

**Subject:** Science

**Living and Non living**

**Date:**

**Book Exercise**

**A. Choose the most appropriate answer**

1. The wood of which a wooden chair is made

a) is living.

b) is non-living.

**(c) was once living but is now dead.**

(d) was once dead but is now living.

2. Which of these do all living organisms have?

a) bones   b) muscles   c) **cells**   d) skin

3. In Plants, respiration occurs

(a) during the day only.

(b) during the night only.

**(c) during day and night.**

(d) only when photosynthesis does not take place.

4. Which of these is not a product of excretion?

(a) sweat   b) urine   c) **energy**   d) carbon dioxide

5. During which process is energy released?

**a) respiration**   b) feeding   c) digestion   d) growth

6. The size of an organism is primarily dependent on

**(a) number of cells in its body.**

(b) size of cells in its body.

(c) space between cells in its body.

(d) amount of water in its body.

7. A cockroach breathes through

a) gills.   b) lungs.   c) nostrils.   **d) holes in its body.**

8. If a potted plant is kept near a window from where light is coming in, the tip of the plant

**a) grows towards the window.**

b) grows away from the window.

c) grows straight up.

d) does not grow.

### B. Very Short answer questions.

1. All living things move and all non-living things do not move. **False**.

2. Which of these grow throughout their life—plants or animals?

**ANS:** Animals generally stop growing after reaching a certain age or size. However, plants continue to grow throughout their life.

3. What is the process of removal of waste products from the body called?

**ANS:** The process of removal of waste products from the body is known as excretion.

4. When oxygen and food combine in the bodies of living organisms they produce **energy**.

5. Name a one-celled living organism.

**ANS:** Amoeba

6. If one living organism can reproduce with another, they belong to the same **species**.

7. Members of different species can reproduce among themselves. **False**

### C. Short answer questions.

1. Why do animals move around?

**ANS:** Animals move around in search of food, shelter and to escape from predators or enemies.

2. Give an example of movement in plants.

**ANS:** Example of movement in plants: A sunflower turns its face towards the sun due to phototropism.

3. What are cells? Are all living things made up of cells?

**ANS:** Cells are the fundamental units of all living organisms. Yes, all living things are made up of cells. In addition, some living organisms are just single celled (unicellular organisms).

4. There is some growth in unicellular organisms. How do they grow?

**ANS:** Unicellular organisms show some growth by an increase in the size of the single cell that constitutes the organism.

5. Give an example of a stimulus and a response.

**ANS:** Example of a stimulus and a response: If you accidentally touch a hot object, you automatically withdraw your hand. The heat of the hot object is the stimulus and you, withdrawing your hand is the response to the stimulus.

6. How are autotrophs different from heterotrophs?

**ANS:**

Autotrophs	Heterotrophs
They prepare their own food by the process of photosynthesis.	They depend upon other organisms for food.
Example: Green plants	Example: Animals

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7. All living things take in oxygen. What function does oxygen perform in the body?

**ANS:** The oxygen taken in by living things during breathing is combined with the food that is digested by them to produce energy.

8. Name three waste products that we excrete.

**ANS:** The three waste products that we excrete are: Sweat, Urine, Exhaled air.

**D. Long answer questions**

1. Explain with an example what is meant by 'living things respond to stimuli'.

**ANS:** Living things respond to changes in their environment. For example, if you touch the leaves of the Mimosa (touch-me-not) plant, the leaves droop. In this case, the plant is responding to the stimulus of touch by drooping its leaves.

2. How do living things grow? Some non-living things also grow. How is their growth different from the growth of living things?

**ANS:** Living things grow by the division of cells. Unicellular organisms such as Amoebae grow by an increase in the size of the single cell that makes up the organism.

Non-living things grow by the addition of material from outside. For example, a pile of sand will grow if more sand is added to it.

3. List three ways in which living things reproduce, giving one example of each.

**ANS:** Three ways in which living things reproduce are:

1. Some living things produce buds which grow into new organisms. For example, potatoes produce buds, known as eyes which grow into new potato plants.
2. Mammals such as humans give birth directly to young ones.
3. Some snakes, birds and crocodiles lay eggs and the young ones hatch from the egg.

4. List four different ways in which organisms carry out exchange of gases for respiration, with one example of each.

**ANS:** All living organisms exchange gases with the environment. The means are as follows:

1. Fishes respire using their gills.
2. Earthworms use their skin for respiration.
3. Insects such as cockroaches breathe through several tracheal tubes in their bodies.
4. Humans and many other animals such as cows, goats etc. respire through external nostrils, which supplies air to their lungs.

5.Explain phototropism and geotropism in plants. Are there any similar examples in the animal world also?

**ANS:** If a plant is potted near a window, its stem will bend toward the light as it grows. The growth of a plant towards light is known as phototropism. In the same way, the roots of plants grow towards the earth and the stem grows in the opposite direction. This is an example of geotropism.

In animals, cockroaches and earthworms show negative phototropism. They move away from light. In the same way, Paramecium swims in the opposite direction of the Earth's gravity and shows negative geotropism.

6.Explain giving examples what you mean by a 'species'.

**ANS:** Each type of living organism has many individuals which are broadly similar to each other. Individuals may differ slightly but their behaviour, habits or appearance are quite similar. Such a group constitutes a species. Members of a species inhabit the same environment, eat the same kind of food and reproduce among themselves.

For example, all pigs are a species, humans form a species, oak trees are a species of trees etc.

- Complete the hot question
- Make a collage on living and non living things in and around you