



VIDYA BHAWAN, BALIKA VIDYAPITH
SHAKTI UTTAN ASHRAM, LAKHISARAI - 811311

STUDY NOTES

Teacher's Name: Anjani Kaushik

CLASS- VI (All Section)

DATE: 20-05-2020

Science

CHAPTER: 9 Organisms and their surroundings

Today's Topic: Living things respire

Most of the animals also breathe like human beings. If you observe a dog or a cow sleeping in your neighbourhood, you will notice the movement of its abdomen. This movement indicates that it is breathing.

Respiration is most essential for all living organisms. Through respiration, the body actually obtains energy from the food taken.

Many organisms have different mechanisms for the process of respiration. For example, fishes breathe through gills. The gills absorb oxygen from the air dissolved in water.

The earthworms breathe through their skin. A tadpole breathes through its skin while a grown up frog breathes through lungs.

Do exchange of gases take place in plants. Yes! Plants also respire. Exchange of gases in plants takes place through their leaves.

Leaves have tiny pores called **stomata**. It is through these pores, oxygen is taken in from the air and carbon-dioxide is given out.

The process of **photosynthesis** i.e., preparation of food by plants takes place in the presence of sunlight and carbon dioxide. Plants produce their food only during the day time. However, respiration in plants takes place day and night. The amount of oxygen taken in for respiration, by the plants, is much less than the oxygen released during the process of photosynthesis.

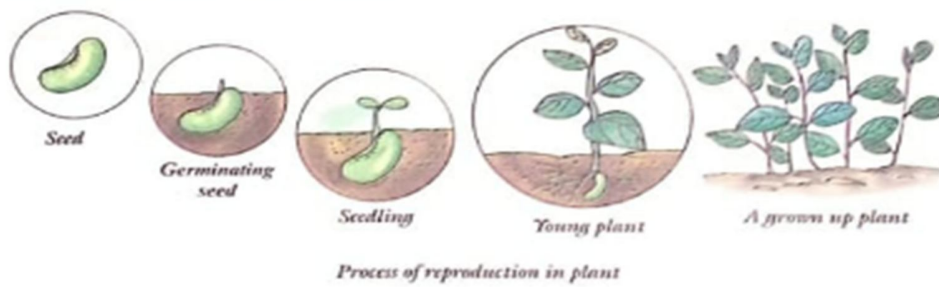
Living things reproduce:

All animals and human beings reproduce their own kind. However, in different animals the mode of reproduction may be different. Birds build nests and hatch eggs. Birds build nests and hatch eggs.

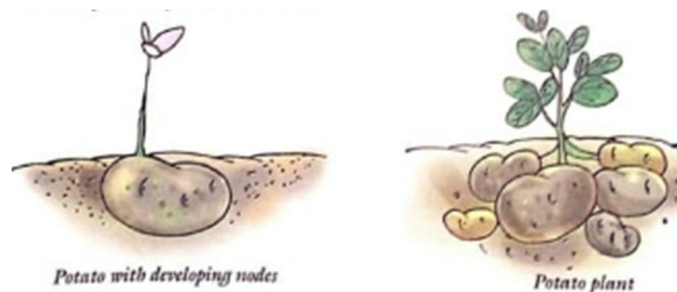
Young birds come out of the hatched eggs. Some animals produce their young ones through eggs while some animals and human beings give birth to the young ones.



Do plants also reproduce? Yes! plants also reproduce. However, plants also differ in their mode of reproduction. Many plants reproduce by mean, of seeds. Plants produce seeds, which germinate and grow into new plants.



Some plants grow from their body parts rather than the seeds. For example, a new potato plant grows from a part of a potato with a bud.



Many types of plants grow from different methods such as cutting, grafting, etc. Let us perform the following activity to show that plants reproduce by the process of cutting.

Activity 1:

From a garden take a cutting from a rose or a mehndi plant. Fix this plant in the soil. Water the plant regularly: Do you observe any change after a few days? Well your answer can be both positive or negative.

If the soil is suitable, the plant can grow by this method. However, if the soil is not suitable the plant may not grow. Thus, it is necessary to consult a gardener when performing the above activity: Hence, all living beings, by the process of reproduction,

produce their own kind. The process may be different in different living beings.

Living things excrete:

All living things eat food. However, only a part of this food is utilised by the body and the remaining is removed by the body as wastes. Some wastes are also produced in our body by other life processes. This process of getting rid of wastes by living organisms is called **excretion**. Plants also excrete. However, the mechanism of waste production in plants is different. Some plants produce harmful or poisonous materials. Some plants store their waste within their body in such a way that they do not harm the whole plant. Waste products as secretions are also released by the plants. Thus, all living things excrete.

Living things show movement:

All animals move from one place to another to find food or to reproduce. What about plants? Plants are anchored in soil and thus, they do not move from one place to another. However, the water and minerals absorbed by the roots of plants move up to the whole body and the food synthesised by the leaves of the plants moves from one part of the body to another. Some plants show movement by opening or closing of flowers. The leaves of the plants move towards light and also respond to music.

A bus, a car, a truck, a piece of paper, clouds, etc., also move. However, the movement of these things are different from the living things.

Living things respond to stimuli:

While walking barefoot, if you suddenly step on a sharp object like a thorn or a piece of glass, how do you respond. What happens when you touch a hot object?

How do you feel when you smell your favourite food? What happens when you come out of a cinema hall or a dark room? In the first two situations, you will respond quickly to the thorn and hot object. In the third situation, your mouth will start watering and in the fourth situation your eyes shut themselves automatically for a moment and then adjust to the bright surroundings. All the above examples are of changes in our surroundings. These changes in our surroundings, which make us respond to them, are called stimuli.

Animals also respond to stimuli. When food is served to your pet dog, he suddenly becomes active on seeing the food. When you come close to a bird, it flies away. Some animals like the cockroach runs to its hiding place when the kitchen light is switched on at night. A sleeping dog will open its eyes when someone passes near it.

HOMEWORK (Based on Previous Study Notes)

Now answer the following questions:-

- 1.** Do non-living things respire?
- 2.** Do non-living beings also reproduce?
- 3.** Do non-living things also excrete?
- 4.** Do non-living things move?
- 5.** Give two more examples of responses of animals to stimuli.