**BIOSPHERE**

**PART 1**

As introduction to cells:

<https://www.youtube.com/watch?v=gFuEo2ccTPA>

1. They are all made up of

Cells, either only one (unicellular organism) or more (pluricellular)

1. They do the vital functions: (nutrition, intercation and reproduction)
2. They all have a similar composition

* Biolelements: C, H, O, N, P (Phosphorus), S (sulphur)
* Biomolecules:
  + Inorganic biomolecules:water and mineral salts
  + Organic molecules: Carbohydrates, Fats or lipids  ,Proteins and Nucleic acids.

What elements are part of living matter?

What are the functions of carbohydrates and what foods can we find them in?

What are the functions of lipids and what foods can we find them in?

What are the functions of proteins and what foods can we find them in?

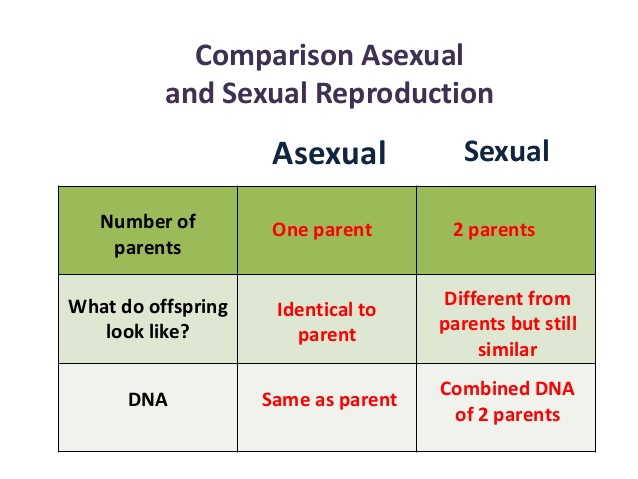
**VITAL FUNCTIONS**

<https://youtu.be/L_zaTnh8LXo>

**NUTRITION**

* Autotrophs (they CAN produce their own organic compounds),

either they get Energy from the SUN: PHOTOSYNTHESIS

or from Chemical \_Ractions: CHEMOSYNTHESIS

* Heterotrophs (they cannot produce their own organic compounds)

**INTERACTION**

Response to a change in the environment.

STIMULUS --RESPONSE

**REPRODUCTION**

* **Sexual**: 2 individuals needes (male + female) , 2 sexual cells (GAMETES), diverse offspring generated
* **Asexual**: only ONE individual implied / genetically identical offspring

Learn singing <https://youtu.be/rABKB5aS2Zg>

What are cells?. Write the difference between unicellular and multicellular beings .

Do activities part 1.

You can review the differences and similarities between prokaryotes and eukaryotes, and between animal an plant cells.

<https://www.youtube.com/watch?v=URUJD5NEXC8>

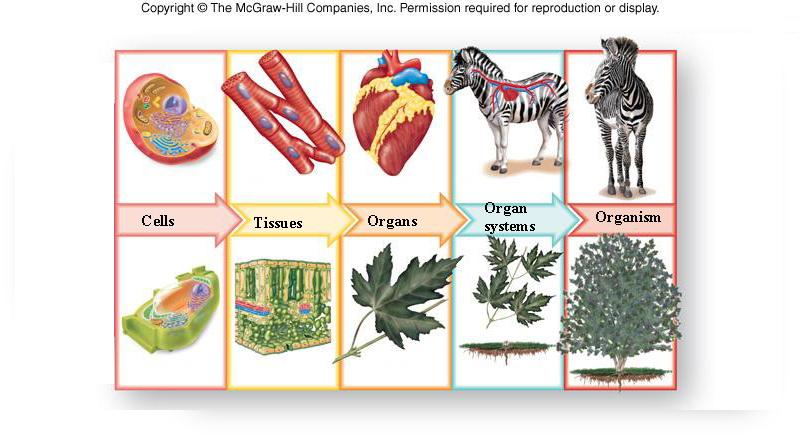
Draw a bacterium with its parts.

Describe an eukaryotic cell

Make a chart with similarities and differences between animal and plant cells.

|  |  |  |  |
| --- | --- | --- | --- |
| **Components** | **Prokaryote** | **Animal eukaryote** | **Plan eukaryote** |
| Cytoplasm |  |  |  |
| Chloroplast |  |  |  |
| Cell membrane |  |  |  |
| Nucleus |  |  |  |
| Mitochondrion |  |  |  |
| DNA |  |  |  |
| Lysosomes |  |  |  |
| Centrioles |  |  |  |
| Golgi apparatus |  |  |  |
| Endoplasmic reticulum |  |  |  |
| Ribosomes |  |  |  |
| Cell wall |  |  |  |

Levels of life organization:



What is tissu made from? Give examples.

What are organs made of? Give examples.

Finally do activity 1 of page 129.