

VIRION

Virtual Reality
Applied to
School Education

BIOLOGY

A project funded by:



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the European Union

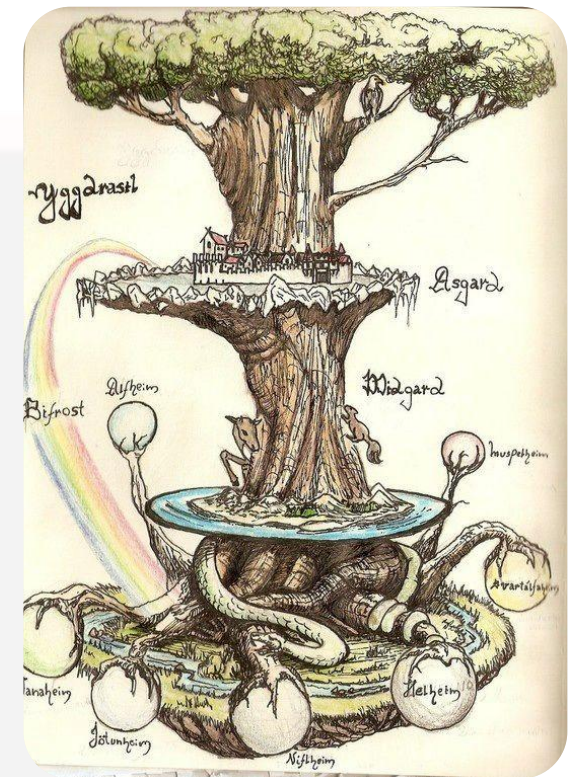
With the participation of:



BIOLOGY VR EXPERIENCE – OBJECTIVES OF VIRION VR PROJECT

- *“Cellular Structure and Function”*: Students can explore the intricate details of cell organelles in a 3D virtual environment, enhancing their understanding of cellular biology.

So, when designing this experience, we decided to place the app within a natural environment that we called the *“TREE OF LIFE”*, inspired on *Yggdrasil*, the massive tree at the centre of Norse Mythology .



BIOLOGY VR EXPERIENCE

The interface design:



BIOLOGY VR EXPERIENCE

Interface design:



BIOLOGY VR EXPERIENCE CONTENT

The Activity:

Walking thru the different paths of *THE TREE OF LIFE*, students should find within its branches two small houses representing experimental laboratories:

“The Bacteria Lab”

and

“The Animal Cell Lab”.

When arriving to each of both labs, student will have to create a complete living cell.

To create them, he will have to complete the list of elements on the table and search through the labs to find each one of them in the jars or canisters spread thru the lab and place them into the cell empty structure on the table following the list.



BIOLOGY VR EXPERIENCE CONTENT

The Bacteria Lab

When arriving to the *Bacteria lab*, student will create a prokaryotic cell: *THE BACTERIA*, finding and placing on the cellular structure on the table its components:

- CELL MEMBRANE
- CYTOPLASM
- FLAGELLUM
- PILLI
- MESOSOMES
- RIBOSOMES

While passing thru each bottle or recipient of the elements, *a explanatory screen* of each of those elements will appear, so student can review its information.



BIOLOGY VR EXPERIENCE CONTENT

The interface design:



BIOLOGY VR EXPERIENCE CONTENT

The Animal Cell Lab

When arriving to the *Animal Cell lab*, student will have to create a eukaryotic cell: *THE ANIMAL CELL*. Here, student will have to create a eukaryotic cell from its components :



- Cell Membrane
- Cytoplasm
- Nucleus with the DNA
- Ribosome
- Lysosome
- Mitochondria
- Golgi Bodies
- Vacuoles
- Endoplasmic Reticulum
- Centriole
- Cell Cytoskeleton

BIOLOGY VR EXPERIENCE CONTENT



Once all the elements of a cell will be incorporated, the cells will come to life.

As in all the othe experiences, once completed the 2 cells with all its components, student will obtain his **certificate of accomplishment**