

# Science

## Chapter 1 Food: Where Does It Come From?



## Food: Where Does It Come From?

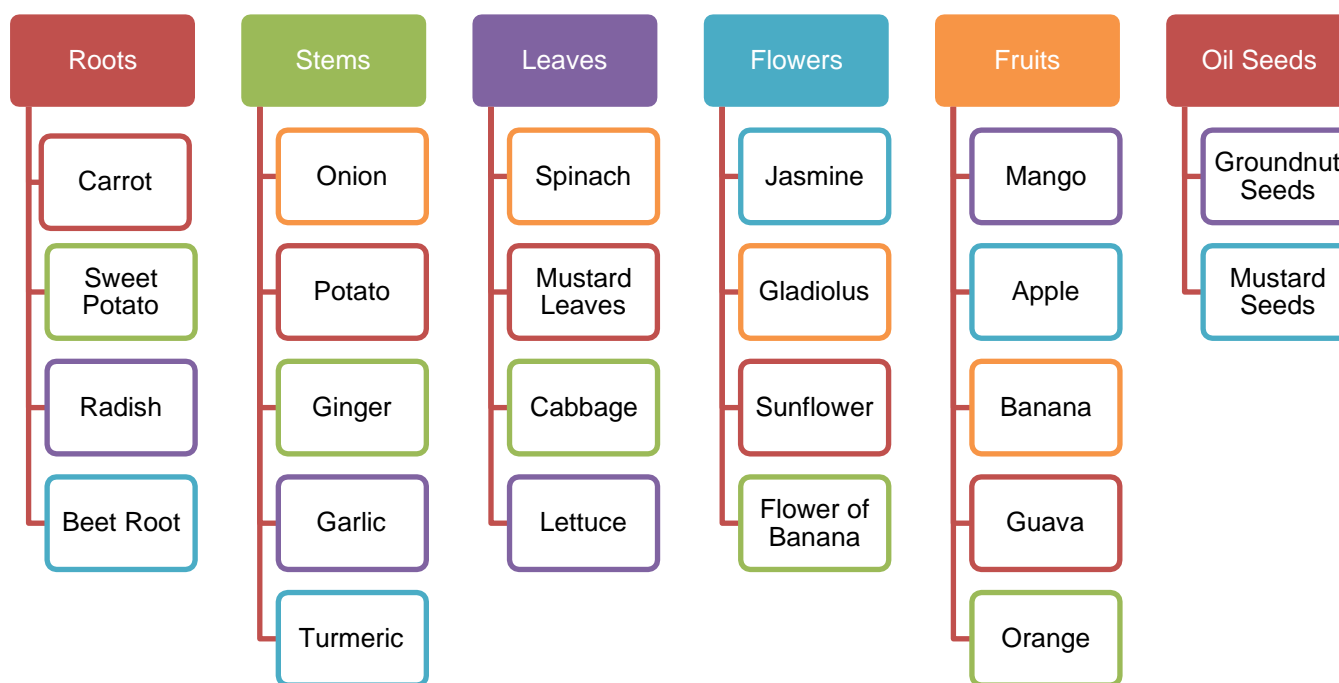


- We eat different kinds of food at different times.
- In the morning, we include milk, bread, fruit etc. in our breakfast.
- We include chapati, dal, sabji, rice and salad in our lunch and dinner.
- Each time we eat different food items which contain different ingredients.

Food Items	Their Ingredients
<b>Chapati</b>	Wheat Flour and Water
<b>Rice</b>	Rice, Water
<b>Dal</b>	Pulses, Water, Salt, Oil, Ghee, Spices
<b>Idli</b>	Rice, Urad Dal, Salt, Water
<b>Kheer</b>	Rice, Milk, Sugar
<b>Chicken Curry</b>	Chicken, Salt, Oil, Spices
<b>Vegetable</b>	Vegetable, Salt, Spices



- We get our food from plants and animals.

### Plant Parts: Sources of Food

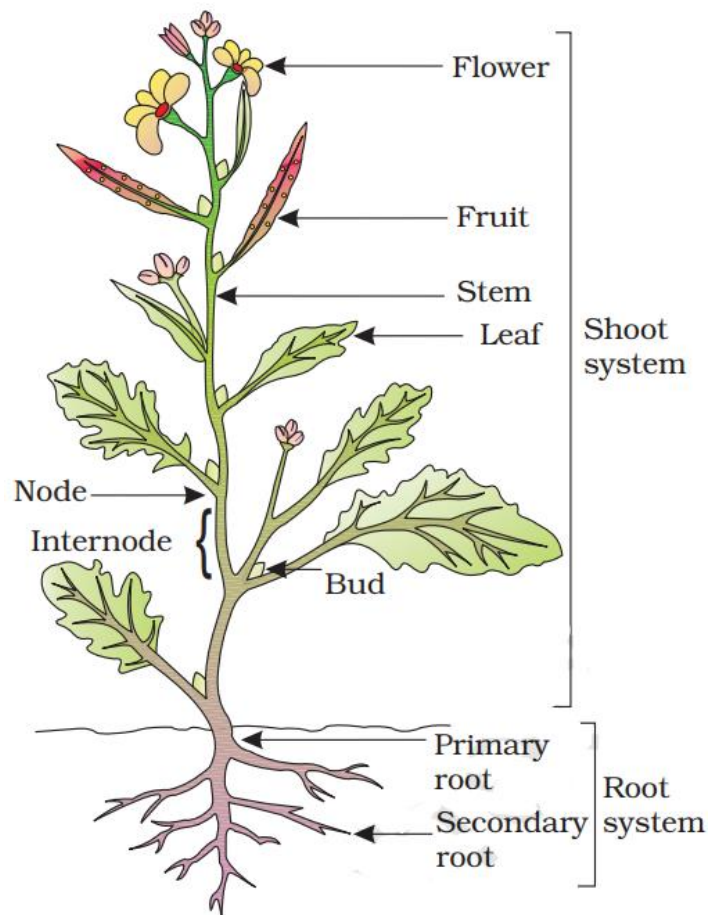




- Some plants have more than two edible parts:

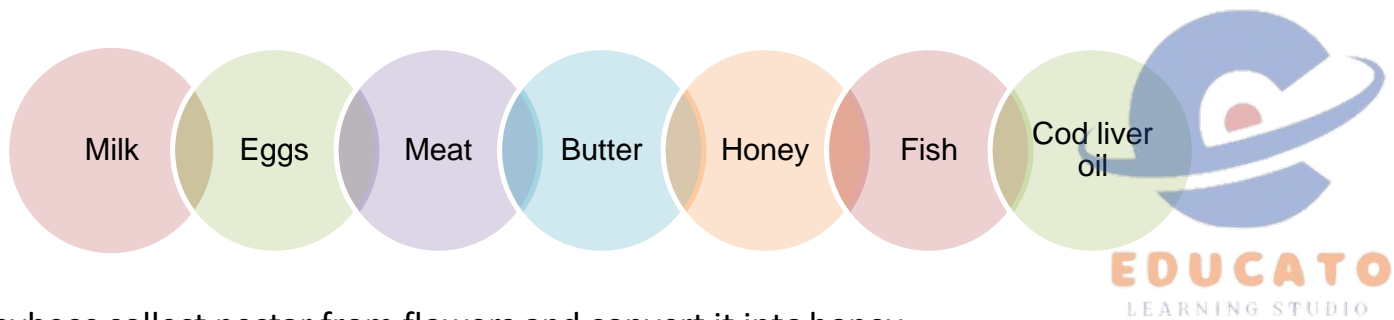
Mustard Plant	Banana Plant
 <p>Seeds are used to extract oil. Leaves are used as a vegetable.</p>	 <p>Banana is rich in nutrients. Flower of banana plant is used as a vegetable.</p>

- All plants are not edible. Some plants may be poisonous and hence not fit for eating.
- When the seeds begin to grow, they develop tiny roots and are called sprouts.
- Sprouts are rich in vitamin A, B and C.
- Figure Plant-parts-as-food.



## Animal Products: Sources of Food

- Following is the list of food products which we obtain from animals:



- Honeybees collect nectar from flowers and convert it into honey.
- Bees store honey in beehives called honeycombs.
- Honey is collected from honeycombs.

### What Do Animals Eat?

- Animals cannot produce their own food. So, they depend on plants and other animals to obtain their food.
- Based on eating habits, animals can be divided into three categories:

**Carnivore** - an organism that only eats animals (meat).



**Herbivore** - an organism that only eats plants.



**Omnivore** - an organism that eats plants and animals.

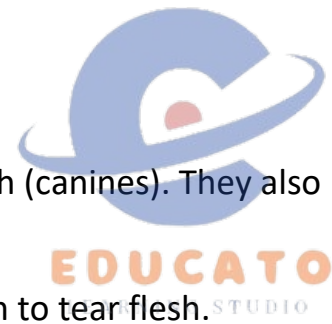


## Special characteristics of Herbivores

- Herbivores like a cow, horse, and goat have wide, blunt teeth which are suitable for pulling plants off the ground and grinding them.
- Herbivores like cow and camel have the ability to bring back previously swallowed food to the mouth for chewing it the second time. This helps them to absorb most of the nutrients from hard-to-digest food like grass.
- Squirrels have a pair of broad, sharp-edged front teeth (incisors) in each jaw. They use these teeth to gnaw food items like nuts.
- Butterfly and hummingbird do not need to worry about chewing their food. They have mouth parts shaped like a straw to suck nectar from flowers.

## Special Characteristics of Carnivores

- The diet of carnivores is rich in fats and proteins
- Carnivores animals like lion and tiger have sharp and pointed front teeth (canines). They also have sharp claws and powerful jaws which help them to tear flesh.
- Carnivorous birds like eagle have curved, pointed beaks that allow them to tear flesh.
- Carnivores like chameleon and frog have a long, sticky tongue that they use to catch insects.
- Carnivorous fish like a shark has several small, sharp teeth that help them bite off chunks of flesh.
- Carnivores such as snakes swallow their prey( prey are animal that is hunted or killed for food) whole.



## Special Characteristics of Omnivores

- Omnivores like a bear and human beings have different types of teeth that help them to eat both plants and the flesh of other animals.
- Omnivorous birds like crow have a sharp and pointed beak to help them eat a variety of food.

## Why do we need Food

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- We know that all living things be it plants, and animals need food and water to live on.
- We need food because food gives us energy.
- The food we eat gives our body essential nutrients to help us grow and heal when we are injured or are ill.
- Thus, food keeps us healthy and provides us with essential nutrients to fight diseases and maintain body functions.
- Food is a substance eaten by us to do work, growth, maintain our body and remain healthy.
- **Food Definition:** It refers to the edible substances consumed by humans and other animals in order to obtain energy for various tasks as well as growth and development.
- We must NEVER WASTE food in any way.
- We must consume food four times a day to remain healthy -> Breakfast, Lunch, Evening Snacks, Dinner.

## Importance Of Food



- The importance of food for living organisms is as follows:
  - a. It helps in the growth of living organisms.
  - b. It also helps to repair and replace damaged parts of the body.
  - c. This provides the energy required for various activities.
  - d. It provides protection from infections and various diseases.
  - e. It helps in the overall growth and development of an organism.
- We must eat different kinds of food at different times for proper Nutrition.
- Different people eat different types of food according to their habits, lifestyle, taste, region, religion, availability and various other factors.
- Even in a single-family different people have different choices of food.

## What are ingredients?

- Food Ingredients are the materials required to prepare the dish we consume as food.
- Food Ingredients can be obtained from plant sources and animal sources.
- To prepare food we need different kinds of ingredients For example - To cook vegetable curry we need different types of vegetables, salt, spices oil and so on. Another example is To prepare vegetable curry, we need different kinds of vegetables, salt, spices, oil.
- Food is prepared using various

## Ingredients of food.

- The table given below shows some food items and major ingredients used to prepare them



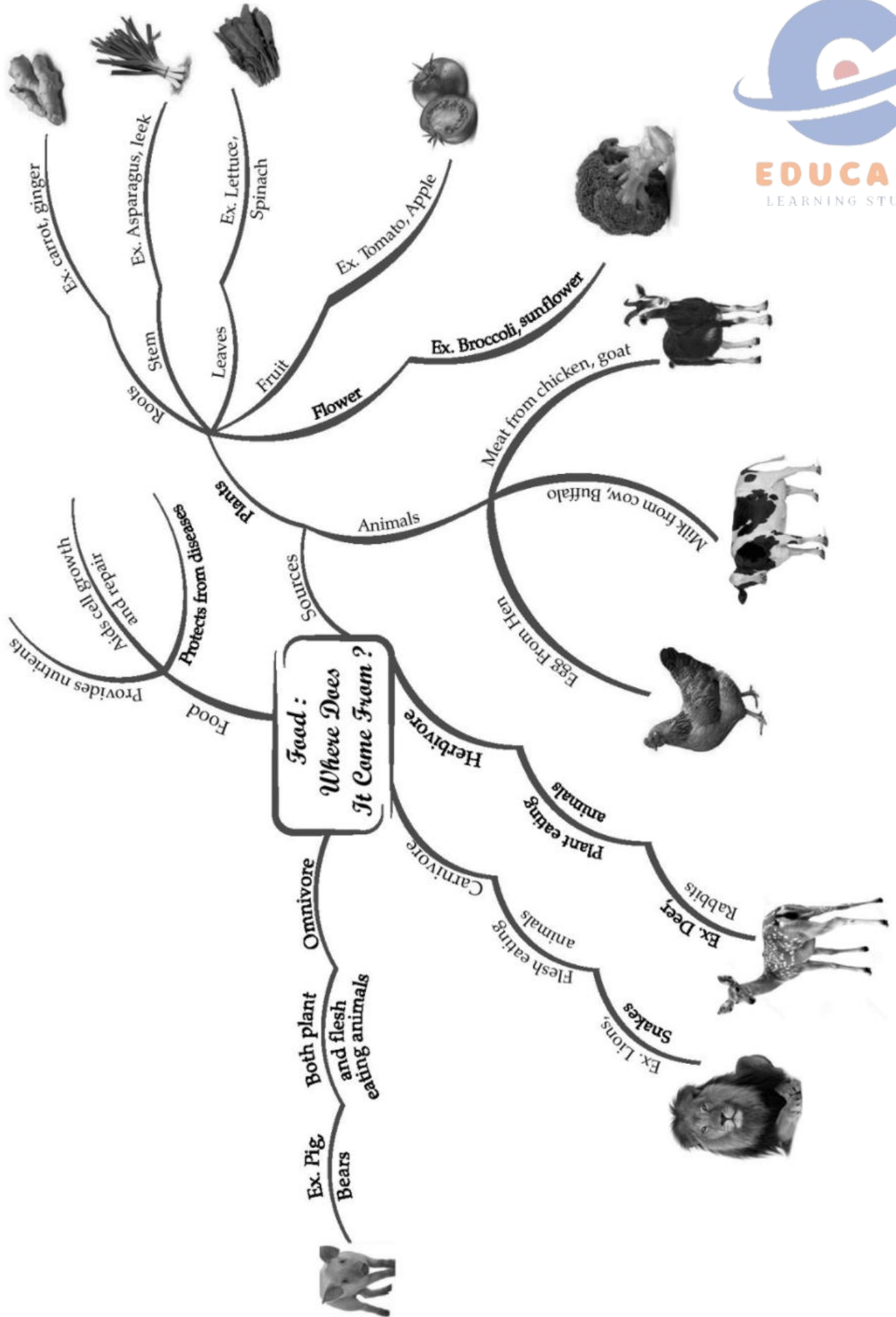
FOOD ITEM	Major Ingredients
1. Boiled rice	Rice, water
2. Dal	Pulses, water, spices, salt, oil
3. Idli	Urad dal, Rice, Salt, Water
4. Roti	Flour, water
5. Chicken curry	Chicken meat, Salt, spices, oil, water
6. Vegetable curry	Vegetables, spice, salt, oil, water
7. Fish curry	Fish meat, spices, oil, water

### Scavengers and Decomposers:

- Scavengers are birds and animals which eat the flesh of other dead animals. Eg: Vulture.
- Decomposers are organisms that feed on and destroy (or decompose) dead plants and animals. E.g.: Fungi and bacteria
- Both scavengers and decomposers play a very important role in cleaning the environment. Without them, our planet would be covered with dead plants and animals.



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## Important Questions



### Multiple Choice Questions:

- How to avoid wastage of food?
  - We should buy a lot of fruits and vegetables
  - We should cooked extra food
  - Storage of food should be done properly
  - None of these
- In our country, people do not have enough food to eat, what should be our duty ?
  - We should grow more food
  - The food that we produce should not get spoilt or eaten away by animals
  - Each of us should make sure not to waste food
  - All of these
- A small white structure may have grown out of seeds is called:
  - Roots
  - Sprouts
  - Seeds
  - None of these
- Bees collect nectar from:
  - Vegetable
  - Fruits
  - Flower
  - None of these
- Bees store nectar for their use all through the:
  - Day
  - Month
  - Week
  - Year
- What are the ingredients of kheer?
  - Milk, rice, sugar
  - Ghee, water, spices
  - Rice, dal, water, salt



- D. None of these
7. Camel milk is used in:
- A. Bengal
  - B. Rajasthan
  - C. Delhi
  - D. Chennai
8. Eggs are the rich source of:
- A. Vitamins
  - B. Fats
  - C. Proteins
  - D. Carbohydrates
9. Honeybees collect the nectar from flowers and prepare honey in their nests called:
- A. Honey
  - B. Flower
  - C. Plants
  - D. Beehives
10. Fruits are:
- A. Juicy
  - B. Tasty
  - C. Delicious
  - D. All of these
11. The milk producing animals are called:
- A. Wild animals
  - B. Pet animals
  - C. Much animals
  - D. None of these
12. Sugar is obtained from:
- A. Banana
  - B. Sugarcane
  - C. Carrot
  - D. Mango
13. Parrot eats only product.



- A. Plants
  - B. Animals
  - C. Both and (b)
  - D. None of these
14. Is a food eaten at a particular time of the day.
- A. Meat
  - B. Meal
  - C. Fruit
  - D. Vegetable
15. Sweet juice is known as:
- A. Nectar
  - B. Pallen
  - C. Both and (b)
  - D. None of these

### Very Short :

1. Give two examples where two or more parts of a single plant are used as food.
2. Name any one plant that grows in water and is eaten as food.
3. Suggest any three ways you can think of to avoid wastage of food.
4. Name two sugar producing plants.
5. Name a non-green plant that we eat.
6. What do you call the habit of an individual to eat a particular type of food items commonly?
7. Compare your food habits with food habits of your friend who lives in Tamil Nadu.
8. What items are used to prepare cooked rice?

### Short Questions:

1. What is food?
2. Why should we eat cooked food?
3. Explain the importance of food for living organisms.
4. Explain the various sources of food items and ingredients with the help of examples.
5. Define the term herbivores.
6. What are carnivores? Explain with examples.
7. Define the term omnivores.



## Long Questions:

1. Differentiate between herbivores, carnivores and omnivores. Give two examples of each.
2. (i) Name the different parts of a banana plant that are used as food.  
(ii) Animal food we get from water resources.  
(iii) Four fruits which we eat as vegetables.
3. Explain different mode of nutrition in animals.

## Answer Key

## Multiple Choice Questions:

1. Storage of food should be done properly  
**Explanation:** By storage of fruits should be done properly to avoid wastage of food.
2. All of these  
**Explanation:** Our duty is that grow more food, should not get spoilt or eaten away by animals and not to waste food.
3. Sprouts  
**Explanation:** A small white structure may have grown out of seeds is sprouts.
4. Flowers  
**Explanation:** Bees collect nectar from flowers.
5. Year  
**Explanation:** Bees store nectar for their use all through the year.
6. Milk, rice, sugar  
**Explanation:** Milk, rice and sugar are the ingredients of kheer.
7. Rajasthan  
**Explanation:** Camel milk is used in Rajasthan.
8. Proteins  
**Explanation:** Eggs are the rich sources of proteins.
9. Beehives  
**Explanation:** Honeybees nests is called beehives.
10. Juicy  
**Explanation:** Fruits are juicy.
11. Much animals  
**Explanation:** The milk producing animals are called milch animals.

12. Sugarcane

**Explanation:** Sugar is obtained from sugarcane.

13. Plants

**Explanation:** Parrot eats only plants product.

14. Meal

**Explanation:** Meal is a food eaten at a particular time of the day.

15. Nectar

**Explanation:** Sweet juice is known as nectar.



### Very Short Answer:

1. **Answer:** Mustard - seeds and leaves, Pumpkin - fruit and flowers.

2. **Answer:** Lotus - Stem of lotus is eaten as food.

3. **Answer:**

i. Avoid leaving food uneaten in meals.

ii. “Eat to live” and not “live to eat” - excess eating should be avoided.

iii. Raw food like pulses, grains should be stored properly.

4. **Answer:**

a. Sugarcane

b. Sugar b

5. **Answer:** Mushroom.

6. **Answer:** Food habit.

7. **Answer:** My food habit: Chapatti, pulses, lassi, rice, vegetables, mustard oil.

Food habit of my friend: Idli, dosa, sambhar, bara, rasam, upma and coconut oil, etc.

8. **Answer:** Raw rice and water.

### Short Answer:

1. **Answer:** The eatable substances eaten by humans and other animals to get energy for various activities for growth and development is called food.

2. **Answer:** We should eat cooked food because by cooking we can kill harmful germs and make it germless. Cooked food can be easily digested and absorbed by our body. Cooking also improves the taste of food.

3. **Answer:**

**Importance of food is:**

i. It provides energy to do various activities.



- ii. It helps in growth.
- iii. It helps to repair and replace damaged parts of the body.
- iv. It protects us from infections and diseases.

**4. Answer:**

There are mainly two sources of ingredients of various food items:

- i. Plants: Plants provide us fruits, vegetables, pulses, grains, cereals, etc.
- ii. Animals: Animals provide us milk, eggs, meat etc.

**5. Answer:** The animals which eat only plants or plant products are called herbivores. For example, cow, goat and buffalo.

**6. Answer:** The animals which eat other animals are called carnivores. For example, lion and tiger. Carnivores generally eat herbivores and other carnivores.

**7. Answer:** The animals which eat both the plants and animals are called omnivores. For example, cat, dog and human beings.

**Long Answer:**

**1. Answer:**

Herbivore	Carnivore	Omnivores
Animals that eat only plants.	Animals that eat flesh of other animals.	Animals that eat both plants as well as animals.
They depend on plants.	They depend on herbivores.	They depend on both.
Teeth are not sharp but have front pointed teeth.	Teeth are sharp for chewing and grasping the meat, have pointed teeth.	Teeth are not sharp they are either pointed front teeth.
Salivary glands are well developed.	Salivary glands are not well developed.	Salivary glands are well developed.
Examples: Cow, Deer, etc.	Examples: Lion, Tiger, etc.	Examples: Human being, Crow, etc.

**2. Answer:**

- i. Flower, fruit and stem of banana.
- ii. Fish, prawn, lobster and crabs.
- iii. Fruits of tomato, brinjal, Ladyfinger (bhindi), cucumber (Loki).

3. **Answer:** Different animals have different feeding habit. Some eat green plants and plant products and are called herbivores like cow and deer. Some feed on flesh of other animals and are called carnivores. Like lion. Some animals eat both plants and animals and are called omnivores, like humans, rat etc.

