Chapter

10 Living Creatures: Exploring their Characteristics

0677CH10



Avadhi and Aayush go for a morning walk with their parents. Avadhi notices some shells and tries to pick them up. Her mother advises her not to do so and explains that the shell could be home to a living snail and is actually a part of its body. Avadhi and Aayush wonder how the shell that is not even moving could have a living being inside! Later that day in school, Avadhi and Aayush share this incident with their friends. They approach the teacher to understand how a shell which is not even moving could be a body part of a living snail. The teacher initiates a discussion in the class on living and non-living.

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Activity 10.1: Let us record

We are surrounded by numerous things. Just look around in your classroom and you may find many examples—the pencil that you are holding, the book that you are reading or the pigeon near the window.

- List them in Table 10.1 and **identify** each of them as living or non-living on the basis of your understanding in column II.
- Write a reason for grouping them as living or non living in column III.

Table 10.1: Living beings and non-living things in our surroundings

(I) Name	(II) My guess (Living/ Non-living)	(III) Reason/ Remarks	(IV) Correct answer	(V) Reason/ Remarks for the correct answer
Pencil	Non-living			
Book				
Pigeon	Living			
Car				
Plant				
Any other				

10.1 What Sets the Living Apart from the Non-living?

Look at Table 10.1. Why do you think a pencil is non-living but a pigeon is living? What do you think are the differences between living beings and non-living things according to you? What similarities do the identified living beings share with each other?

You may have identified movement as one of the similarities among living beings. You have also seen cars moving on a road. Does it mean that a car is living? List the

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tasks that you can do but a car cannot. You are a wonderful example of a living being. Whenever you attempt to group things around you as living or non-living, you can compare them with yourself. Which characteristics help you in differentiating yourself from a car? For instance, a car does not grow. Does it mean it is non-living? Now, which characteristics have you used to classify a car as non-living? Continue your discussion in a similar way to identify the essential characteristics of living beings.

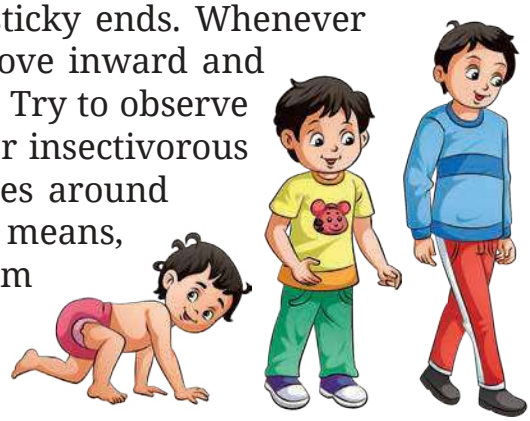
What are some common characteristics that make living beings very different from the non-living things? Let us learn about them.

Can we consider **movement** as one of the characteristics to differentiate between the living and the non-living? List five things around you that can move on their own. Do you think that all five things that you have listed can be considered as living just because they can move on their own? However, unlike animals, plants do not move from one place to another. Do you consider them as living?



Drosera

Even though plants do not move from one place to another, they do show certain types of movements. Opening of flowers is one of the examples of movement in plants. Another example of movement in plants is seen in insectivorous plants. Insectivorous plants are dependent on insects for their nutrition. Drosera is one of the examples of an insectivorous plant. Drosera is featured with saucer-shaped leaves having many hair-like projections of unequal length with sticky ends. Whenever an insect enters the saucer, hairs move inward and trap the insect with their sticky ends. Try to observe the mechanism of movement in other insectivorous plants. Climbers also wind themselves around any object placed close to them. That means, even though plants do not move from one place to another, they do show some movements.



Growth of a child

Compare yourself with the picture of your childhood. Can you

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wear the dress that you used to wear four years ago? No, because you have become larger in size. This is due to **growth** in your body. Plants and other living beings also grow. Can we consider growth as a characteristic of living beings?

Living beings need food (**nutrition**) for their growth and development. List five living beings that require food to grow.

Now, think of a process without which we cannot live. Count the number of breaths you take per minute after a normal walk, after a run, and after a few dance steps. Record the data and observe. Do you notice any difference in the number of breaths after each situation? Do you notice the process of breathing in other animals like dogs, cats, cows and buffaloes? Notice the movement of their abdomen while they are taking rest.

In the process of breathing, when we inhale, the air moves from outside to inside our body. When we breathe out, the air moves from inside our body to outside. Breathing is part of a process called **respiration**. Do plants also respire? There are tiny pores called stomata on the surface of leaves. These pores help plants in taking air in and out. Interact with senior class students in your school and request if they can demonstrate stomata using a microscope in your class. All living beings respire.

Have you noticed white patches forming on shirts around the armpits during summers? These patches are formed due to sweat. The sweat consists of water and salts removed by the body as waste products. Removal of waste products from the body is called **excretion**. Urine is also formed as a product of excretion in animals. Do you know that plants also excrete? You may notice plants excrete excess water and minerals in the form of small droplets on leaves. For example, grasses and roses. All living beings excrete.



Water droplets on grass

Let us look at another characteristic. What is your reaction if you unexpectedly step on a sharp object, such as a thorn,

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while walking without shoes, or you accidentally touch a hot cup of tea? Stepping on a thorn and touching a hot object are stimuli. Any thing or any event that prompts living beings to respond is called a **stimulus**. List three stimuli (plural of stimulus) and your body's instant **response** to them.



Touch-me-not (chhui-mui) plant

Do plants also respond to stimuli? Yes, plants also respond to stimuli. For example, touch-me-not (mimosa, *chhui-mui, lajjalu)* plants fold their leaves when we touch them. Have you also observed that certain plants fold their leaves after sunset? Specifically, the leaves of certain plants facing each other tend to come together. This can be observed in the sleeping leaves of *amla* (Indian gooseberry) tree. All living beings **respond to stimuli**. Find a few more plants in your neighbourhood which fold their leaves after sunset.

Why do the leaves of *chhui-mui* and *amla* plants respond in this way? Which stimulus could be responsible for their behaviour?

Have you seen young ones of cats, dogs or other animals? List young ones of five different animals. Have you seen young ones of any non-living things such as a pencil, a chair or an electric bulb?

All living beings reproduce. **Reproduction** is the process of producing new ones of one's own kind. Why is reproduction necessary? It is necessary for the continuity of life.

When a living being is not able to exhibit all of the above mentioned characteristics, despite the availability of all resources (like food, air and water) needed for being alive, it is said to be **dead**.

From the above discussion, we can understand that all **living** beings share some common characteristics. For example, all living beings show movement, they need

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food, and they grow. They also respire, reproduce, excrete, respond to stimuli, and eventually, die. Absence of any of these features indicates that they are **non-living** things.

Now that you know how to identify a living being, fill up the remaining two columns (IV and V) of Table 10.1 and complete the activity.

In which category would you place a seed—living or non-living? Why?

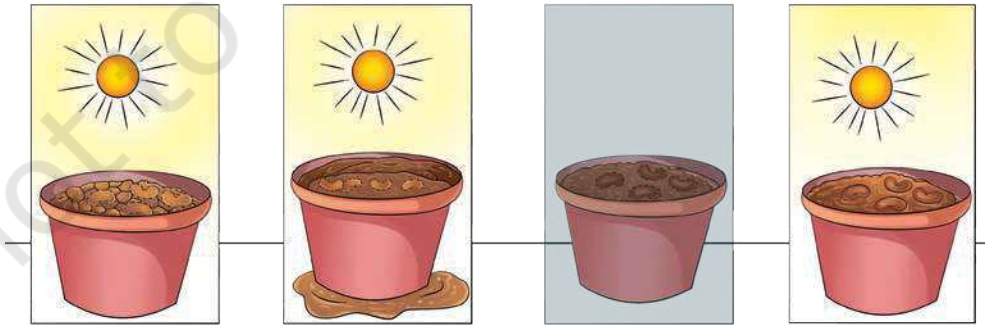
Let us **explore** how a seed germinates to observe some of these essential characteristics in plants.

10.2 Essential Conditions for Germination of a Seed

Have you observed a seed germinating? You might have wondered what conditions are required for **germination** of a seed. What conditions do you think are required for seed germination? How will you investigate whether these conditions have an effect on the germination of a seed?
Let us find out by performing Activity 10.2.

Activity 10.2: Let us experiment

- Take four identical pots filled with garden soil. Sow four bean seeds in each pot. Now, keep these pots in the following conditions for 15 days.
  - Pot A: Do not water the soil. Place this pot in direct sunlight.



(a) Pot A kept in direct sunlight, no water | *(b) Pot B kept in direct sunlight, excess water* | *(c) Pot C with moist soil, kept in the dark* | *(d) Pot D with moist soil, kept in direct sunlight*

Fig 10.1: Bean seeds exposed to different conditions

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- Pot B: Add excess water to the soil such that water is always present above the soil. Keep adding water on a regular basis if water reduces. Place this pot in direct sunlight.
- Pot C: Keep the soil in this pot slightly moist by adding a moderate amount of water on a regular basis. Place this pot in a dark location.
- Pot D: Maintain the soil in this pot slightly moist by adding a moderate amount of water on a regular basis. Place this pot in direct sunlight.

- Indicate the availability of air, sunlight and water for the seeds in each of these cases in Table 10.2.
- When a seed turns into a sprout, it is said to have germinated. Predict whether the seeds in each pot will germinate. Record your **predictions** for each pot kept under different conditions in Table 10.2.

Table 10.2: Effect of certain conditions on seed germination

Pot with bean seeds	Availability of			Seed germination		Possible reason for the observation
	Air	Sunlight	Water	Prediction	Observation	
A: In direct sunlight and without water			No			
B: In direct sunlight and excess water						
C: In complete dark and moist soil						
D: In direct sunlight and moist soil						

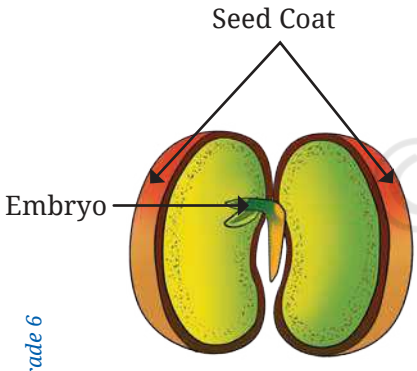
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- Regularly observe the pots for 7–10 days to check the status of germination of the seeds. Record your **observations** in Table 10.2.
- Compare your predictions with your observations.

Do you think sunlight is necessary for germination of seeds? Do the seeds in all the pots receive air, water and sunlight? Is there any pot in which air is not available to the seeds? If so, why is it not available? What happens to the seeds in the pot where water is provided in excess? Which seeds receive both air and water? Identify the pots where you can notice the germination of seeds.

Do your observations match with your predictions? Write possible reasons in favour of your observations in Table 10.2. Based on your observations, state the conditions which favour seed germination.

Which of the following are essential for seed germination– air, water and sunlight? Compare the available conditions in each pot. Germination of bean seeds requires the right amount of water and air. Why do seeds require these conditions for germination? Do you think that the absence of one or more of these conditions will affect seed germination?



Germinated bean seed

Let us understand how these conditions help in seed germination. The effects of the following conditions have been seen in Activity 10.2.

Water: Seeds require water for germination. Water enables the seeds to carry out the processes necessary for their growth. The outer covering of the seed is called seed coat. Water softens the seed coat and helps the tiny embryo inside it to develop into a plant.

Air and Soil: Seeds need air for germination. They use the air available in the spaces between soil particles. Moreover, spaces between the soil particles allow roots to grow easily.

Light and/or dark conditions: We have learnt that for the bean seeds, presence of light is not essential for their germination. In general, most seeds do not require light for germination. But after germination, sunlight is required for further growth of the seedling.

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Do you know?

Some seeds of flowering plants, like Coleus and Petunia, require light to germinate. Covering these seeds with soil inhibits their sprouting. Seeds of flowering plants, like Calendula and Zinnia, need darkness to germinate. These seeds should be covered with sufficient soil.

In the Chapter 'Mindful Eating: A Path to a Healthy Body', you have learnt that human beings need a balanced diet for good health and proper growth. Similarly, plants too need favourable conditions and nutrients for their proper growth and development. What other conditions do you think would affect seed germination?

In Activity 10.1, what are the characteristics of living beings which made you place plants in living beings? Do plants show growth in Activity 10.2? Are there any other characteristics of living beings that these plants show?

How would you now categorise a seed, as living or non-living?

Let us study another characteristic that can be seen clearly in plants—growth and movement.

10.3 Growth and Movement in Plants

How do plants respond to sunlight? Does sunlight affect the direction of growth of different parts of plants? In which direction would the root and shoot of a plant grow and move if the plant is placed inverted? How would you **design** an activity to find answers to these questions?

Activity 10.3: Let us design

- Take some bean or gram seeds and allow them to germinate on a moist cloth or a moist tissue paper.
- Let them germinate until each of them develop into a seedling having a small root and a small shoot.
- Now, take three glass beakers or tumblers, and label them as A, B and C.

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- Take three glass plates and attach a thick blotting paper to one side of each plate using a thick soft cotton thread.
- Fix one seedling on each plate using a thick soft cotton thread, as shown in Fig. 10.2, ensuring that the plant is not damaged.
- Now, place one glass plate upright with a seedling attached into each of the beaker A and beaker C, as shown in Fig. 10.2a and Fig. 10.2c.
- In beaker B, arrange the plate such that the shoot of a seedling is directed downwards and the root is directed upwards, as shown in Fig. 10.2b.

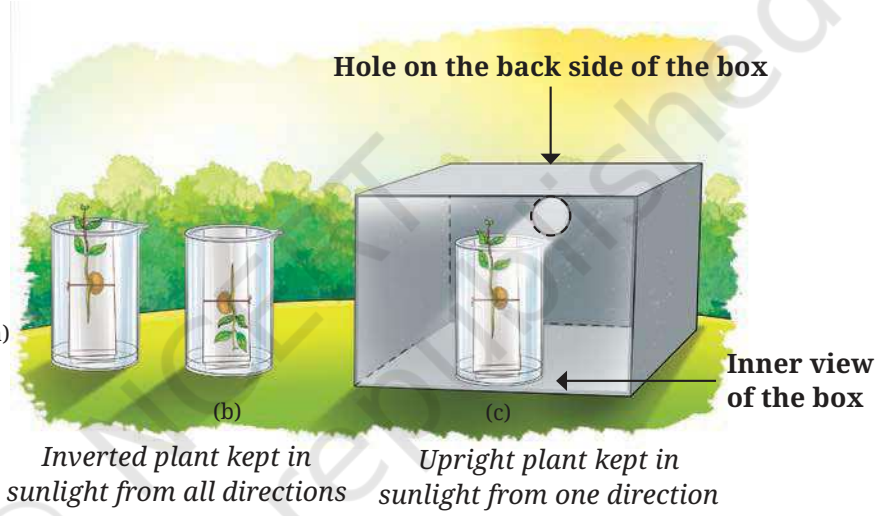


Fig. 10.2: Set-up showing plants kept in different conditions

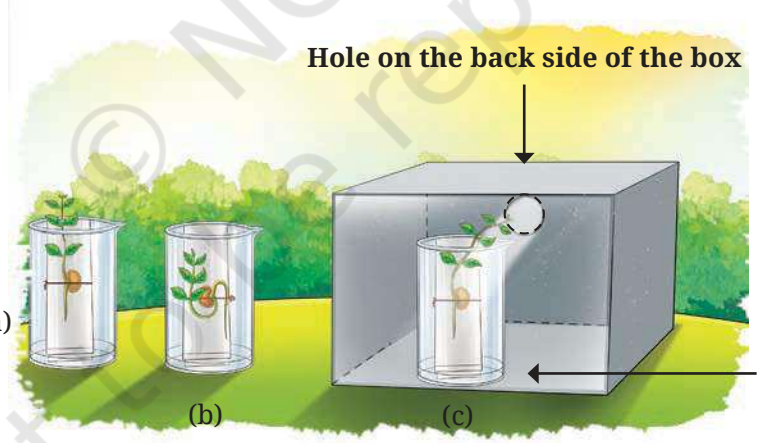
- Pour water into all the three beakers to ensure that the seedling in each beaker remains above the water level.
- In each case, let the bottom of the blotting paper get completely wet by soaking in the water. In this way, the seedling will get the moisture from the wet blotting paper.
- Place beaker A and beaker B in sunlight as shown in Fig. 10.2a and Fig. 10.2b.
- Position beaker C as shown in Fig. 10.2c. Place a cardboard box in such a way that the seedling gets light from one direction only through a small circular hole.
- Fill Table 10.3 with your predictions and observations.

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Table 10.3: Growth of root and shoot under different conditions

Beakers	Direction of sunlight	Direction of plant	Direction of growth of root and shoot		
			Shoot/ Root	Predictions	Observations
A	All directions	Upright	Shoot		
			Root		
B	All directions	Inverted	Shoot		
			Root		
C	Only from one direction	Upright	Shoot		
			Root		

What is the direction of growth of root and shoot in beakers A, B and C based on your observations? Do your predictions match your observations? What do you **conclude** from this activity?



Upright plant kept in sunlight from all directions

Inverted plant kept in sunlight from all directions

Upright plant kept in sunlight from one direction

Fig. 10.3: Direction of growth of root and shoot under different conditions

From the results of this **experiment** (Table 10.3 and Fig. 10.3), we note that—

1. When the plant is kept upright, the root grows downwards and the shoot grows upwards.

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2. When the plant is kept inverted, the root bends and grows downwards. Also, the shoot bends and grows upwards.
3. When the plant gets sunlight only from one direction, the shoot grows in the direction of light while the root continues to grow downwards.

After conducting Activity 10.3, we can conclude that shoots of plants grow upward and exhibit movement towards sunlight but roots of plants grow downwards.

Know a scientist



Jagadish Chandra Bose (1858–1937) was an Indian scientist who did some fascinating experiments with plants. He built a machine called a crescograph to record how plants respond to stimuli like light, heat, electricity and gravity. With this machine, he could measure how fast plants grow. He also showed that plants can sense and respond to stimuli.

10.4 Life Cycle of a Plant

We have learnt about conditions required for germination and how plants grow and exhibit movement. Let us now explore the changes a plant undergoes in its whole life.

Activity 10.4: Let us explore

- Plant a bean seed and provide suitable conditions for its growth. Observe regularly for three months.
- Record your observations in Table 10.4 as and when changes become visible.
- Note the date when any change is observed. Record answers for the following questions—
  - How long does it take for any change to occur? Make sketches of various changes that you observe in Table 10.4.
  - After how many days does the first flower appear?

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- After some parts of the flower have dried, can you see any further growth?
- Which structure do the remaining parts of flower develop into?
- Can you notice a pod or a fruit with seeds develop from a flower?
- What happens to the plant after the fruits containing seeds are formed?

Table 10.4: Changes observed during the growth of the plant

Date	Observations	Sketches
	Seeds are sown	

Go through the observations you recorded regarding the growth of the bean plant in Table 10.4. What changes do you observe after the fruits are formed? Does the plant become yellow and dry even when you continue watering it? Sow the seeds obtained from your bean plant. Watch how the seeds give rise to a new generation of bean plants. Compare the sketches that you have drawn in Table 10.4 with Fig. 10.4.

A seed grows into a young plant and matures to produce flowers and fruit. The fruit, in this case a pod, contains seeds which give rise to a new generation of bean plants. The entire process from a seed to a plant, and then, to the next generation of seeds is called the **life cycle** of a plant (Fig. 10.4). When a plant stops growing and all activities of life gradually come to an end, even after the availability of all the necessary conditions, the plant is considered dead.

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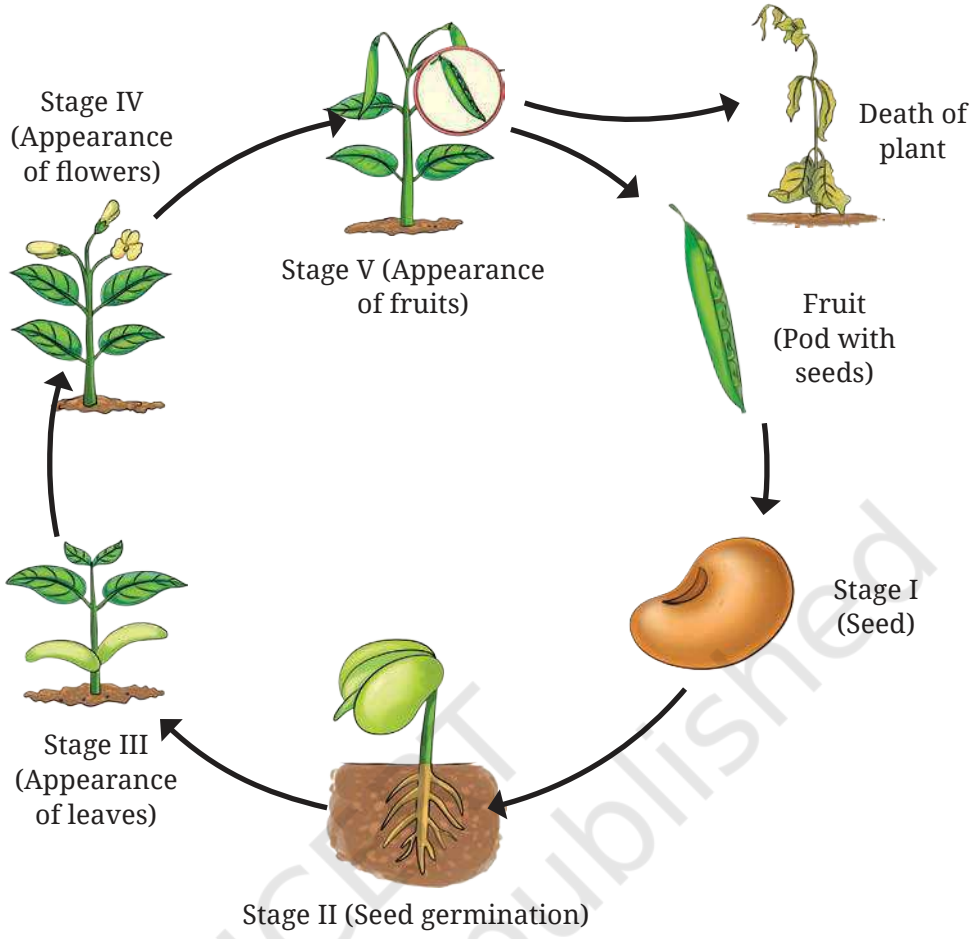


Fig. 10.4: Life cycle of a bean plant

10.5 Life Cycle of Animals

We have learnt about the life cycle of a plant. We have seen that a plant goes through many changes in its life cycle. Have you ever observed how animals grow over time? Draw sketches of their young ones and name them.

10.5.1 Life cycle of a mosquito

Mosquitoes buzzing around is a common experience for all of us. Female mosquitoes are bloodsucking insects that transmit several diseases like malaria, dengue and chikungunya. You might have learnt from newspapers, school noticeboards or awareness campaigns that mosquito breeding should be prevented. We are advised not to allow water to stagnate anywhere in our surroundings. Why is it so? Does stagnant water have any relation with mosquitoes laying eggs?

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Conduct a safety audit in your school, or at your home and surroundings to check for stagnant water (if available, carry a hand lens to observe any small creatures). Some common places where stagnant water is likely to gather are desert coolers, planted pots and any open container. You may find two different types of worm-like creatures (Fig. 10.5). They are **larva** and **pupa**, two distinct life stages during the development of mosquito. In case you observe larvae and pupae, report to your teacher. Discuss with the teacher and classmates about the necessary measures one can take to prevent breeding of mosquitoes. What differences do you observe in the shape of larvae and pupae?

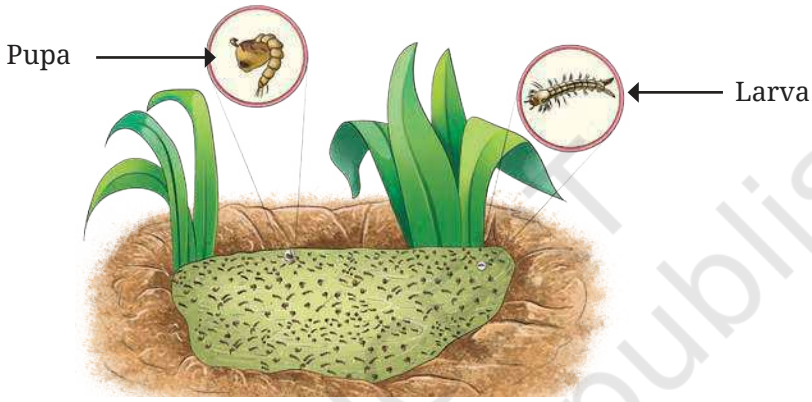


Fig. 10.5: Larvae and pupae of mosquitoes in a stagnant water body

Mosquito larvae and pupae observed in water bodies repeatedly come to the water surface. What can be the reason for this? Mosquito larvae and pupae live in water and require air to respire. They move to the surface of the water for air.

How can the life cycle of a mosquito be disrupted?

I have seen my mother spraying kerosene oil on stagnant water. Why does she do so?





Kerosene oil forms a thin layer over the water surface. This layer separates water from air, and does not allow larvae and pupae to inhale air. As a result, they die.

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Activity 10.5: Let us analyse

Let us solve an interesting puzzle.

How will you decide which stage (larva or pupa) comes immediately after the egg stage?

Suppose you are given a container with water from a puddle containing larvae and pupae. Design an activity to find out the correct sequence of these stages.



You can take help of the following activity designed by Avadhi to **create** your own activity—

Step 1: I have a water container with mosquito larvae and pupae.

Step 2: I will separate 4–5 larvae and pupae into two separate containers with the same water.

Step 3: I will observe them every day until I see them changing to the next stage.

Step 4: If the larvae change into pupae, it would mean that the larval stage comes before the pupal stage or vice-versa.

Step 5: I will keep watching both the containers to see in which one a mosquito appears first.

These observations will help us to learn the correct sequence of growth.

Now, suppose you are given a container filled with water from a puddle which contains larvae and pupae. Without separating them from the container, how would you design an activity to decide which stage, out of the two, gives way to the next?

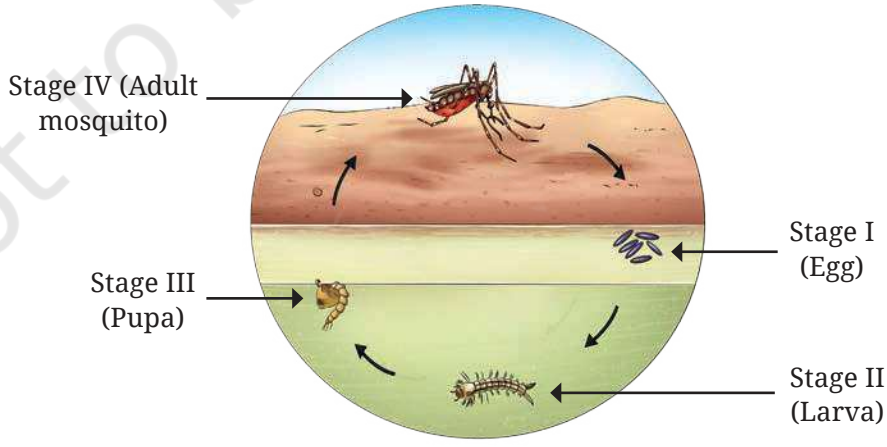


Fig. 10.6: Life cycle of a mosquito

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Let us learn more about these stages in the life cycle of a mosquito.

Mosquitoes pass through four stages in their life cycle—egg, larva, pupa and adult (Fig. 10.6).

The adult mosquito that emerges from the pupa rests briefly on the surface of water and then flies away. The adult mosquito may survive for 10 to 15 days.

We have seen that a mosquito begins its life as an egg (stage I), the egg develops into a larva (stage II), the larva grows into pupa (stage III), and the pupa transforms into an adult mosquito (stage IV). The adult female mosquito lays eggs directly on or near water, and the cycle continues.

Significant changes occur in the appearance, body shape and structure during the various stages in the life cycle of a mosquito. The shape of the egg is quite different from the larva; the larva appears very different from the pupa. The pupa appears very distinct from the adult mosquito. Is it easy to imagine that a mosquito emerges from a pupa?

Do you know?

The silk moth also passes through four life stages—egg, larva, pupa and adult. Eggs hatch into larvae, which then grow in size. Larvae secrete thread-like material which they wrap around themselves, before changing to pupae. These are the fibres that are used to make silk fabric. In India, the Khadi and Village Industries Commission (KVIC) has set up several centres for silk production.

10.5.2 Life cycle of a frog

Activity 10.6: Let us analyse

Avadhi and Aayush are dressed up in full sleeves shirts and full pants today. It has been raining intermittently for a week. They are going out with their classmates for an activity. After a brief walk led by their science teacher, they reach a shallow pond. It is surrounded by trees and tall grasses. The teacher cautions them to watch everything from a distance

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without causing any disturbance. You may also go to a small water body during the rainy season with a facilitator and explore it by taking due safety precautions.

You may notice a white jelly-like substance on the surface of water towards the edge of the pond (Fig. 10.7). This may also be attached to plants growing in or around the water. This jelly-like substance is actually a cluster of eggs of a frog and is known as **spawn**.

Observe the features of all the stages of a frog shown in Fig. 10.7. How will you decide the sequence of the given stages (A, B, C, D, E, F)? Some of the stages show distinct changes in their initial and final shapes. Record these changes in Table 10.5.

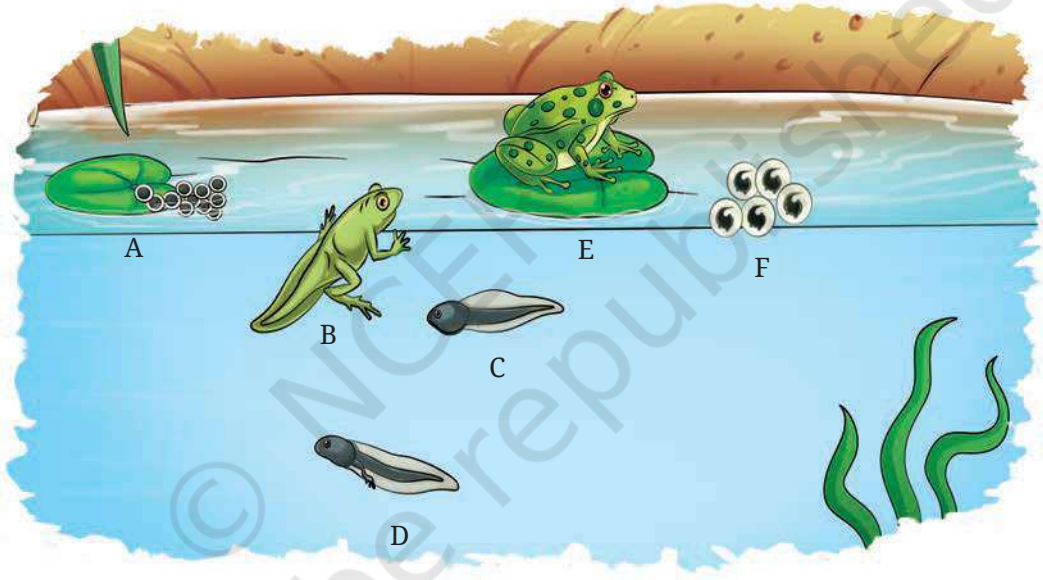


Fig 10.7: Different stages of a frog in a pond

Based on the observations listed in Table 10.5, draw the life cycle of a frog. Compare the figure drawn by you with Fig. 10.8.

Table 10.5: Changes in different life stages of a frog

A	B	C	D	E	F
			It is similar to 'C' but it has two legs.		

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Some of the stages have been clubbed together, for example, stages A and F in Fig. 10.7 have been kept under stage I. You will find four stages in the life cycle of a frog—the egg stage, which progresses to the embryo stage; the **tadpole** stage, consisting of an early stage with a tail and no legs, and a late stage with hind legs; the **froglet** stage, and the adult frog stage (Fig. 10.8).

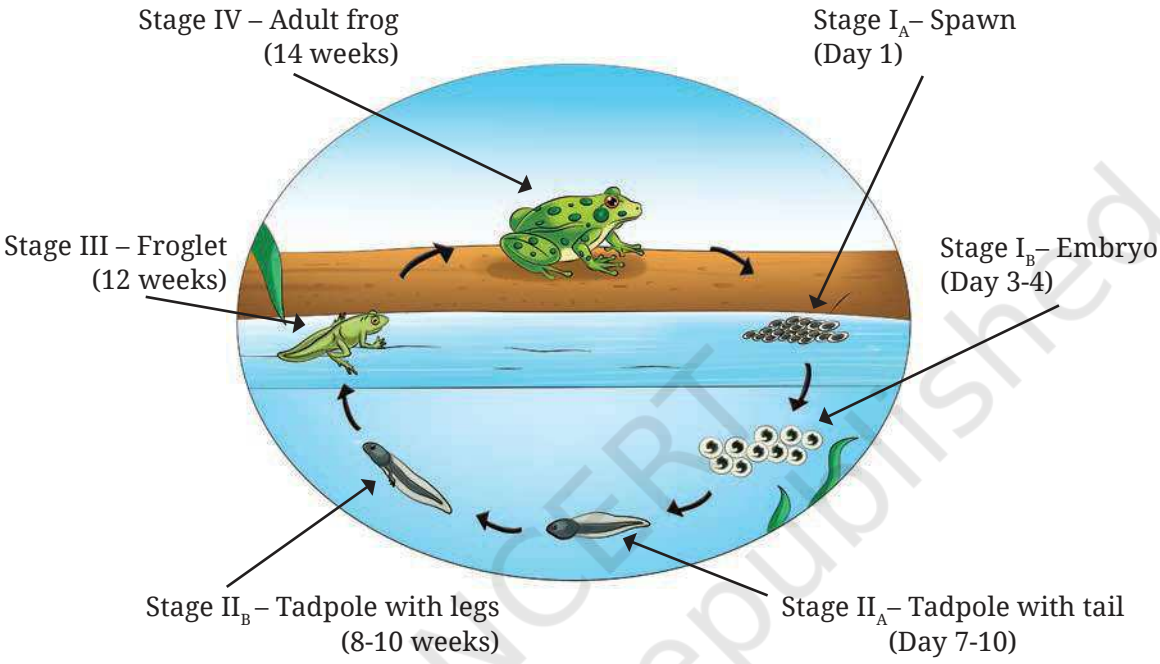


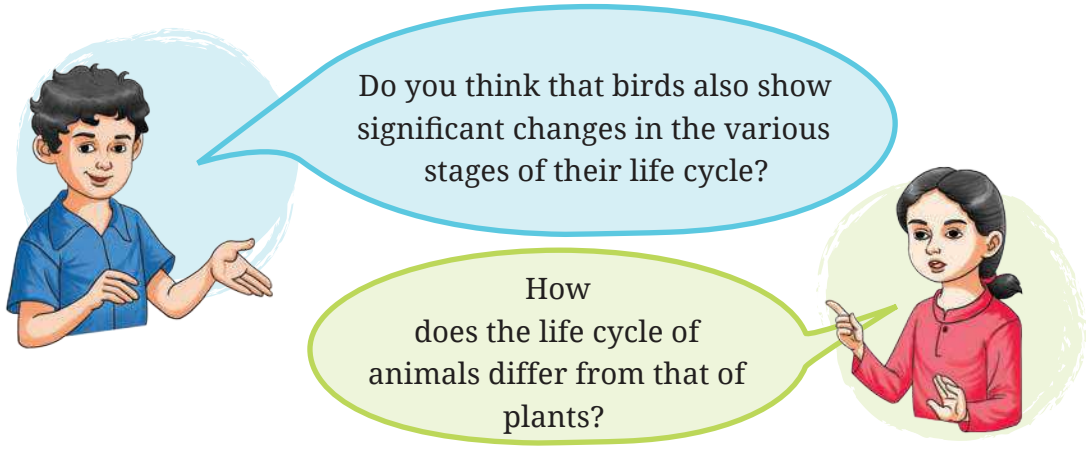
Fig. 10.8: Life cycle of a frog

Discuss in the class along the following points:

- How are these eggs of a frog different from the other eggs that you may have seen?
- Which stage has the shortest duration?
- Is there a change in the habitat during the various stages in the life cycle of a frog?
- How do the special features support that stage?

Observe Fig. 10.8. You will see that tadpoles develop legs but still have tails. Tails help them swim in water. Tadpoles grow gradually and start looking like little frogs called froglets. They still live in water but begin to spend some time on land. They continue to grow and lose their tails completely. Their legs become strong to help them jump and land. They become fully developed adult frogs who live both in water and on land.

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Plants and animals are a part of the living world. They go through various changes during the course of their lives. We have learnt that a tiny plant grows and develops into a big tree. We have also learnt how animals grow and change from young ones to adults. This journey varies for each animal, making it unique and special. We have seen pupae change into insects, and tadpoles change into frogs. Such changes are important for plants and animals to survive and to maintain continuity of their kind. We should also take care of them and their homes. By nurturing and preserving their homes, we contribute to this flourishing living world.

Keywords

Breathing
Death
Excretion
Froglet
Germination
Growth
Larva
Life cycle
Living
Movement
Non-living
Nutrition
Pupa
Reproduction
Respiration
Response
Stimulus
Tadpole
Conclude
Create
Design
Experiment
Explore
Identify
Observation
Prediction

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Summary

Key Points

- The objects around us can be categorised into two types living and non-living.
- The essential features of living beings are that they move, eat, grow, breathe, excrete, respond to stimuli, reproduce and die. Absence of any of these features indicates that they are not living beings.
- Each living being goes through several stages during its life.
- Germination of seeds depends upon the availability of water, air and suitable light and/or dark conditions.
- During germination of seeds, roots generally grow downwards, while shoots grow upwards.
- A plant's life cycle starts with seed germination, followed by several stages of its growth and development. These include flowering and seed production. Seeds produced during their life cycle would germinate into new plants and the cycle continues.
- The life cycle of an animal as a result of reproduction, begin with a newborn that undergoes various stages of growth and development followed by an adult stage and finally death. The process of reproduction maintains the continuity of its kind.
- Mosquitoes pass through the stages of egg, larva, pupa and adult. The life stages of a frog include eggs, tadpoles, froglets and adults.
- In some living beings, such as mosquitoes and frogs, significant changes occur during the various stages of their life cycles. These changes can be seen in body shape, structure and sometimes even in the habitat.

Let us enhance our learning



1. List the similarities and differences in life cycles of plants and animals.
2. The table on the next page 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

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an example for any of the conditions given below is not possible, explain why.

S. no.	Does it grow?	Does it respire?	Example	Remarks
1.	No	No		
2.	No	Yes		
3.	Yes	No		
4.	Yes	Yes		

3. You have learnt that different conditions are required for seed germination. How can we use this knowledge for proper storage of grains and pulses?
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?
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 favour or against the two statements given by Charan and Charu.
6. What are the similarities and distinguishing features in the life cycles of a mosquito and a frog?
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.

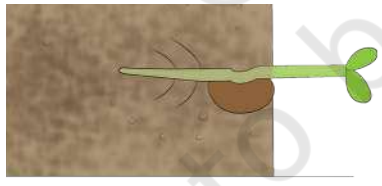


Fig. 10.9: Pot kept along the ground

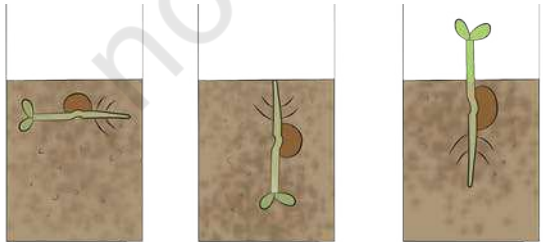


Fig. 10.10: Experimental set-up

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?
9. Design an experiment to check if temperature has an effect on seed germination.

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Learning further

- Make a field trip to a local garden. Interact with a gardener to learn about various conditions and the time required for the growth of various plants.
- Can we grow plants without germinating their seeds? Explore and cite some examples.
- Observe the life cycle of five plants grown at home, school, or in a nearby garden. Create a picture book containing pictures of various stages of their growth. Write the name of each plant and the duration of each of its stage.
- Try to observe some of the stages in the life cycle of a butterfly or a moth. Are these stages similar to the stages in the life cycle of a mosquito?
- In your opinion, would the environment affect the life cycles of insects? Explore and list the factors that affect the life cycles of insects.

Let us create

Add more lines to the incomplete poem given below. Include information on the different stages in development of a frog. You may also draw and paint each stage as it appears in your poem.

In shaded and grassy bogs,
There lived a group of frogs.
They happily sang from dusk to dawn,
In double bass going on and on.
One day sitting beside a reed,
Female frogs think it's time to breed .....
.....

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Notes

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