

Science

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Characteristics of Life

Responsiveness to the environment meaning that all living things respond to their environment.

Growth and change meaning that you are accessible to change.

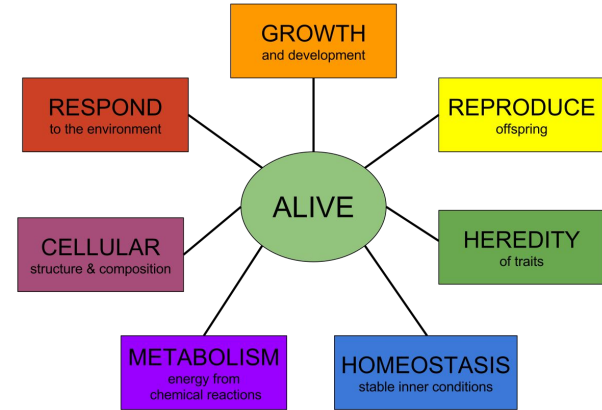
The ability to reproduce meaning they can procreate

Has metabolism and can breath meaning that you can burn off calories and can breath.

Can maintain homeostasis meaning to keep body temperature at 98.6 degrees.

To be made of cells.


To pass traits onto offspring meaning that the offspring will be and look similar to you.




Cell Theory

All living things are composed of one or more cells. The cell is the basic unit of life and new cells arise from existing cells. The cell is the fundamental unit of structure and functioning in things.all organisms are made of one or more cells.


Cell Theory



1. All living organisms are made of cells




3. Cells arise from pre-existing cells




5. All cells have the basic chemical composition



2. Cells are the basic unit of life



4. Hereditary information is passed from cell

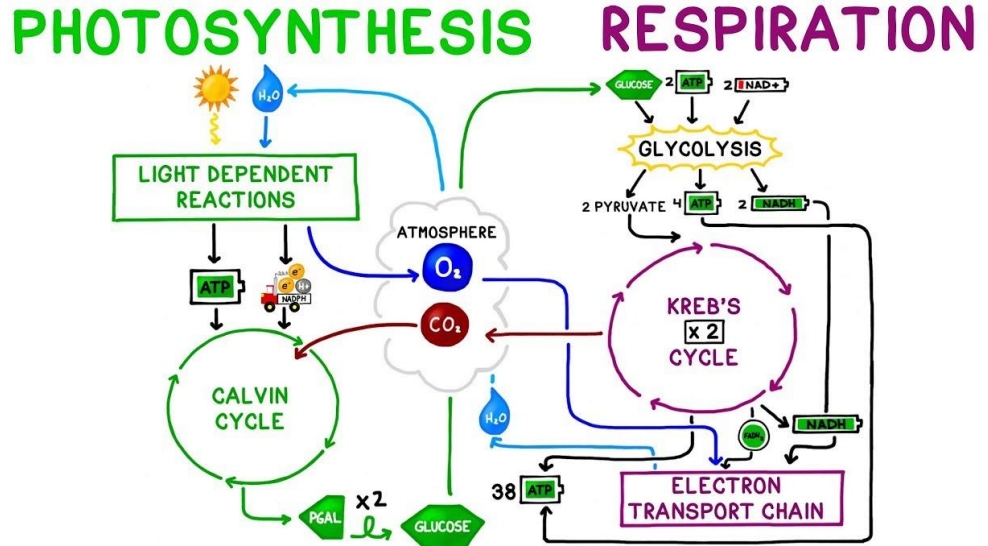


6. Energy flow occurs within cells

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Photosynthesis and cellular respiration.

Photosynthesis involves the use of energy from sunlight, water and carbon dioxide to produce glucose and oxygen. **Cellular Respiration** uses glucose and oxygen to produce carbon dioxide and water. For example both processes synthesize and use A.T.P, the energy currency. A.T.P stands for adenosine Triphosphate an organic compound that is composed of adenosine and three phosphate groups.



Microorganisms.

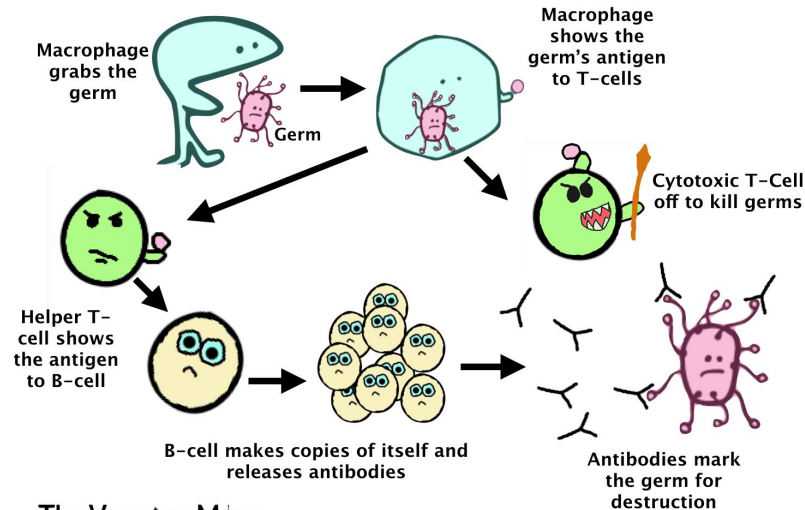
Microorganisms are microscopic organisms that exist in its single-celled form or in a colony of cells.



The Immune System.

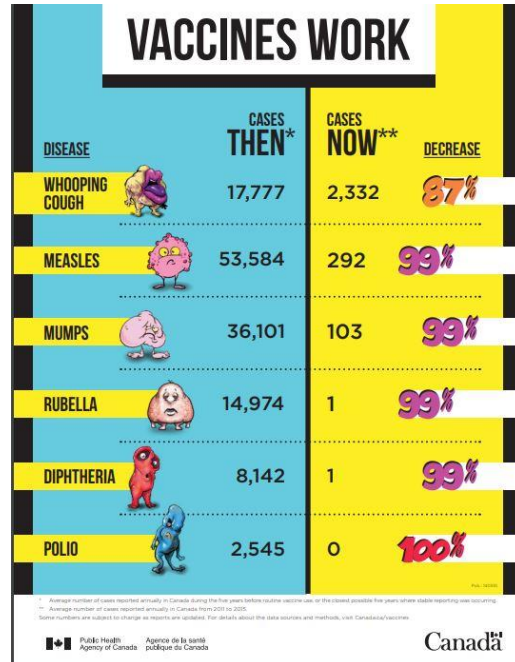
The major function of the immune system is to protect the host from environmental agents such as microbes or chemicals thereby preserving the integrity of the body. Specific immunity is further divided into hormonal immunity the one involved in antibody and cellular immunity witch is orchestrated by T cells.

Adaptive Immune System (In a nutshell)



Vaccinations and antibiotics.

For most people when taking antibiotics for mild illness should not keep them from getting vaccinations on schedule. Antibiotics do not interfere with the ingredients in a vaccine or cause bad reaction in a person who has just been vaccinated.



Impacts of epidemics and pandemics on human populations.

Social and political impacts evidence suggests that epidemics and pandemics can have a significant social and political consequences creating clashes between states and citizens eroding state capacity driving population displacement and highlighting social tension and discrimination.

Epidemic vs. Pandemic.

An **epidemic** is an outbreak of a disease that affects a disproportionately large number of individuals within a population, community or region at the same time. (example—typhoid)



A **pandemic** is an epidemic of an infectious disease that is spreading through human populations across a large region, continent or even worldwide (examples: smallpox, tuberculosis, flu of 2009).



Bibliography.

[Characteristics of Life \(Read \) | Biology | CK-12 Foundation](#)

[4.1C: Cell Theory - Biology LibreTexts](#)

[Photosynthesis and Respiration - Photosynthesis Education](#)

[Microorganism - Wikipedia](#)

[Structure and function of the immune system. - NCBI](#)

[Vaccines & Antibiotics: A Safe Combo?](#)

[The Economic Risks and Impacts of Epidemics](#)