



## INDIAN SCHOOL AL WADI AL KABIR

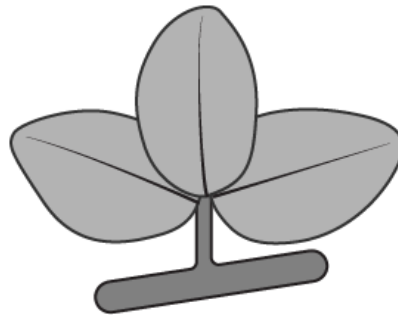


<b>Class: VI</b>	<b>DEPARTMENT: SCIENCE 2024-2025</b>	<b>DATE: 15.05.2024</b>
<b>WORKSHEET NO: 2</b>	<b>TOPIC: GETTING TO KNOW PLANTS</b>	<b>NOTE: A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT:</b>	<b>CLASS &amp; SEC:</b>	<b>ROLL NO.</b>

### I. OBJECTIVE TYPE QUESTIONS:

1. A student observed some leaves that were attached to a stem, as shown in the image.

Which part of the leaf helps them to become attached to the stem?



- a) Lamina  
**c) Petiole**
- b) Midrib  
d) Veins
2. Which of the following types of plants have thick, hard and woody stems?  
**a) Trees**  
b) Herbs  
c) Shrubs  
d) All of these
3. Which is the correct set of parts of the pistil?  
a) Ovary, Style, Filament  
**b) Ovary, style, stigma**  
c) Ovary, anther, filament  
d) Filament, anther
4. If a plant has fibrous root, what type of venation are its leaves likely to have-  
a) Reticulate venation  
**b) Parallel venation**  
c) No such relation can be observed  
d) Reticulate and parallel



9. **Assertion (A)** - The parts of a typical flower are sepals and petals only.

**Reason (R)** - The parts of the stamen are filament and anther.

**iv) A is false but R is true.**

10. **Assertion (A)** - Leaves are generally green in colour.

**Reason (R)** - Leaves are green in colour due to the presence of chlorophyll.

**i) Both A and R are true and R is the correct explanation of the assertion.**

## **II. VERY SHORT ANSWER TYPE QUESTIONS (2M):**

1. What is transpiration?

**[Hint: Transpiration is the loss of water from the aerial parts of the plant in the form of vapour.]**

2. Why are leaves generally green?

**[Hint: The green colour of leaves is because of the presence of chlorophyll.]**

3. What are shrubs?

**[Hint: Shrubs are medium-sized plants with a hard stem branching out near the base.]**

4. Write the functions of sepals and petals.

**[Hint: Functions of sepals: Sepals protect the inner parts of the flower when it is a bud.  
Function of petals: Petals attract insects which are the agents of pollination by colour and fragrance.]**

5. Define the following –

i) Petiole - **The stalk of a leaf by which it is attached to the stem is called the petiole.**

ii) Lamina - **The broad green flat part of a leaf is called lamina.**

iii) Leaf venation - **The design made by veins in a leaf is called leaf venation.**

6. Rohit tries to pull out a grass and a rose plant from the soil. Which one will he be able to pull out more easily and why?

**[Hint: He will be able to pull out grass more easily as compared to rose plant because fibrous roots are found in the grass which does not go down much deep in the soil.]**

7. What are the functions of the stem?

**[Hint: i) It keeps the plant upright. ii) It helps in the conduction.]**

8. How leaves are arranged on the stem? **[Hint: Leaves are arranged on the stem in such a manner that they are well exposed to sunlight.]**

### **III. SHORT ANSWER TYPE QUESTIONS (3M):**

1. How do you identify the root system of a plant without pulling it out of the soil?

**[Hint: By looking at the venation of the leaves, we can identify the root system of plants. Plants with leaves having parallel venation have fibrous roots and leaves having reticulate venation has a taproot.]**

2. What are the main functions of roots?

**[Hint: i) Roots absorb water and minerals from the soil.  
ii) Roots help in holding the plant firmly in the soil.  
iii) Root helps to prevent soil erosion.]**

3. Transpiration results in the loss of water in plants. Yet, it is a useful process, both for the plant and the environment. Justify.

**[Hint: The loss of water in the form of water vapour from the plant cools down the plant when the weather is hot and helps the plant to absorb water and minerals from the soil. Transpiration is very important for maintaining moisture conditions in the environment, 10 per cent of the moisture in the Earth's atmosphere is from transpiration of water by plants.]**

4. Will a leaf taken from a potted plant kept in a dark room for a few days turn blue-black when tested for starch? Give reasons for your answer.

**[Hint: No, it will not turn blue-black because all the starch present in the leaf would have been used up by the plant. And due to the non-availability of sunlight, no starch would be synthesised in the leaves.]**

5. What are the functions of a flower?

**[Hint: Flower is the reproductive part of a plant. It results in the formation of fruits and seeds. Seeds on germination give rise to new plants. It is the source of food for many insects. Flowering plants are grown in gardens and in homes because of the bright colour and fragrance of the flowers. Therefore, they beautify the surroundings and provide aesthetic value.]**

6. What are Trees? **[Hint-Trees are the tallest plants which have thick, hard and brown stems. The branches arise from the upper part of the stem, much above the ground.]**

7. Differentiate between Parallel and reticulate venation.

[Hint:

PARALLEL VENATION	RETICULATE VENATION
Veins run parallel to each other from the petiole to the tip of the leaf.	The main vein runs through the center giving rise to several smaller veins.
Examples- Banana, Grass	Examples- Peepal, Mango

#### **IV. LONG ANSWER TYPE QUESTIONS (5M):**

1. Can the stem of a plant be compared with a street with two-way traffic? Give reason.

[Hint: Yes, the stem of a plant can be compared with a street with two-way traffic. It is because in the stem, water and minerals move in an upward direction and food moves in a downward direction. The stem transports water and minerals from the root to leaves and other parts of the plant (upward). The food prepared by the leaves travels through the stem to different parts of the plant and roots (downward).]

2. Boojho wanted to test the presence of starch in leaves. He performed the following steps.

(i) He took a leaf and boiled it in water.

(ii) He placed the leaf in a petri dish and poured some iodine over it. He did not get the expected result. Which step did he miss? Explain.

[Hint: After boiling the leaf in water, it has to be boiled in alcohol so that chlorophyll is removed and the green colour of the leaf comes out. Boojho did not boil the leaf in alcohol to remove the chlorophyll and therefore, he did not get the expected result (i.e. change in colour of the leaf).]

3. Do all flowers have the same parts and are they arranged in the same way?

[Hint: The flowers of different species of plants are different. The number of petals and sepals are different in different flowers. Some of the flowers have stamens and some flowers have only pistil, others have both. Sepals may be connected with petals in some cases; but in other cases, these may be separated. Thus, the properties of flowers are different.]

4. Observe the picture of an activity given in the picture carried out with leaves of plants and polythene bags.



Answer the following.

a) Which process is demonstrated in the activity?

**[Hint: The process of transpiration is being demonstrated in the given activity.]**

b) When will this activity show better results on a bright sunny day or a cloudy day?

**[Hint: The activity will show better results on a bright sunny day because the rate of transpiration increases in the presence of sunlight.]**

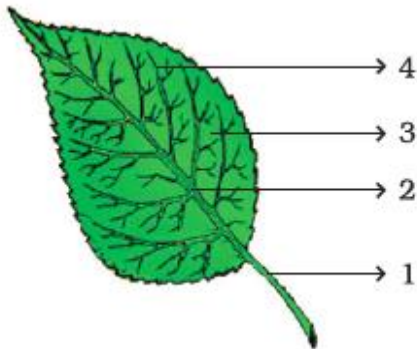
c) What will you observe in the polythene bag after a few hours of setting up the activity?

**[Hint: After a few hours, small drops of water will be seen inside the polythene bag.]**

d) Mention any one precaution you must take during this activity.

**[Hint: (i) The set-up must be airtight. (ii) The polythene bag must be dry. (iii) The twig must be fresh with 10-12 leaves.]**

5. Observe the figure and attempt the questions that follow it.



a) Label the parts 1, 2, 3 and 4 in the diagram.

**[Hint: Part 1 – Petiole, Part 2 – Midrib, Part 3 – Lamina, Part 4 – Veins]**

b) What type of venation does the leaf have?

**[Hint: The leaf has reticulated venation. In reticulate venation, veins form a network like appearance.]**

c) What type of venation is seen in grass leaves?

**[Hint: In grass leaves, parallel venation is seen.]**

## V. SOURCE-BASED/CASE STUDY-BASED QUESTIONS:

Read the following passage and answer the questions.

1. Take a white flower with a part of its stem. In a glass of water, add a few drops of red ink. Put the flower with its stem in the glass undisturbed for 12 hours. You will see that the white flower is not white anymore.

a) What will be the colour of the flower after 12 hours?

i. Half red and half blue

**ii. Red**

iii. Blue

iv. No change

b) What is the conclusion of the experiment?

**i. Stem conducts water.**

ii. Root carries water.

iii. Leaf produces food.

iv. Leaf stores food.

2. Which of the following substances are transported by the arrows shown in the given plant?

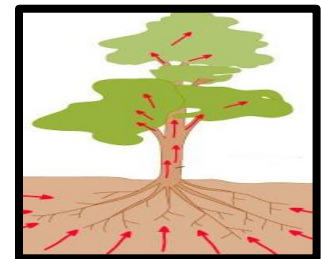
i) Water      ii) Carbon dioxide      iii) Mineral salts

a) (i)

b) (i) & (ii)

**c) (i) & (iii)**

d) (ii) & (iii)



3. Rima kept some soaked gram seeds for sprouting. But she forgot about this. On the fifth day, she suddenly remembered and opened the container having seeds. She found that small leaves along with white sprouts had grown out of the seed.

a) What does the white structure of sprout give rise to?

**[Hint: The white structure of the sprout gives rise to the root of the plant.]**

b) What kind of root is found in the gram plant?

**[Hint: Taproot.]**

Prepared by Ms. Surya J J

Checked by HoD Science