

STUDY MATERIAL

1. FOOD

I. Choose the correct answer:

1. Radish is obtained from plants.
a) Skin b) Meat c) Ghee d) **Radish**
2. Ghee is obtained from animals.
a) **Ghee** b) Potato c) Onion d) Coconut
3. The food that cannot be eaten raw is fish and meat.
a) Fish and carrot b) Meat and apple c) **Fish and meat** d) Fruits
4. The food that is cooked by boiling is rice.
a) idli b) groundnut c) **rice** d) poori
5. Cashewnuts are cooked by roasting.
a) **Roasting** b) Frying c) Steaming d) Both a and b
6. Utensils made of clay were used in olden days.
a) Aluminium b) **clay** c) iron d) all the three
7. Dough nut is an unhealthy food.
a) Fish b) Vegetable c) Fruit d) **Dough nut**
8. Milk is a healthy food.
a) Ice cream b) Murukku c) **Milk** d) Cake
9. Storing food in air-tight containers is called canning.
a) Drying b) **canning** c) pickling d) all the three
10. Red chilli is preserved by drying.
a) Jam b) Pickle c) Vegetable d) **Red chilli**

II. Fill in the blanks:

1. Food obtained from nature provides all the nutrients to our body.
2. Egg and meat are obtained from animals.
3. Carrot and onion are obtained from plants.
4. Food that can be eaten directly without cooking is called raw food.
5. Frying is a method of cooking food in hot oil.
6. Idli is cooked by the method of steaming.
7. Porridge of rice or cereal is easily digestible.

8. We should avoid eating **junk** food.
9. We can preserve pickle by **salting**.
10. World Hunger Day is observed on **May 28**.

III. Write True or False:

- | | |
|--|-------|
| 1. Junk food is good for health. | False |
| 2. You should wash your hands before and after eating. | True |
| 3. Earlier people cooked their food in pressure cooker. | False |
| 4. Solar cooker reduces the use of fuel. | True |
| 5. Vegetables should be washed after cutting. | False |
| 6. Fish is a plant food. | False |
| 7. Sweet potato can be eaten raw. | True |
| 8. Cooking food for a long time enriches the nutrients. | False |
| 9. Clay pot cooking keeps the food warm for a long time. | True |
| 10. Avoid taking food that is too hot. | True |

IV. Match the following:

- | | | | |
|--------------------------|---------------------|-----|-----|
| 1. Drying | - (a) Healthy foods | 1) | (j) |
| 2. Refrigeration | - (b) Poori | 2) | (c) |
| 3. Fruits and vegetables | - (c) Vegetables | 3) | (a) |
| 4. Boiling | - (d) Idiyappam | 4) | (f) |
| 5. Steaming | - (e) Dhal | 5) | (d) |
| 6. Roasting | - (f) Egg | 6) | (i) |
| 7. Frying | - (g) Drumstick | 7) | (b) |
| 8. Pressure cooking | - (h) Buttermilk | 8) | (e) |
| 9. Animal food | - (i) Cashewnut | 9) | (h) |
| 10. Plant food | - (j) Red chilli | 10) | (g) |

V. Pick the odd one out:

- | | | | |
|------------------|--------------|--------------|--------------------------|
| 1. Potato, | Curd, | Cucumber, | Onion |
| 2. Butter, | Meat, | Egg, | Rice |
| 3. Idli, | Banana, | Corn, | Groundnut |
| 4. Dosai, | Meat, | Poori, | Papaya |
| 5. Roasting, | Baking, | Frying, | Microwave cooking |
| 6. Clay pot, | Tawa, | Pan, | Fan |
| 7. Tomato juice, | Fish, | Cake, | Apple |
| 8. Popcorn, | Egg, | French fry, | Cool drink |

VI. Give reason:

1. Vegetables should be washed before cooking. Why?

Vegetables should be washed before cooking to remove dirt and germs.

2. We should cook food. Why?

We should cook food to make it soft, kill germs, add taste and flavour.

3. Foods should not be cooked for long time. Why?

Foods should not be cooked for a long time because it destroys the nutrients present in the food.

VII. Answer the following:

1. Name the cooking methods.

Boiling, Steaming, Pressure Cooking, Roasting and Frying.

2. Name the food items you should eat when you are sick.

Porridge, fruit juice, tender coconut, steamed foods.

3. Name the food preservation methods.

Pickling, Refrigerating, Drying and Canning.

4. How can you reduce wastage of food in your home?

- **Take what you will eat and eat what you take.**
- **Share the excess food.**
- **Give the excess food to hungry animals.**

5. What are utensils made of?

Utensils are made of clay, stainless steel and aluminium.

6. Give examples for food items from plants and animals.

Food items from plants- Fruits, vegetables, nuts and tubers.

Food items from animals- Milk and meat.

7. Write the benefits of clay pot cooking.

- **Easy to digest and preserves the nutrients.**
- **Needs less oil for cooking.**
- **Adds flavour to the dish.**
- **Keeps the food warm for a long time.**
- **Keeps the food from becoming stale soon.**

VIII. Answer in detail:

1. Explain the methods of food preservation.

1. Pickling: Mixing fruits and vegetables with oil and salt. Example: Pickle
2. Refrigerating: Keeping food in the refrigerators (fridge) to preserve them for a short time. Example: Fruits, vegetables.
3. Drying: Removing the water content of the food. Example: Fish.
4. Canning: Storing food in air tight containers. Example: Jam.

2. Explain the cooking methods with examples.

1. Boiling: It is a method of cooking food by immersing it in boiling water. So that the food becomes soft.
Example: Rice, Egg.
2. Steaming: It is a method of cooking food in steam by immersing the vessel in a container with boiling water.
Example: Idli, Idiyappam.
3. Pressure cooking: It is a method of cooking food in a pressure cooker.
Example: Rice, Dhal.
4. Frying: It is a method of cooking food in hot oil.
Example: Chips, Poori.
5. Roasting: It is a method of cooking food by heating on a tawa or frying pan without covering it.
Example: Groundnuts, Cashewnut.

3. What are the hygienic ways of taking food?

- ✓ Always cover food to protect them from dust and insects.
- ✓ Eat fresh food always.
- ✓ Avoid taking food that is too cold or too hot.
- ✓ Avoid fast food and fried food always.
- ✓ Wash your hands with the soap before and after eating.

LESSON: 2 - WATER

I. Choose the correct answer:

1. Water is found in seas, lakes, oceans and rivers.
a) Seas and lakes b) oceans and rivers c) **both a and b**
2. A balloon and bicycle tube are filled with air and it is in gas state.
a) Air, solid b) air, liquid c) **air, gas**
3. The solid form of water are ice and snow.
a) **Ice and snow** b) snow and steam c) ice and cold water

4. **Rain water** is in liquid state.
 - a) **Rain water** b) Ice c) Snow
5. In colder places, combined water droplets come down as **sleet and hail**.
 - a) Sleet b) hail c) **both a and b**
6. In the water cycle, **evaporation and condensation are involved**.
 - a) only evaporation is involved. b) only condensation is involved.
 - c) **evaporation and condensation are involved.**
7. **Rainwater harvesting** increases the ground water level.
 - a) Water cycle b) **Rainwater harvesting** c) Well

II. Fill in the blanks:

1. Drinking water is in **liquid** state.
2. Water vapour becomes water on **heating**.
3. Water becomes ice at temperature **below 0°C**.
4. Water becomes water vapour at **100°C**.
5. Continuous change of water from one state to another in nature is called **water cycle**.
6. The process which is responsible for the formation of droplets on the surface of a glass of cold drink is **condensation**.
7. **Rainwater harvesting** is the only way to conserve rain water.
8. The process by which water droplets fall down as rain is called **precipitation**.

III. Write True or False:

- | | |
|---|-------|
| 1. Rainwater harvesting cannot be used for agriculture. | False |
| 2. Water cycle is important for farming. | True |
| 3. Water becomes water vapour on cooling. | False |
| 4. Water in ocean is in liquid state. | True |
| 5. Heating is essential for condensation. | False |
| 6. Change of state of water occurs naturally. | True |
| 7. Corn and ragi are in solid state. | True |
| 8. The rain water harvesting was launched in the year 2005. | False |

IV. Match the following:

- | | | |
|-----------------|--------------------|--------|
| 1. Water | - a) Precipitation | 1) (d) |
| 2. Water vapour | - b) Condensation | 2) (g) |
| 3. Heating | - c) Liquid state | 3) (f) |

4. Cooling	- d) Streams and ponds	4)	(b)
5. Artificial reservoir	- e) Freezing	5)	(h)
6. Snow	- f) Evaporation	6)	(a)
7. Water → ice	- g) Gaseous form	7)	(e)
8. Oil in a bottle	- h) Tank	8)	(c)

V. Pick the odd one out:

- | | | | |
|-------------|---------------|----------------|----------------|
| 1. Ice, | stone, | water vapour, | water, |
| 2. Lake, | sea, | tank, | pond, |
| 3. Chair, | milk, | rice, | car, |
| 4. Melting, | boiling, | evaporation, | cooking |
| 5. Pit, | boulders, | bricks, | coarse sand |

VI. Give reason:

1. Water is a good example for all states of matter. Why?

Water is a good example for all states of matter because it exists in three states: solid, liquid and gas.

2. Water cycle is important to humans. Why?

The water cycle is important to humans because it provides fresh water for drinking, cooking, farming and other daily needs.

VII. Answer the following:

1. What are the three states of water?

The three states of water are solid (ice), liquid (water) and gas (water vapour).

2. What is freezing?

The process of changing water into ice is called freezing.

3. Name the processes involved in water cycle.

Evaporation, condensation and precipitation are the processes involved in water cycle.

4. Which state government made rainwater harvesting as mandatory in the year 2001?

Tamil Nadu State is the first Indian state which made rainwater harvesting as mandatory.

5. What is needed to construct a rainwater harvesting pit?

To construct a rainwater harvesting pit, we need boulders, gravels and coarse sand.

6. What is rain water harvesting?

The process of collecting and storing rainwater for future use is called rainwater harvesting.

7. What is rooftop harvesting?

Rooftop harvesting is a type of rainwater harvesting. The rain water on the rooftop of the building is collected and passed into the ground through pipes.

VIII. Answer in detail:

1. What is rainwater harvesting? List out the advantages of rainwater harvesting.

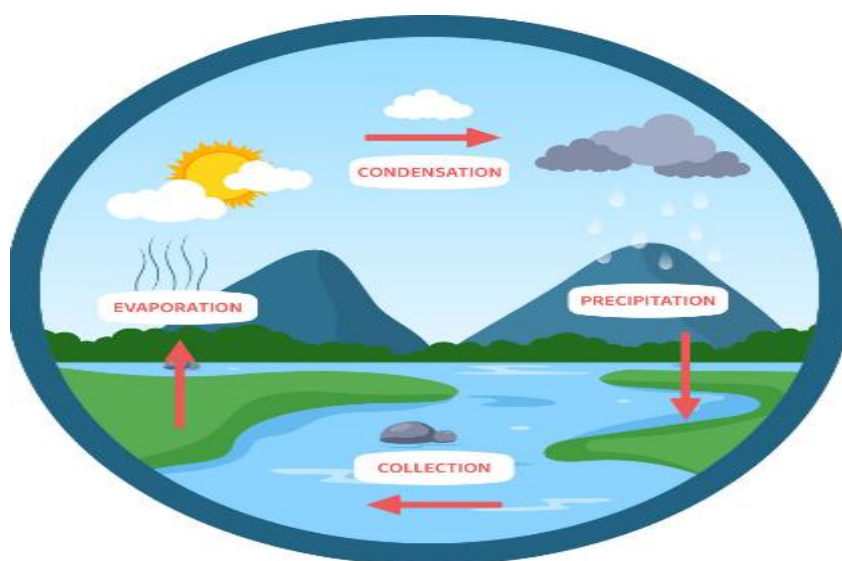
Rainwater harvesting is the process of collecting and storing rainwater for future use.

Advantages of rainwater harvesting:

- It increases the groundwater level.
- It can be used for agriculture.
- It increases the availability of water for living things.

2. Explain the water cycle with block diagram.

Water becoming water vapour on heating is called evaporation. The water vapour when comes into contact with cool air becomes water droplets. This is called condensation. The water droplets combine to form clouds. These water droplets then fall down as rain. This is called precipitation.



The Water Cycle

LESSON: 3 - PLANTS

I. Choose the correct answer:

1. Veins carry water and minerals.
a) water b) minerals and oxygen
c) food and water d) **water and minerals**
2. Petiole joins the leaf to the main stem.
a) Midrib b) **Petiole** c) Stalk d) Apex
3. The part which is present on a leaf is stomata.
a) stamen b) pistil c) sepal d) **stomata**
4. Sunlight is trapped by the chlorophyll.
a) stomata b) **chlorophyll** c) veins d) midrib
5. An example of flowering plants is neem.
a) **neem** b) fungi c) algae d) all the three
6. An example of non-flowering and green plant is algae.
a) paddy b) **algae** c) grass d) both a and c
7. The bright coloured part of a flower is petal.
a) sepal b) stamen c) pistil d) **petal**
8. Stamen and Pistil are seen at the centre of a flower.
a) **Stamen and Pistil** b) Stamen and Stalk
c) Pistil and Petal d) Sepal and Petal
9. The flower that blooms in summer is sunflower.
a) tuberosa b) **sunflower** c) tulip d) saffron
10. Boat lily is an Exotic Plant.
a) Tulip b) Dahlia c) Jasmine d) **Boat lily**

II. Fill in the blanks:

1. During photosynthesis, plants release oxygen(O₂).
2. Plant is a primary producer.
3. Stomata are seen in the lower surface of the leaf.
4. Pigment involved in food synthesis is chlorophyll.
5. Plants are classified based on pigment and flower of the plant.
6. Non-green plants depend on other organisms to live.
7. Sepals protect the flower while it is still a bud.
8. Stamen contains pollen grains.
9. Pistil is female part of a flower.

10. **Underground stem** part of the potato plant is used as food.
11. Seeds are rich in **proteins** and **carbohydrates**.
12. Non-flowering plants reproduce through **spores**.
13. **Non-green** plants depend on other organisms for their food.
14. **Insects** help the flowers in the transfer of pollen grains.
15. Cabbage is a **leafy** vegetable.
16. Fruits are rich in **vitamins** and **minerals**.

III. Write True or False:

- | | |
|--|-------|
| 1. Fenugreek is a grain used as food. | True |
| 2. All fruits and vegetables can be eaten raw. | False |
| 3. Moringa stems are edible. | False |
| 4. Clove is a flower. | True |
| 5. The roots of tapioca are edible. | True |
| 6. All exotic plants can grow only in its native land. | False |
| 7. Seasonal flowers bloom only in a specific season. | True |
| 8. Leaf stalk is always green. | False |
| 9. All plants have chlorophyll. | False |
| 10. Oxygen is absorbed during photosynthesis. | False |

IV. Match the following:

A)

- | | | | |
|------------------------|----------------------|----|-----|
| 1. Lamina | - a) fern | 1) | (g) |
| 2. Photo | - b) exchange gas | 2) | (e) |
| 3. Stomata | - c) protect buds | 3) | (b) |
| 4. Flowering plant | - d) pollen grain | 4) | (f) |
| 5. Non-flowering plant | - e) light | 5) | (a) |
| 6. Non-green plant | - f) groundnut | 6) | (h) |
| 7. Stamen | - g) broad flat part | 7) | (d) |
| 8. Sepal | - h) fungi | 8) | (c) |

B)

- | | | | |
|--------------|---------------------|----|-----|
| 1. Tuberose | - a) root vegetable | 1) | (b) |
| 2. Jasmine | - b) winter | 2) | (d) |
| 3. Tulip | - c) leaf | 3) | (h) |
| 4. Saffron | - d) summer | 4) | (f) |
| 5. Sago palm | - e) stem | 5) | (g) |

6. Beetroot	- f) spring	6)	(a)
7. Turmeric	- g) cycas	7)	(e)
8. Coriander	- h) autumn	8)	(c)

V. Pick the odd one out:

1. December, tuberose, tulip, **rose**
2. Carrot, **onion**, tapioca, beetroot
3. Mushroom, bread mould, **algae**, fungi,
4. Neem, **fern**, paddy, mango
5. **Stomata**, petal, sepal, pistil

VI. Give reason:

1. Plants are called Primary Producers. Why?

Plants prepare food for themselves and also for other living things, so they are called primary producers.

2. Most of the leaves are green. Why?

Most of the leaves are green because they contain a green pigment called chlorophyll.

VII. Answer in one or two words:

1. Which is the female part of the plant? **Pistil**
2. Write the name of any one of the leaves that is used as a food.
Coriander leaves
3. Which flower is used as spices in food? **Clove**
4. What are the nutrients present in the seeds? **Carbohydrates and proteins**
5. Write any one of the flowers that blooms in summer? **Sunflower**

VIII. Answer the following:

1. Write the parts of the leaf.

Blade, Apex, Midrib, Veins, Petiole are the parts of leaf.

2. Define. Photosynthesis

Photosynthesis is a process by which plants make their food using chlorophyll, water and carbon dioxide in the presence of sunlight.

3. Write the names of the exotic plants.

Sago palm, fern, crotons, travelers palm, boat lily and aloe vera are the exotic plants.

4. Write the names of underground stem plants.

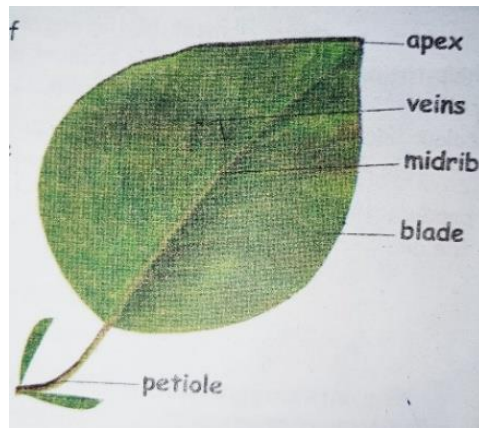
Potato, onion, ginger are the underground stem plants.

5. Why should we not touch the parthenium plant?

We should not touch the parthenium plant, because the pollen of this plant is allergic in nature.

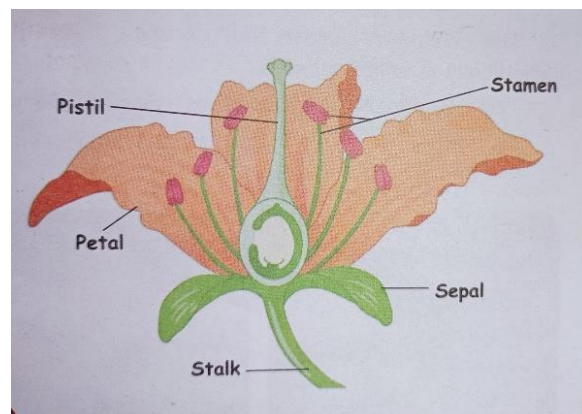
IX. Answer in detail:

1. Mark the parts of a leaf and describe them.



- ❖ Blade: The broad flat part of the leaf lamina.
- ❖ Apex: The tip of the leaf.
- ❖ Midrib: The midrib runs along the centre of the leaf.
- ❖ Veins: Veins are branch out from the midrib. They are the framework of hollow tubes that carry water and minerals.
- ❖ Petiole: This part joins the leaf to the main stem.
- ❖ Stomata: Stomata are tiny openings or pores mostly found at the base of the leaf's stomata are used to exchange gases.

2. Draw a diagram of a flower and explain the parts of a flower.



- ❖ Petal: Petals are often bright coloured. They attract insects such as bees or butterflies, to the flower. The insects help the flowers in the transfer of pollen grains.
- ❖ Stamen: Stamen can be seen at the centre of a flower. They contain pollen grains that help the plants to multiply. It is the male part of a flower.
- ❖ Pistil: Pistil is seen at the centre of the flower. The pistil uses the pollen to help the flower become the fruit. It is the female part of a flower.