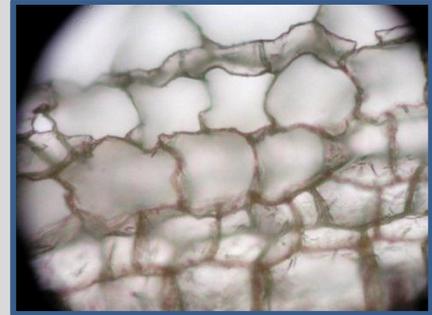


REVIEW: The Cell and The Cell Theory

Robert Hooke



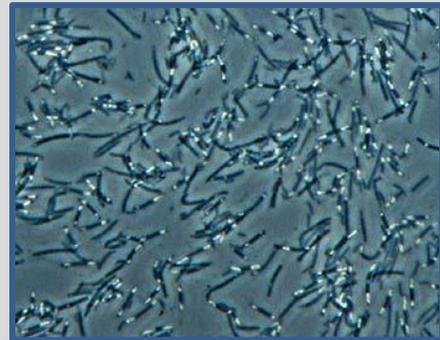
- Observed the cells walls of CORK.
- Came up with the name "CELLS"



Anton van Leewenhoek

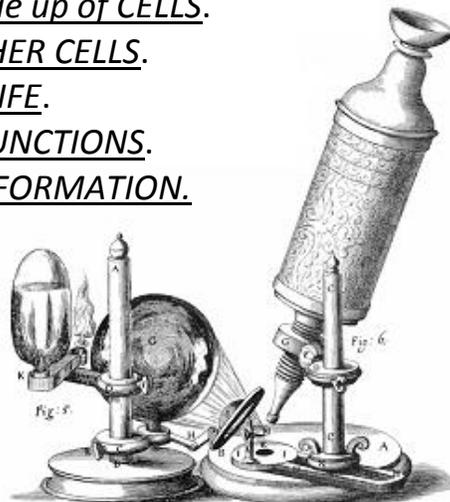


- SINGLE LENS microscope
- He saw BACTERIA!

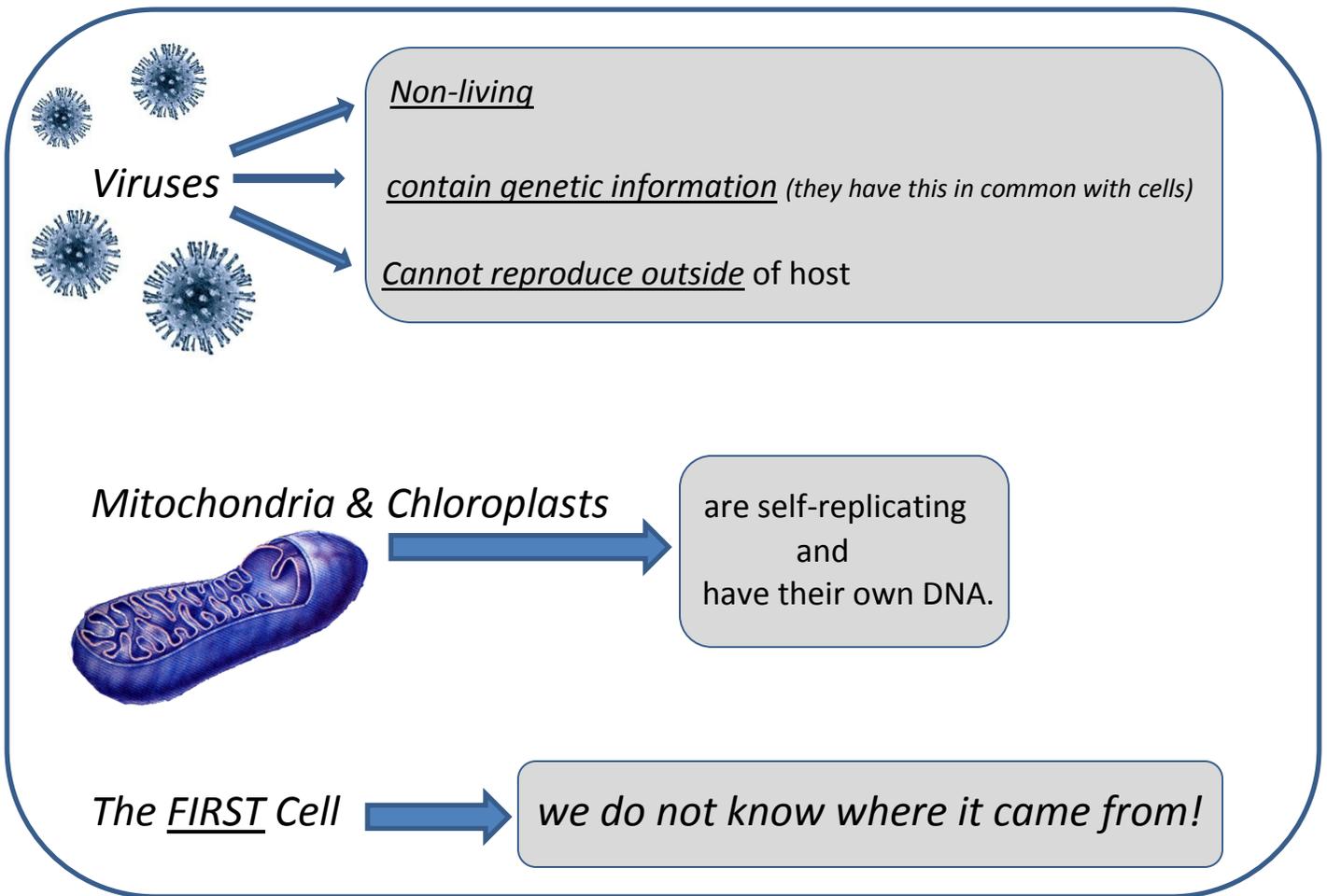


The Cell Theory

1. ALL living things are made up of CELLS.
2. Cells only come from OTHER CELLS.
3. CELL is smallest form of LIFE.
4. ALL cells carry out LIFE FUNCTIONS.
5. Cells contain GENETIC INFORMATION.



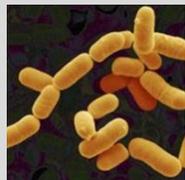
★ Exceptions to the Cell Theory



Prokaryotic and Eukaryotic Cells

Prokaryote cells

- ✓ Primitive cell (simple)
- ✓ it has NO ORGANELLES in it!



Bacteria

Eukaryote cells

- ✓ Complex cell
- ✓ it has ORGANELLES in it!



Red Blood cells

The Cell

Cell Membrane

Controls what goes IN and what goes OUT of the cell.

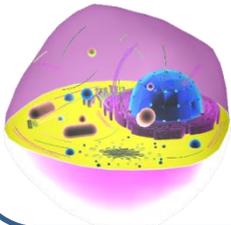
called **NUTRITION**

called **EXCRETION**



Remember:

It DOES NOT keep bad things out of the cell.....

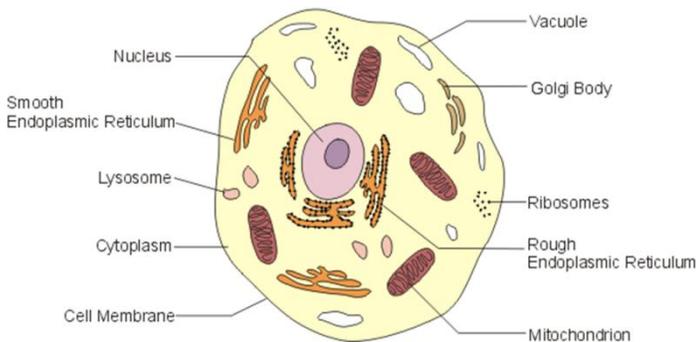


Sometimes a virus gets into a cell.

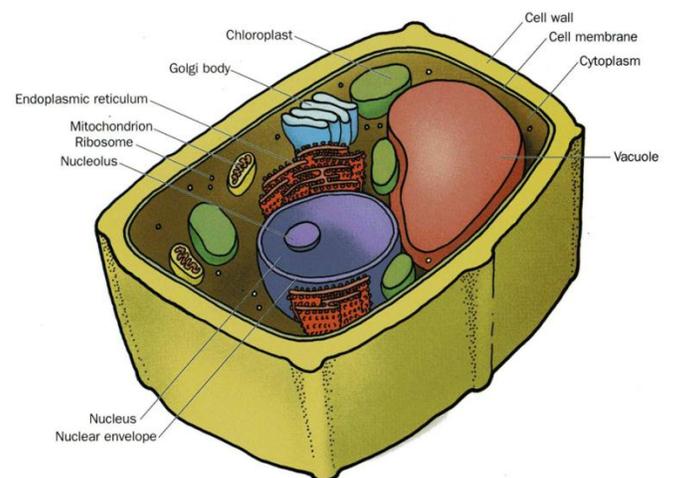


★ LARGE things must be BROKEN DOWN before entering the cell.

Animal Cell



Plant Cell



Organelles: all parts of the inside of a cell

- ✓ Cytoplasm: *fluid in the cell*
- ✓ Vacuole: *used for storage (PLANTS have LARGE vacuole)*
- ✓ Nucleus: *contains DNA & CONTROLS functions of the cell*
- ✓ Ribosome: *site of protein synthesis (protein is made here)*
- ✓ Nucleolus: *creates ribosomes*
- ✓ Mitochondria: *releases ENERGY (ATP)*
- ✓ Cell membrane: *controls movement into and out of the cell.*
- ✓ Cell wall (found in PLANT CELL ONLY): *gives plant structure*
- ✓ Centrioles (found in ANIMAL CELL ONLY): *help with cell division*
- ✓ Chloroplasts (found in PLANT CELL ONLY): *site of photosynthesis*
- ✓ Chromosomes: *coiled DNA inside the nucleus*
- ✓ Cilia: *small hair-like structures used for movement*