Living-things that can move, respire, are sensitive to the environment, grow, reproduce, excrete and require nutrition.

Biology-study of living things

Organism- any living thing that can grow and reproduce

Cell-the building blocks of life

Death is the end point of life

**M**ovement

**R**eproduction

**S**ensitivity

**N**utrition

**E**xcretion

**R**espiration

**G**rowth

Glucose + oxygen 🡪 carbon dioxide + water +energy

Movement

They can move to a certain degree

-Humans can walk

-Plants bent towards the Sun

Respiration

NOT BREATHING

2 types:

-Aerobic, which uses oxygen to release energy

-Anaerobic, which does not use oxygen to release oxygen

Takes place in the mitochondria of the cell

-Mitochondria releases the energy from mainly glucose

Sensitivity

Can react to its surroundings and environment

Every living thing notices changes in the environment around them and react

-Plants grow towards the light

-People react to the temperature around them

Nutrition

All living things need nutrition

-Food is needed to provide energy to live and grow

-Green plants make their own food through photosynthesis and absorbs nutrients through roots

-Animals cannot make their own food and therefore rely on plants and/or other animals for their energy

-Fungi feed on decaying organisms

Animals and fungi are HETEROTROPHS

-They rely on other living things for food

Plants are AUTOTROPHS

-They make their own food

Excretion

Expelling liquid and gas from body

Organs involved:

-Kidneys

-Bladder

-Liver

-Lungs

Faeces and other wasted products are not excretion-it is elimination

Reproduction

All living things reproduce

-Animals have babies

-Plants grow from seeds from their parent

Growth

Growth is an ongoing increase

-People get bigger as they get older

-Plants grow when fed

Tertiary consumers

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Secondary consumers

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Primary consumers

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Autotrophs

^(energy)

Sun

Most energy from animals is spent on growth, reproduction and heat (90%)

Cells

All cells have membranes

All cells contain different chemicals within.

Cells are the smallest units that living things are made of]

Unicellular: an organism that is made of a single cell

Multicellular: an organism that contain more than one cell

Two types of cells:

-Ones with nucleus-a.k.a. true nucleus as the nucleus’s DNA is surrounded by a membrane

-Ones without a nucleus

Eukaryotic cells have a **true nucleus**, which means the cell's DNA is surrounded by a membrane. Therefore, the **nucleus** houses the cell's DNA and directs the synthesis of proteins and ribosomes, the cellular organelles responsible for protein synthesis.

Prokaryotic cells (like bacteria) are very simple cells. They lack a **nucleus**, sometimes called the control centre of the cell. In prokaryotic (PRO-care-ee-ought-ick) cells, the genetic material or DNA is loose inside and is made of a single loop. The loop is called a plasmid.

Kingdom Kids

Phylum Playing

Class Chicken

Order On

Family Freeway

Genus Gets

Species Squashed

Taxonomy

All of the species of living things are named and classified according to a system first developed by Carl Linnaeus in the 1700s.

The classification names are in Latin, because Latin is a dead language, so the words won’t change their meaning.

The classifying scientists use systematics. This is an analytical approach to understanding the relationships between organisms

Aerobic-relating to or denoting exercise taken to improve the efficiency of the body’s cardiovascular system in absorbing and transporting oxygen

Anaerobic- relating to or denoting exercise which does not improve the efficiency of the body’s cardiovascular system in absorbing and transporting oxygen

Autotroph- an organism that is able to form nutritional organic substances from simple inorganic substances such as carbon dioxide

Heterotroph- an organism deriving its nutritional requirements from complex organic substances

Prokaryotic cell- Prokaryotes are unicellular organisms that lack organelles or other internal membrane-bound structures. Therefore, they do not have a nucleus, but, instead, generally have a single chromosome: a piece of circular, double-stranded DNA located in an area of the cell called the nucleoid.

Eukaryotic cell-Eukaryoticcells are cells that contain a nucleus and organelles, and are enclosed by a plasma membrane

Pathogenic- microorganism that causes disease

Parasite- an organism that lives from another

Habitat

Lysotroph

5 kingdoms

Prokaryotae- Bacteria and cyanobacteria- are everywhere. Number of Prokaryotae in a handful of soil is more than the number of humans to ever have lived. Most unicellular. Have a variety of shapes. Do not have membrane bound organelles

Protoctista

Fungi

Plantae

Animalia