

# 8 Characteristics of Life

Compiled by class members of 1st hour biology

# Reproduction

- One organism can survive without reproduction...
  - but it's required for a species to survive
- Genetic information gets passed to next generation

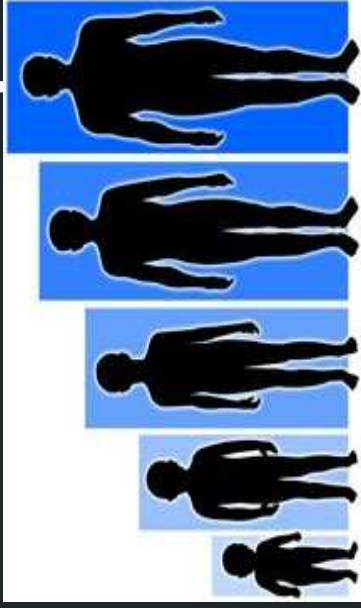
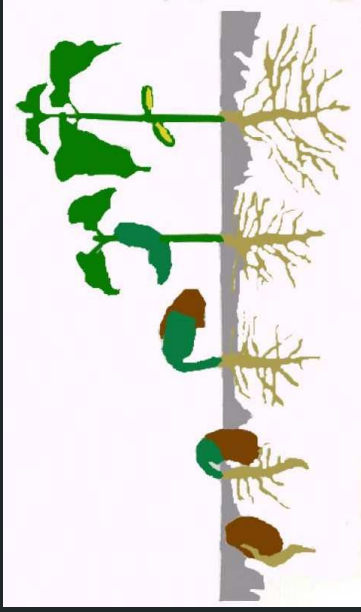
**Adaptations evolve over time**

- **inherited changes**
- **occur over time**
- **help the species survive**

# Cells

For centuries scientists had no idea that the human body has trillions of cells. Cells are the basic unit of structure and organization of all living organisms. All living organisms have one or more cells. Cells arise only from previously existing cells. With cells passing copies of their genetic material onto their daughter cells, everything is composed of cells. There are multiple types of cells for example blood cells.

# Growth & Development



Examples: Plants grow and develop.

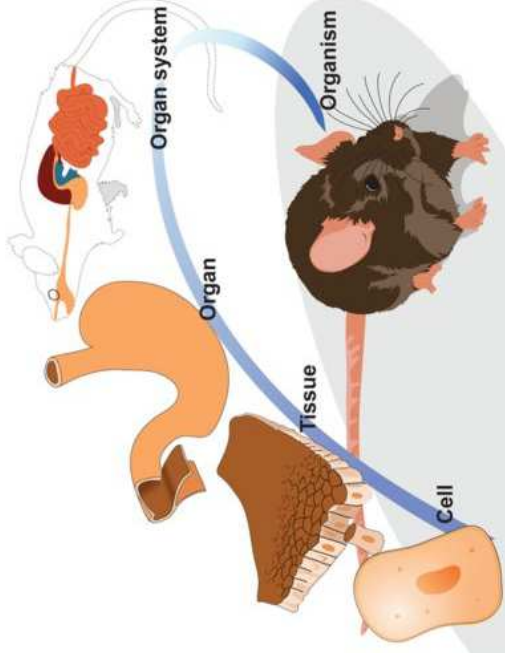
Humans grow and develop.

**Growth:** One of a pair of cells that functions in the opening and closing of a plant's stomata by changes in their shape.

**Development:** Changes an organism undergoes in its lifetime before reaching adult form.

# Organization:

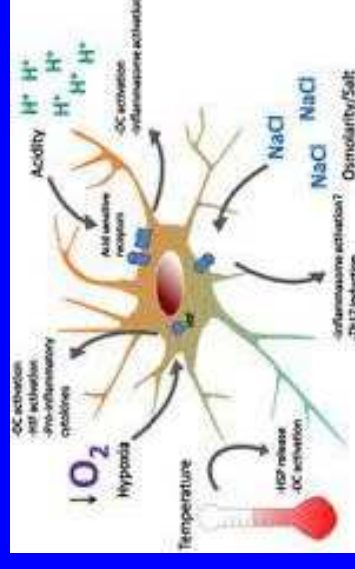
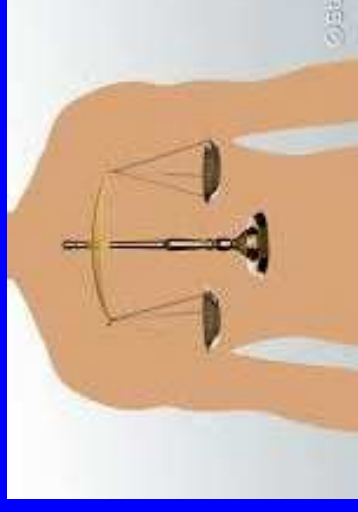
One of the characteristics of life is organization, living things display this by being arranged in an orderly way. All living things are organized differently. Single cellular organisms may only be made up of one cell, but that cell is organized in a certain way. Multicellular organisms have specialized cells that are organized into groups that work together called tissues. The tissues are organized into organs which carry out different functions such as reproduction or digestion.



# HOMEOSTASIS

HOMEOSTASIS- IS REGULATION OF AN ORGANISM'S INTERNAL ENVIRONMENT TO MAINTAIN CONDITIONS NEEDED FOR LIFE.

- OCCURS IN ALL LIVING THINGS
- IF ANYTHING HAPPENS WITHIN OR TO AN ORGANISM THAT AFFECTS ITS NORMAL STATE, PROCESS TO RESTORE THE NORMAL STATE BEGINS.
- IF NOT RESTORED, DEATH MAY OCCUR.



## Response To Stimuli

Anything outside or inside of an organism that causes a reaction by the organism, sort of reaction to a stimulus is a response.



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### Google's Definition :

In physiology, a **stimulus** (plural **stimuli**) is a detectable change in the internal or external environment. The ability of an organism or organ to respond to external **stimuli** is called sensitivity. When a **stimulus** is applied to a sensory receptor, it normally elicits or influences a reflex via **stimulus**transduction.

<https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#safe=strict&q=response-to-stimuli>



# Energy Use

-All living things need some sources of energy. They get there energy from food.

-An example of an organism using energy would be when a plant uses light energy from the sun to make its own food.

-Then there are organism who cant make their own food and get their energy from eating other organisms.

-Some of the energy is used for growth and development.