| | | |
|---|---|---|
| **INDIAN SCHOOL AL WADI AL KABIR** | | |
| **CLASS: VI** | **DEPARTMENT: SCIENCE**<br>**2025-26** | **DATE: 30-01-2026** |
| **TEXTBOOK Q & A** | **TOPIC: LIVING CREATURES: EXPLORING THEIR CHARACTERISTICS** | **NOTE: A4 FILE FORMAT** |
| **NAME OF THE STUDENT:** | **CLASS & SECTION:** | **ROLL NO.** |

1. List the similarities and differences in the life cycle of plants and animals.

**Ans. Similarities in Life Cycles of Plants and Animals.**

- **Both animals and plants have distinct life stages that start with the initial stage and are followed by several stages of development, and lastly death.**
- **Both have reproductive stages where they produce offspring.**
- **Both animals and plants have male and female organs/parts required for reproduction.**

**Differences in Life Cycles of Plants and Animals**

| Life Cycle of Plants | Life Cycle of Animals |
|---|---|
| A plant's life cycle starts with seed germination. | An animal's life cycle begins with a newborn or egg. |
| Plants grow throughout their life. | Animals stop growing after a certain stage of time. |
| Seeds or reproductive parts are produced throughout their life cycle. | Animals have a definite time for reproduction. |

| | |
|---|---|
| **Plants do not move from one place to another.** | **Animals move from one place to another.** |
| **Plants use flowers and vegetative parts for reproduction.** | **Animals have specialised organs for reproduction** |
| **Plants use stomata for respiration.** | **Animals have specialised organs like lungs or gills for respiration.** |

2. The table shows some data. Study the data and try to find out examples appropriate for the conditions given in the second and third columns. If you think that an example for any of the conditions given below is not possible, explain why.

Ans.

| Does it grow? | Does it respire? | Example | Remarks |
|---|---|---|---|
| No | No | **Book** | **Non-living thing, no growth or respiration.** |
| No | Yes | **Not possible** | **All living organisms grow and respire.** |
| Yes | No | **Sand dunes** | **Dunes get big according to wind, but do not respire as they are non-living thing which grows by the addition of material from outside.** |
| Yes | Yes | **Humans, Plants** | **Living things which can grow and respire as well.** |

3. You have learnt that different conditions are required for seed germination. How can we use this knowledge for the proper storage of grains and pulses?

**Ans. We learnt that water, air and suitable temperature are required for seed germination. So, we will store the grains and pulses in a cool and dry place, such as:**

- **Cold Storage**
- **Airtight Containers**

4. You have learnt that a tail is present in a tadpole, but it disappears as it grows into a frog. What is the advantage of having a tail in the tadpole stage?

**Ans. The tail in the tadpole stage helps it in:**

- **The tail helps the tadpole in swimming and changing direction in water.**
- **The tail also helps it find food and keep itself safe from predators.**
- **It also helps the tadpole in maintaining balance and stability while moving in water.**

5. Charan says that a wooden log is non-living as it cannot move. Charu counters it by saying that it is living because it is made of wood obtained from trees. Give your arguments in favor or against the two statements given by Charan and Charu.

**Ans. Against Charan: The wooden log was once part of a living tree, which was alive and exhibited characteristics of living beings.**

**Against Charu: Once the wood is separated from the tree, it cannot move, respire, grow or perform any other life processes, making it non-living.**

6. What are the similarities and distinguishing features in the life cycles of a mosquito and a frog?

**Ans. Similarities between the life cycle of the mosquito and the frog:**

- **The life cycle of both the frog and mosquito has four stages.**
- **Both begin life as eggs.**
- **Both have a larval stage (tadpole in frogs, larvae in mosquitoes) that is aquatic.**

**Differences between the life cycle of the mosquito and the frog:**

| Life Cycle of Mosquito | Life Cycle of a Frog |
|---|---|
| 1. The life cycle of a mosquito consists of egg, larva, pupa and adult. | 1. The life cycle of a frog consists of egg, tadpole, froglet and adult frog. |
| 2. The adult mosquito cannot live in water. | 2. The adult frog can live both on land and in water. |
| 3. The adult mosquito may survive for 10 to 15 days. | 3. The adult frog may survive for 14 weeks. |

7. A plant is provided with all the conditions suitable for its growth (Fig. 10.9). Draw what you expect to see in the shoot and the root of the plant after one week. Write down the reasons.

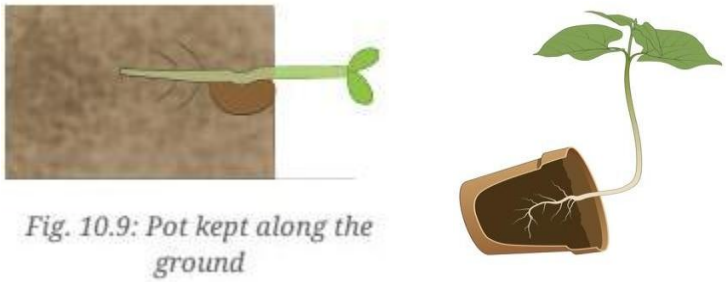

*Fig. 10.9: Pot kept along the ground*

**Ans. Expected observations:**

- **Shoot: Growth upwards, exhibit movement towards sunlight.**
- **Root: Growth downwards, exhibits movement towards the soil.**

**Reasons:**

- **Shoots grow towards light (phototropism) for photosynthesis.**
- **Roots grow downwards (gravitropism) for stability and nutrient absorption.**

8. Tara and Vijay set up the experiment shown in the picture (Fig. 10.10). What do you think they want to find out? How will they know if they are correct?

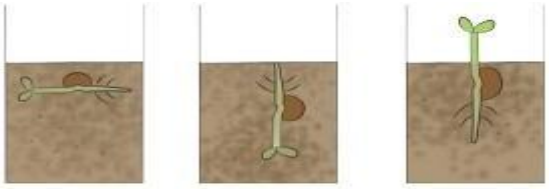

*Fig. 10.10: Experimental set-up*

**Ans. Tara and Vijay want to find out in which direction the root and shoot of a plant would grow and move if the plant is placed upside down or along the ground.**

**Observation: The shoot always grows upwards (towards the light), and the root always grows downwards (into the soil), regardless of how the seed is placed. This shows that plants have natural mechanisms that guide their growth direction.**

9. Design an experiment to check if temperature affects seed germination.

**Ans. Aim: To check if temperature has an effect on seed germination.**

**Materials: Identical pots, soil, seeds, thermometers, and different temperature-controlled environments (e.g., refrigerator, room temperature, heated environment).**

**Procedure:**

1. **Each pot is filled with the same type of soil.**
2. **A seed is planted in each pot.**
3. **Now, each pot is kept in a different environment with controlled temperatures (e.g., cold temperature, room temperature and warm temperature).**
   **Each pot is given water in equal quantity.**
4. **The number of seeds germinated in each environment is recorded daily for two weeks. Observation: Measure and compare the rate of germination and growth in different temperatures.**
   **Conclusion: Determine the optimal temperature for seed germination based on observations.**

| | |
|---|---|
| *Prepared by:*<br>*Ms Sithara Sharaf* | *Checked by:*<br>*HOD Science* |