Chapter 10
Living Creatures Exploring their Characteristics
Answer Key

Q.1 Write the summary of the chapter in the flow chart below, using the hints givebe-low:

1.	Essential conditions	2.	Tropisms	3.	Life cycles	4.	Plants and animals' Growth	5.	Unity in Diversity

Q2. Multiple Choice Questions

1. b) They can grow.
2. b) Air, water and warmth
3. c) Opening of flowers
4. c) Excretion
5. b) Anything that prompts living beings to respond

Q3. Fill in the Blanks

1. All living things need **food** to grow and stay strong.
2. **Excretion** means removing dirty or waste stuff from the body.
3. Plants move by **turning** towards the sunlight.
4. **Water** is needed to help seeds grow.
5. A frog's life cycle goes through eggs, **tadpole** , froglet, and adult.

Q4. True or False

1. All living things can walk or move around. **False**
2. Plants don't need air to start growing. **False**
3. Animals get rid of waste using different body parts. **True**
4. Living things can have babies to continue their kind. **True**
5. A mosquito's life has only three steps. **False**

Q5. Assertion and Reason Questions

Choose the correct options

1. **Assertion (A):** Tadpoles have tails to help them swim in water.

Reason (R): Frogs are born on land and do not need to swim during early stages.

Answer: (A) is true, R is false.
Explanation: Tadpoles do have tails for swimming, since they live in water. The reason is incorrect because frogs are not born on land—their eggs are laid in water, and the early stages (tadpoles) are aquatic.

2. **Assertion (A):** Water is necessary for the germination of seeds.
Reason (R): Water helps soften the seed coat and activates the baby plant inside.

Answer: Both A and R are true, and R correctly explains A.
Explanation: Water plays a vital role in seed germination. It softens the seed coat, allowing the embryo inside to grow, making the reason a correct explanation.

Q6. Match the Columns

1.

Column A	Column B
1. Tadpole breathe in	c) Respiration
2. Plant that respond to touch for	e) Touch-me-not plant
3. Seeds need air for	d) Oxygen
4. Frog's swimming organ in early life	b) Tail
5. Plants breathe through	a) Stomata

Q7. Very Short Answer Questions

1. **What is the difference between living things and non-living things?**
Living things can grow, move, breathe, reproduce, and need food. Non-living things cannot do these things.

2. **Can plants move from one place to another?**
No, plants stay in one place, but they do show movement by moving their leaves or flowers.

3. **What does it mean that living things grow?**
Growing means increasing in size and developing over time.

4. **Why do living things need food?**
Food provides energy for living things to play, grow, and stay healthy.

5. **What is the process of taking air in and out of our bodies called?**
Breathing is taking air (oxygen) in and carbon dioxide out.

Q8. Short Answer Questions

1. **What are the different changes that occur during the life cycle of a mosquito?**
Various changes occur in the appearance, body shape, and structure during the stages of a mosquito life cycle, which include egg, larva, pupa, and adult.

2. **How is breathing in a tadpole different for that in an adult frog?**
Tadpoles grow, develop legs, and their tails gradually shorten. They continue to grow, lose their tails completely, and develop strong legs to become fully developed adult frogs.

3. **Why are the changes in the life cycles of plants and animals important?**

   These changes are important for plants and animals to adapt to their surroundings and to maintain the continuity of their kind.

4. **On the basis of which characteristics will you distinguish living beings from non-living things?**

   Living beings show movement, need food to grow, respire, reproduce, excrete, respond to stimuli, and eventually die. Non-living things do not exhibit all these characteristics.

5. **Describe how plants show movement despite not moving from one place to another.**

   Plants do not move from one place to another. However, they do show certain types of movements, such as shoots bending towards sunlight (phototropism), roots growing downwards (geotropism), and the opening and closing of flowers. Some plants also show rapid movements in response to touch, like the Venus flytrap or the Touch-me-not plant.

Q.9 Long Answer Questions

1. **Describe the essential characteristics that define living beings.**

   The essential characteristics that define living beings include:

   a. Movement: Living things can move on their own, even if it's just growth towards a stimu lus (like plants moving towards sunlight).

   b. Growth: All living things increase in size and develop over time as cells divide and multi ply.

   c. Respiration: Living things breathe, taking in air and releasing it, converting food into energy.

   d. Excretion (Waste Removal): Living things get rid of waste products from their bodies.

   e. Response to Stimuli: Living things react to changes in their surroundings.

   f. Reproduction: Living things produce their own kind, which is vital for the continuation of life.

   g. Need for Food: All living organisms require food for growth and development.

   h. Death: All living things grow and eventually die.

2. **Explain the life cycle of a frog, detailing the key transformations that occur during its development.**

   The life cycle of a frog involves several key transformations:

   a. Egg: A frog's life begins as fertilized eggs, which are laid in water and often appear as jelly-like balls.

   b. Tadpole: When an egg hatches, a tadpole emerges. Tadpoles are aquatic, have a tail for swimming, and breathe using gills.

   c. Tadpole with legs: The tadpole begins to grow legs, and its tail starts to shorten. Lungs also develop, allowing it to breathe air and enabling it to live both in water and on land.

d. Froglet: At this stage, it looks more like a frog but still retains a remnant of its tail.

e. Adult Frog: The tail completely disappears, and it becomes a fully grown frog, capable of living both on land and in water (amphibious).

Q10. Case Study Based Questions

1. Ria planted two bean seeds. She kept one pot near a sunny window and watered it daily. The other pot was kept in a dark corner with no water. After a week, the seed near the window grew into a small plant. The other seed didn't grow at all.

   (i). What helped the first seed grow into a plant?
   Sunlight, water, and fresh air.

   (ii). Why didn't the second seed grow?
   It did not get water or sunlight.

   (iii). What do seeds need to germinate?
   Water, air, and the right temperature.

   (iv). Can seeds grow in total darkness and without water?
   No, they need proper conditions.

2. Aryan saw jelly-like balls floating on the pond water during his morning walk. He asked his mom what they were. She said they were frog eggs. A few days later, he saw tiny creatures with tails swimming in the pond.

   (i). What were the jelly-like balls?
   Frog eggs, also called spawn.

   (ii). What were the tiny creatures with tails?
   Tadpoles, the baby stage of frogs.

   (iii). How do tadpoles move in water?
   Using their tails.

   (iv). What do tadpoles turn into later?
   They grow into froglets and then become adult frogs.

Q11. Spot the Differences – Vertebrates vs Invertebrates

Instructions: Observe the diagram and answer the questions.

1. **Circle the body part that shows the backbone in the vertebrate.**
   Vertebrate: Animals with backbone Fish.

2. **What structural difference do you notice in the invertebrate?**
   Invertebrate: No backbone, soft body or exoskeleton.

3. **Name one more example of each type from your surroundings.**
   Examples: Vertebrate → Fish Dag; Invertebrate → Earthworm.

Q12. Animal Adaptation

Instructions: Study the diagram showing three animals in different habitats.

1. **Label one adaptation for each animal**
   Polar bear: Thick fur → warmth in cold.

2. **How does each adaptation help the animal survive?**
   Fish: moist skin → helps in breathing.
3. **Draw your own "imaginary creature" adapted to a volcano habitat.**
   Imaginary creature: Adapted to volcano habitat → heat resistant skin, ability to withstand lava gases.

Q13.Plant Life Comparison

Instructions: Observe the diagram comparing two plants.

1. **Label the special features.**
   Special features: Cactus has spines (reduce water loss), Lotus has broad leaves (float on water).
2. **Match each feature to its function.**
   Functions: Spines protect and conserve water; broad leaves help photosynthesis.
3. **What would happen if a cactus was planted in a pond?**
   If cactus planted in pond → it would rot and die due to excess water.

Q14.Curiosity Corner – Mystery Creature

Instructions: Read the clues and sketch your guess.

Clues point to Frog.

1. **Draw the creature based on clues.**
2. **Name it and list 3 characteristics it shares with other living beings.**

- Characteristics:
  1. Breathes through moist skin.
  2. Lays eggs in water.
  3. Lives both on land and in water.

Q.15 Write the meanings of the following words:

1. **Germination:** The process by which a seed begins to grow into a plant.
2. **Stimuli:** Changes in the environment that cause a reaction in a living thing.
3. **Respiration:** The process of breathing and using oxygen to produce energy.
4. **Reproduction:** The process by which living things produce young ones of their own kind.
5. **Life Cycle:** The series of changes an organism goes through from birth to death.
6. **Nutrition:** The process of taking in food and using it for growth and health.
7. **Excretion:** The removal of waste products from the body.
8. **Growth:** The increase in size or development of an organism.
9. **Movement:** The ability of an organism to change position or move parts of its body.
10. **Environment:** The surroundings or conditions in which a living thing exists.

Q16.Fill in the table by adding the appropriate prefix or suffix to create new words:

(2) Reproduce

(3) Microorganism

(4) Disconnect

(5) Development

(6) Reactive

Q17. Make a life cycle of any one out of Frog, Butterfly, or Sunflower.

Example: Frog Life Cycle

- Photo/Drawing: (Students draw stages)
- Stages: Egg → Tadpole → Froglet → Adult Frog