chew the food well. The difference between the two should be explained in detail.
7. The teacher may ask the students their reaction when they smell biryani. The teacher should explain that 90% of the taste is linked with smell of the food. Elders ask kids to take medicine by closing their nose.

Check for understanding:

8. What is a taste bud.
9. Have you eaten a chilli? What is the taste?

Resources Suggested

Textbook, chalkboard, Resource 1

Activity 1

Name of the activity – Remember the taste
Type of activity – Individual/random
Learning Objective: Recall the tastes
Use it for – Understanding taste better
Materials – Notebook, pencil

Teacher instructions:

1. The teacher may prepare of list of common food that are prepared.
2. The teacher may read out the names of different food items. For examples:
    - Paratha, Chapathi, Idli, Dosa, Poori, Paneer butter masala, Aloo Bhaji etc
3. The teacher may read out the names in the class and ask the students to write the taste of the dish.
4. They should explain if there are combination of taste like sweet and spicy, sweet and sour etc
5. The intention of the activity is to remember the taste of food which might have not been noticed while eating .
6. The teacher can conclude the session by explaining the importance of concentrating only on food while eating. It is good to avoid other activities like playing, watching TV while having food.

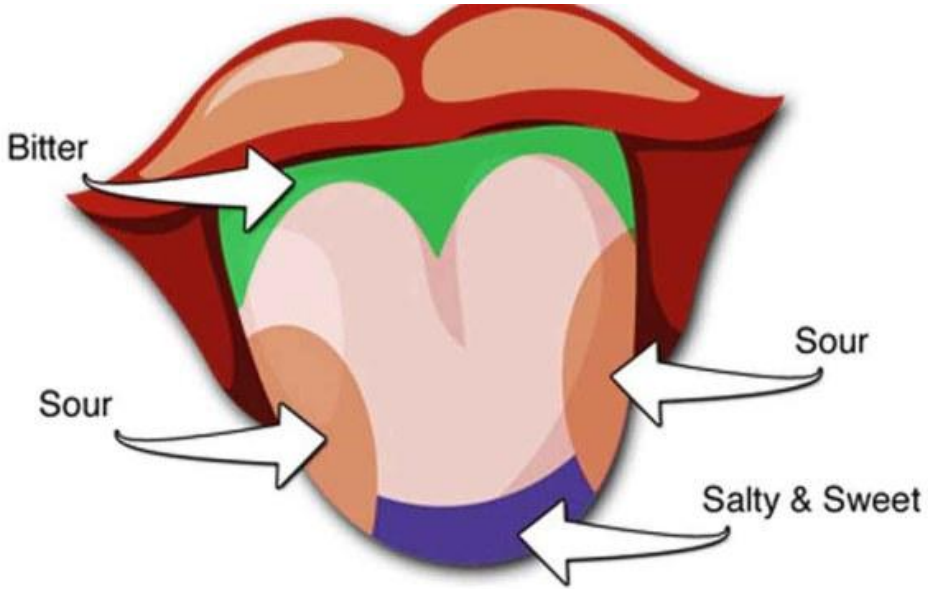
Activity 2

Name of the activity – What is the taste?
Type of activity – Group of two.
Learning Objective: Understand the role played by saliva
Use it for – Understanding different taste
Materials – Different food items (sugar, salty, sour, bitter)

Teacher instructions:

1. The teacher should divide students into group of two.
2. Ask the students to get a few food items of different taste.(should be informed a day prior. Students should take the help of their parents to get the food stuff)
3. Student a should open his/ her mouth, dry the tongue and close his/her one eye with the palm and the student b should place the food item on the tongue of Student a.
4. Student a should analyse how long it took to feel the taste and which part of tongue the student felt the taste.
5. Now place food in the mouth without drying the tongue. Compare the results.
6. Do the activity with Student b.
7. The teacher may conclude by explaining the important role played by saliva in experiencing the taste of food.

Resource 1:



Parts of tongue

Subtopic and Learning Objective #2

LO: Explain the activities in stomach after having food.

Teacher Activity

1. Ask the students:
    - How do you know when you are hungry?
    - Have you ever skipped a meal?
    - How did you feel after skipping a meal, tired or energetic?
2. The teacher can pick a few students and ask them to explain their experiences.
3. Then, the teacher can tell that there are many activities which happen in the stomach before and after having food.
4. One such activity is called as hunger.
5. Introduce the word digestions and digestive juices to the kids by explaining the process of digestion in a simple manner. Refer Resource 2.
    - Digestion: The process of breaking down of food to provide energy is called digestion
    - Digestive juices: The liquids in the stomach that helps in digesting the food easily are called digestive juices.

6. The teacher can now ask the students if they have tasted Glucose. Discuss what glucose does to our body and the reason why glucose drip is given during diarrhea and dysentery.

Check for understanding:

a) What is digestion?
b) What helps in digestion?

Resources Suggested

NCERT textbook, Resource 2

Resource 2:

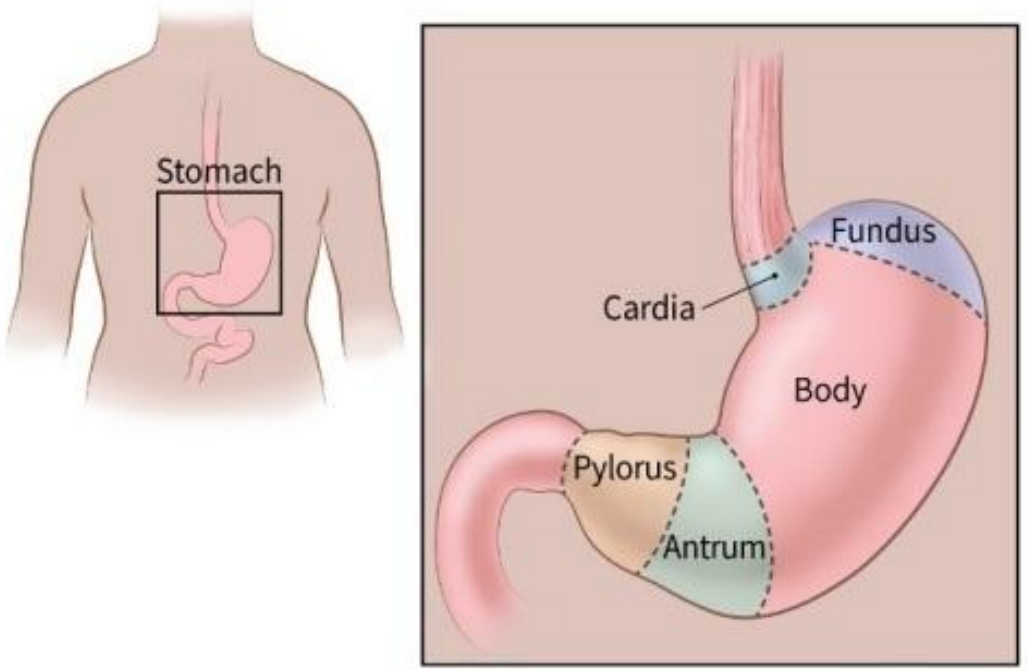
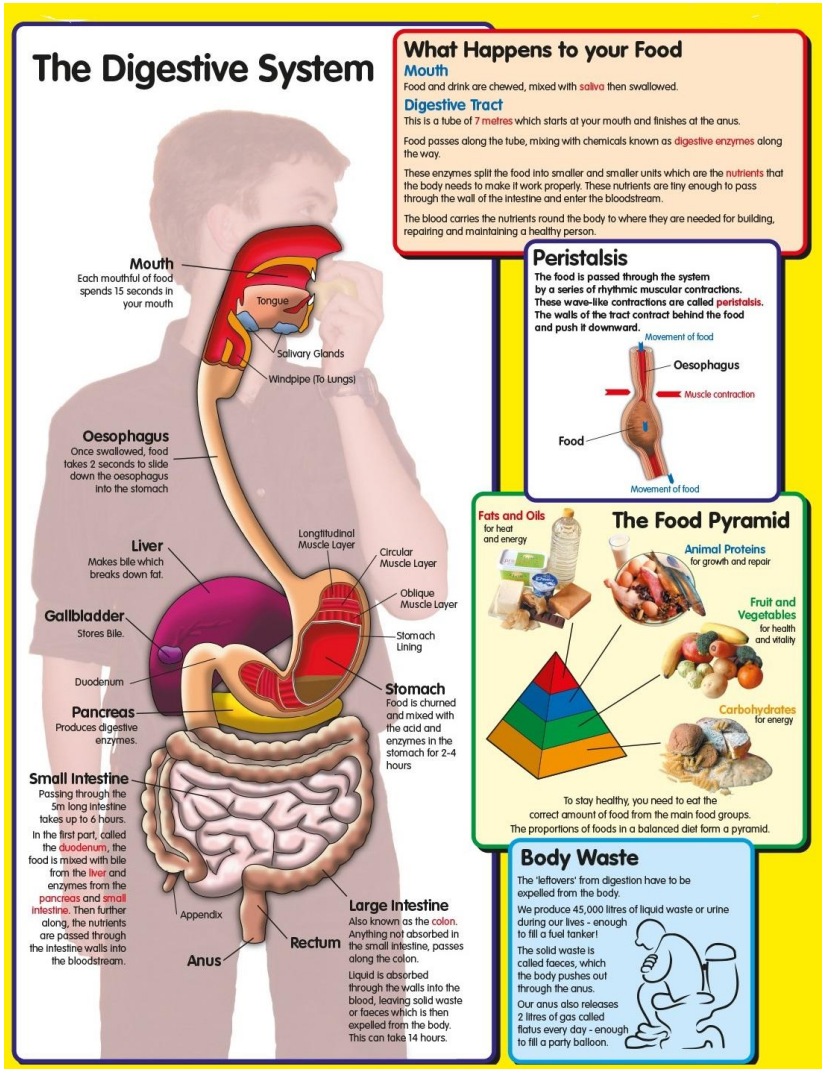


Diagram of stomach





Saline bottle

Subtopic and Learning Objective #3

LO: Explain the importance of food

Teacher Activity

1. The teacher may explain that food gives us nutrients and energy to live.
2. Refer to Resource 3 and explain the importance of having all the a good combination of food.
3. Introduce the term malnutrition and discuss the importance of having proper, timely and healthy food.
4. The teacher may explain that many children in world don't have food and instruct the students to share the food they have if their friends like it and not to waste food..

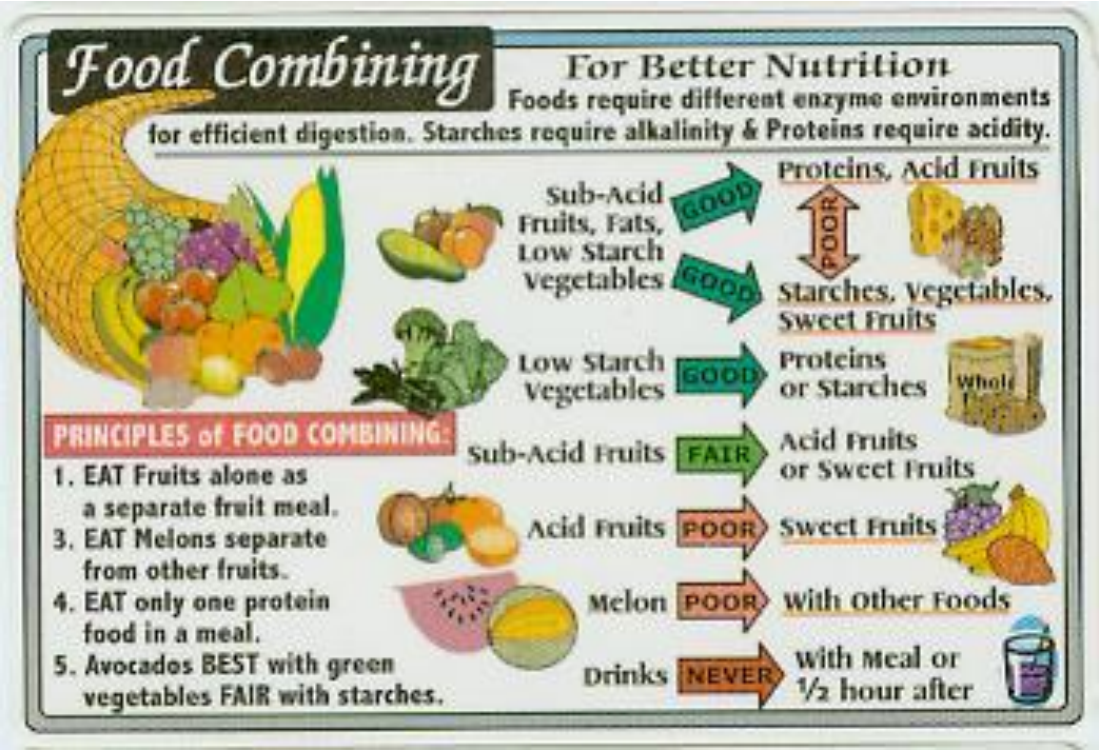
Check for understanding:

a) What is meant by malnutrition?
b) Is it good to waste food?

Resources Suggested

NCERT textbook, Resource 3

Resource 3:


Food Combining
For Better Nutrition
Foods require different enzyme environments
for efficient digestion. Starches require alkalinity & Proteins require acidity.
Sub-Acid Fruits, Fats, Low Starch Vegetables
GOOD
GOOD
POOR
Proteins, Acid Fruits
Starches, Vegetables, Sweet Fruits
Low Starch Vegetables
GOOD
Proteins or Starches
Whole
PRINCIPLES of FOOD COMBINING:
1. EAT Fruits alone as a separate fruit meal.
3. EAT Melons separate from other fruits.
4. EAT only one protein food in a meal.
5. Avocados BEST with green vegetables FAIR with starches.
Sub-Acid Fruits
FAIR
Acid Fruits or Sweet Fruits
Acid Fruits
POOR
Sweet Fruits
Melon
POOR
With Other Foods
Drinks
NEVER
With Meal or ½ hour after

IRON / HEALTHY FOOD

INFOGRAPHIC : ELEMENTS







SPINACH



BROCCOLI



PUMPKIN SEEDS



GREEN PEAS



APRICOTS



ALMONDS



RAISINS



MEAT



SEAFOOD

FOOD-COMBINING CHART



PROTEINS

Nuts (Almonds, Cashews, Pecans, Brazils, Hazelnuts, Walnuts, etc.)
Seeds (Pumpkin, Sunflower, Sesame, etc.)
Dairy Products - Eggs
Game, Fish, Shellfish, Poultry, etc.



STARCHES

Potatoes
Beans and Pulses (Adzuki beans, Chickpeas, Mung beans, Lentils, Butter beans, etc.)
Grains (Rice, Wheat, Oats, etc.)
Sweet Potatoes, Pumpkins, etc.

POOR

GOOD

GOOD



VEGETABLES

Asparagus
Aubergine
Beetroot
Cabbage
Carrot
(mildly starchy)
Cucumber
Herbs

Leafy greens
Mustard and cress
Onion
Parsnip
Peas

Salad vegetables
Summer squash
Sweetcorn
Sweet pepper
Turnip
Watercress
Most sprouted seeds and grains, etc.

FAIR
SUB-ACID & SWEET FRUITS
FAIR
FAIR

SUB-ACID & ACID FRUITS
POOR
POOR
POOR

POOR
FAIR
FAIR



ACID FRUITS

Blackberries
Grapefruit
Lemon
Lime
Orange
Pineapple
Plum

Pomegranate
Rasberries
Satsuma
Strawberries
Tangerine, etc

GOOD



SUB-ACID FRUITS

Apple
Apricot
Blackcurrants
Fresh figs
Grapes
Kiwi fruit
Mango

Nectarine
Papaya
Peach
Pear
Sweet cherries, etc

FAIR



SWEET FRUITS

Banana
Dates
Dried figs
Persimmon
Raisins and other dried fruits etc.

FAIR



MELONS

(eat on their own or leave alone)
Cantaloupe Honeydew Watermellon
Crenshaw Ogen etc.

RECOMMENDATION

Make meals of one or two combinations, especially of one protein or one starch with one or two vegetables

COMBINATIONS

POOR
Fruit & Starch
Protein & Starch

FAIR
Leafy Freens & Acid fruits
Leafy greens & Sub-acid fruits
Proteins & Acid fruits

GOOD
Avocado & Acid or Sub-acid fruits
Avocado & Leafy vegetables
Protein & Leafy greens
Starch & Vegetables
Oils & Leafy greens
Oils & Acid or Sub-acid fruits



NEUTRAL FOODS

(they go well with anything)
Avocado Olives Seed oils

RECOMMENDATION

All juices can be mixes because they are liquid and can be absorbed by the body within half an hour

5. WORKSHEETS

Print or copy the worksheet questions on the blackboard and ask the students to attempt them. They can be given as homework or a class test as well.

Worksheet 1

Use it like: Class test, Home assignment, Revision

1. **Explain the travel of food from mouth to stomach.**
2. **What are Digestive juices?**
3. **What is the main function of the tongue? What are the four types of tastes?**
4. **What is the function of saliva in the mouth?**
5. **Why can we not taste food properly when you have a cold?**

Worksheet 2

Use it like: A class test, home assignment, revision

1. **The process of breaking down of food in simple form which the body can use is called ___**
   a. **Digestion**
   b. **Ingestion**
2. **The tiny bumps present on the tongue ____.**
   a. **Taste bud**
   b. **Food bud**
3. **The liquid in our mouth that helps in digestion is ____.**
   a. **Digestive juices**
   b. **Saliva**
4. **A muscular bag in our body that churns food is ___.**
   a. **Stomach**
   b. **Liver**
5. **Food like chips, sweets, burgers, sandwiches, pizzas, samosas, soft drinks that are not good for our body are called___**
   a. **Junk food**
   b. **Health food**

6. SOLUTIONS

This section gives you sample answers for activities and questions listed above.

Worksheet 1

1. When food enters our mouth, it gets mixed with saliva as an when we chew it. This mixture passes through a channel to reach stomach. In the stomach, this mixture is broken down into smaller units with the help of digestive juices.
2. Digestive juices are fluids present in the stomach that helps in breaking down the food that we eat.
3. Tongue help is determining the taste of the food. Tongue has taste buds that helps in differentiating different food. The four taste are sweet, salty, sour and bitter. These tastes are felt at different places of the tongue.
4. The saliva dissolves the food and allows the tongue to taste the food. Saliva helps in chewing and swallowing the food easily. It adds moisture to dry food.
5. The taste of the food also depends on the smell. When we have cold we cannot smell food because of a blocked nasal area. As we fail to receive the smell we don't feel the taste also.

Worksheet 2

1. Digestion
2. Taste bud
3. Saliva
4. Stomach
5. Junk food

7. EXTRA RESOURCES

Carry out the following suggested activities/ tasks if you have the time and resources to do them

1. **Reference Video links:**

   The students can be suggested to watch the following videos/ shown in class:

   https://www.youtube.com/watch?v=C4rdqXXzPGU

   https://www.youtube.com/watch?v=YDAvE6HNjn0

2. **Extension activity 1:**

   Carry out the following suggested activities/ tasks if you have the time and resources to do them

   Purpose: Observe the ingredients of a food prepared at home and what taste it adds to the food.

   The teacher may ask the students to help their mother in cooking at home. They should ask questions to understand the names of different ingredients added and what taste they add to the food prepared. They can have a list prepared and discuss the same in the class.