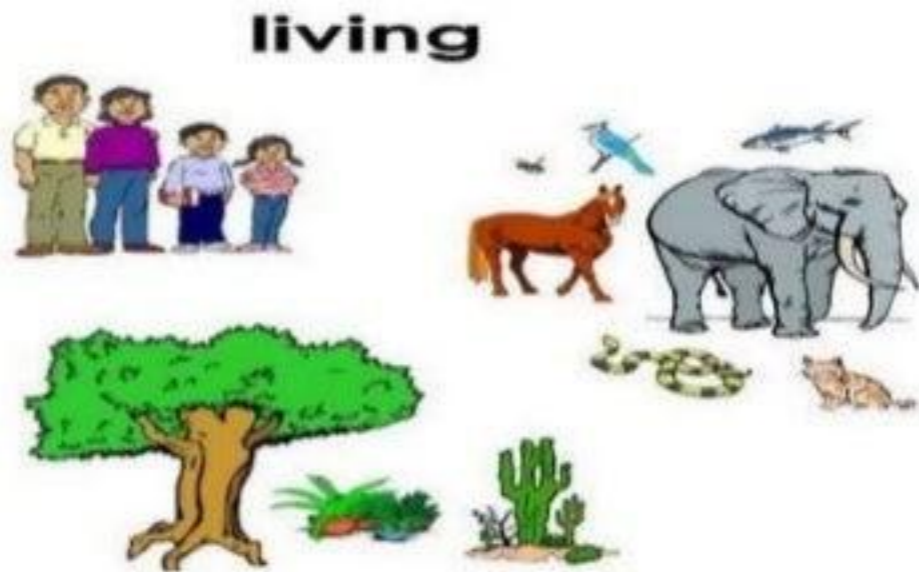


CHAPTER 1: THE CHARACTERISTICS OF LIVING THINGS.



LIVING AND NEVER LIVED

Living things have seven features that differentiate them from non-living things.



SIGNS OF LIFE

The 7 life processes are:

- 1) Feeding (nutrition)
- 2) Respiration
- 3) Movement
- 4) Growth
- 5) Excretion
- 6) Reproduction
- 7) Irritability (sensitivity)

ANIMAL LIFE

- All animals show the 7 signs of life in different ways

Example (1):

Crabs and lobsters have a skeleton outside their bodies, so they grow by shredding their old skeleton and stretching new soft one by taking in water.



NOTE:

- ◉ Insects and spiders do this by taking in air.



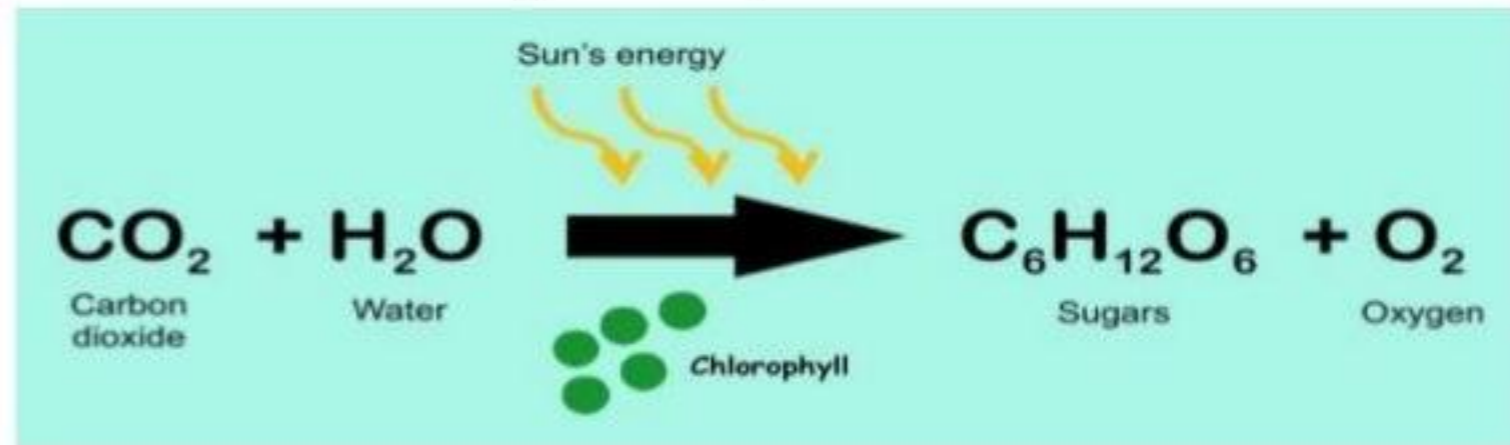
Example (2):



Axolotls have gills outside their bodies to help them get the oxygen they need from the water.

PLANT LIFE

- Plants show the 7 signs of life in different ways than animals.
- Plants make their food using the process of photosynthesis.



- Some plants reproduce by making seeds or spores and some make copies of themselves called plantlets.

MRS. NERG / MRS. GREN

LOOKING AT SIGNS OF LIFE

1) EATING AND FEEDING

- Plants make their own food.

But,

- Animals must get it from other living things.

Example: In rainforests ticks, lice, leeches and mosquitoes feed on blood.



Leech
mouth

N.B. Leeches are sometimes used to draw out blood as part of a medical operation.

2) MOVEMENT

- Muscles help animals move to find food, shelter and avoid enemies.
- Our **heart** is made of muscles to pump blood around the body.
- The **wall of the stomach** is made of muscles to churn the food.
- There are **muscles** between the ribs that help them up and down.

3) IRRITABILITY (SENSITIVITY)

- Animals detect or sense changes in their surroundings by their **sense organs**.

Example (1):



Antennae

Centipedes use their antennae to touch the ground and then send the information to the brain to help them decide if it is safe to move forwards.

Example (2):



- The grass snake uses its forked tongue to collect chemicals in the air.
- It draws its tongue back into its mouth and pushes the tip into a pit in its nose where the chemicals are detected.

4) GROWTH AND, 5) REPRODUCTION

- Reproduction is the process that keeps a plant or animal species in existence.

Example (1):



Example (2):



Young animals need food to grow healthily.

6) RESPIRATION

RESPIRATION is

NOT,

the same as BREATHING.

(Is only air in air out :Inhalation and Exhalation)

- Respiration is the process by which energy is released from food.

Glucose + Oxygen → Carbon Dioxide + Water + Energy



- Respiration takes place in animals and plants (during daytime and nighttime).
- Note : Plants do **both** photosynthesis and respiration

7) EXCRETION

- When food and oxygen are used up in the body, waste products are made.
- The body must get rid of the waste products because they are poisonous.
- Wastes are released in **urine**, **sweat** and **air** we breathe out containing **carbon dioxide**.