Life Processes | Class 10 Biology

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GOOD MORNING CHILDREN

AT THE VERY OUTSET I JUST WANT TO GET ASSURED OF THAT YOU ALL RARE STRICTLY FOLLOWING HOME QUARINTAINE.

IN THIS PERIOD OF CRISIS ,WE HAVE TO WORK HAND IN HAND TO FIGHT AS A FIGHTER AGAINST THIS DREADLY VIRUS.

AT THE SAME TIME WE HAVE TO CONTINUE OUR TEACHING-LEARNING PROCESS.

TO BEGIN WITH IT AFTER A GAP OF NEARLY 10 TO 15 DAYS FIRST WE WILL DEAL WITH THE SYLLABUS OF BIOLOGY

THE CHAPTERS ARE-

1.LIFE PROCESSES

2.CONTROL AND COORDINATION

3.HOW DO ORGANISMS REPRODUCE

4.HEREDITY AND EVOLUTION

5.OUR ENVIRONMENT

6. MANAGEMENT OF NATURAL RESOURCES

IN BIOLOGY ALL TOGETHER WE HAVE 6 CHAPTERS

WE WILL START WITH THE FIRST CHAPTER- LIFE PROCESSES

BEFORE I START WITH THE CHAPTER I WILL ASK YOU TO SOLVE THIS WORK SHEET WHICH IS BASED ON YOUR PREVIOUS KNOWLEDGE

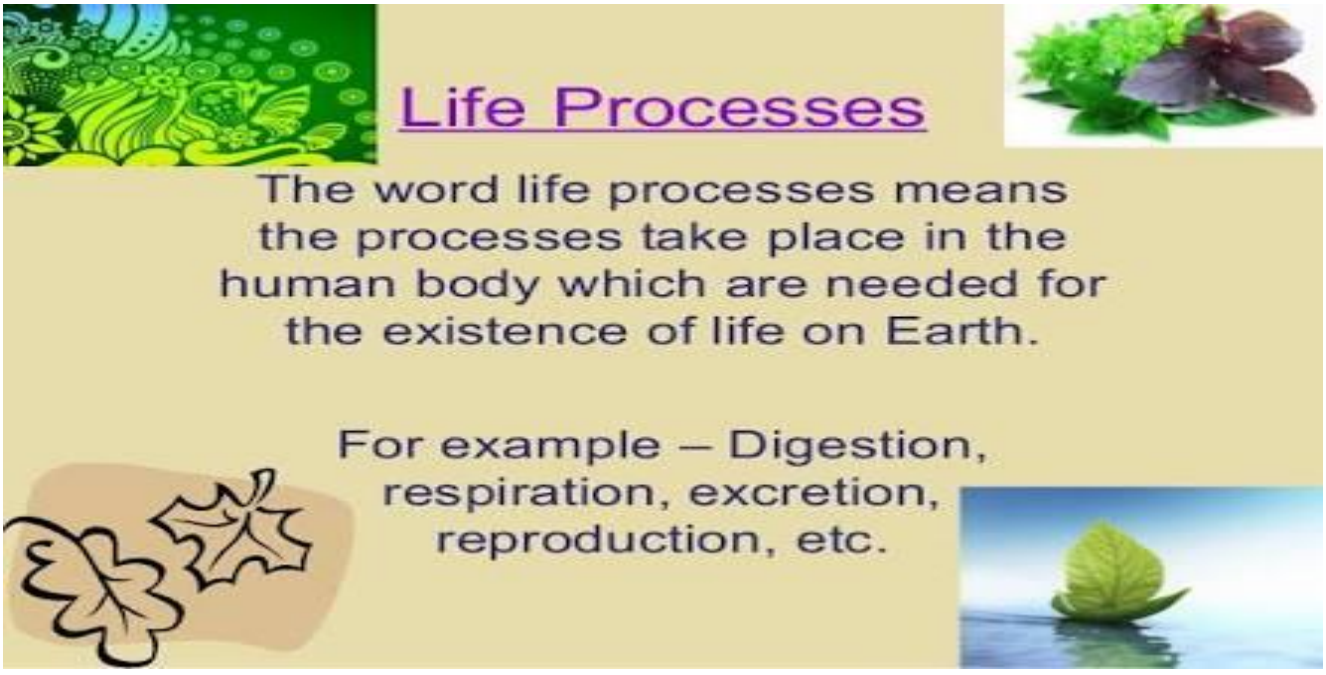
WORKSHEET -1.

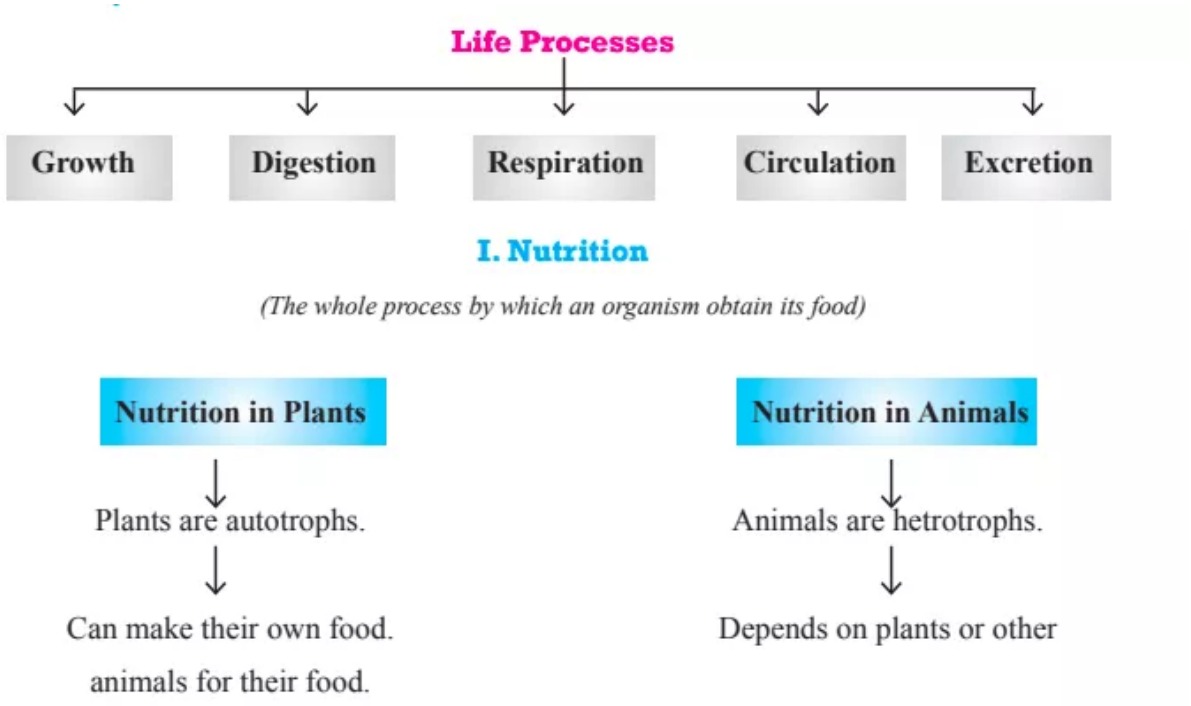
1.Name the organs present in our digestive system.

2.Write atleast two differences between milk teeth and permanent

4.How many pairs of salivary glands present in our body.

5.Name the organ where complete digestion takes place.





Life Processes

All the plants and animals are alive or living things.

Properties of Living Beings Compared to Non - living -

1. Movement
2. Grow
3. Need Food
4. Excrete
5. Respiration
6. Reproduce

The major criterion which is used to decide whether something is alive or not alive is movement. The movement in animals is fast and can be observed easily but the movement in plants is slow and observed with difficulty. Animals can move from one place to another or they can move their body parts. The plants can only move parts of their body such as leaves, flowers, roots and shoots.

Life Processes - Life processes are processes undergoing in living organisms to sustain life. For example: Reproduction, Excretion, Respiration and Growth.

Nutrition -The Process of taking of food inside the body and converting it into smaller molecules which can be absorbed by the body is called Nutrition.

Need of nutrition: Nutrition is needed to provide energy for doing any activity and provide essential nutrients for life processes.

Nutrients: Materials which provide nutrition to organisms are called nutrients. For example,

- Carbohydrates and fats are the nutrients which are used by the organism mainly as a source of energy. These nutrients are found in wheat, rice, corn, chocolates etc. So when you eat them you feel energetic.
- Proteins, vitamins and mineral are nutrients used for making body parts like skin, blood, bones etc.

Mode of Nutrition -

Mode of nutrition means method of obtaining food by an organism. There are mainly two modes of nutrition:

1. Autotrophic mode 2. Heterotrophic mode

a. Autotrophic Mode: As the name suggest `auto' means 'self' and `trophe' means 'nutrition'.

In this mode of nutrition an organism does not depend on other living beings for food. Organism makes (or synthesizes) its own food by photosynthesis.

Those organisms which can make their own food by photosynthesis are called Autotrophs. For example: all green plants, autotrophic bacteria.

b. Heterotrophic Mode: As the name suggest 'heteros' means 'others' and trophe' means `nutrition'.

Heterotrophic nutrition is that mode of nutrition in which an organism cannot make (or Not synthesizes) its own food and depends on other organisms for its food.

Those organisms which cannot make their own food and depends on other organisms for their food are called Heterotrophs. For example: all the animals (man, dog, cat, lion, etc.), most bacteria and fungi.

Now heterotrophs can be further divided into three types.

Carnivores: Organisms those eat only animals are called carnivores. For example: tiger, lion, snake, frog etc.

Herbivores: Organisms those eat only plants are called herbivores. For example: cow, deer, rabbit, elephant etc.

Omnivores: Organisms those eat both plant and animals are called omnivores. For example: crow, human, dog, sparrow etc.

Types of Heterotrophic Nutrition:

Heterotrophic mode of nutrition is of three types:

(i). Saprotrophic (saprophytic) nutrition

(ii). Parasitic nutrition

(iii). Holozoic nutrition

(i) Saprotrophic nutrition: Saprotrophic nutrition is that nutrition in which an organism obtains its food from decaying organic matter of dead plants, dead animals and rotten bread etc. The organisms having saprotrophic mode of nutrition are called saprophytes.

Saprophytes are the organisms which obtain food from dead plants (like rotten leaves) dead and decaying animal bodies and other decaying organic matter. For example: Fungi (liker bread moulds, mushrooms) and many bacteria.

(ii) Parasitic nutrition: The parasitic nutrition is that nutrition in which an organism derives its food from the body of other living organisms without killing it.

A parasite is an organism which feed on another living organism called its host. For example, some animals like Plasmodium and roundworms, a few plants like Cuscuta (amarbel) and several fungi and bacteria.

(iii) Holozoic nutrition: The holozoic nutrition is that nutrition in which an organism takes the complex organic food materials into its body by the process of ingestion; the ingested food is digested and then absorbed into the body cells of the organism. For example: human beings and most of the animal.

Answer the following questions

1.Define the term LIFE PROCESSES.

2.Differentiate between Autotrophic and Heterotrophic nutrition.

3.Name two animal parasite and plant parasite.

4.How is saprotrophic nutrition and parasitic nutrition different from each other?