

Introduction to Cells

EQ: HOW DO PROKARYOTES AND EUKARYOTES
COMPARE?

What is a Cell?

Cell – Basic unit of living things.



Organisms are either:

- Unicellular – made of one cell such as bacteria and amoebas.



OR

- Multicellular – made of many cells such as plants and animals.



History of the Cell- Don't write

Robert Hooke (1665) – Observed “cells” in cork

Anton van Leeuwenhoek (1674) – Saw tiny living things in pond water.

Matthias Schleiden (1838) – Plants are made of cells.

Theodor Schwann (1839) – Animals are made of cells.

Rudolf Virchow (1855) – New cells come from existing cells.

Janet Plowe (1931) – Cell membrane is a physical structure.

Lynn Margulis (1970) – Organelles were once free-living cells.

Cell Theory

Confirmed discoveries that all scientists believe to be true about cells:

- 1. Cells are the basic unit of life.
- 2. All living things are made of cells.
- 3. New cells are produced from existing cells.

Divide the rest of your page into two column

Title one : Prokaryotes

Title the other : Eukaryotes

The Discovery of Cells

Prokaryotic

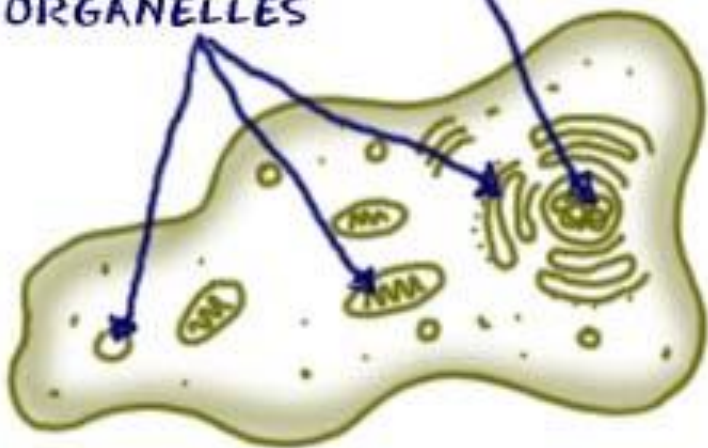
before

nucleus



DEFINED NUCLEUS

ORGANELLES

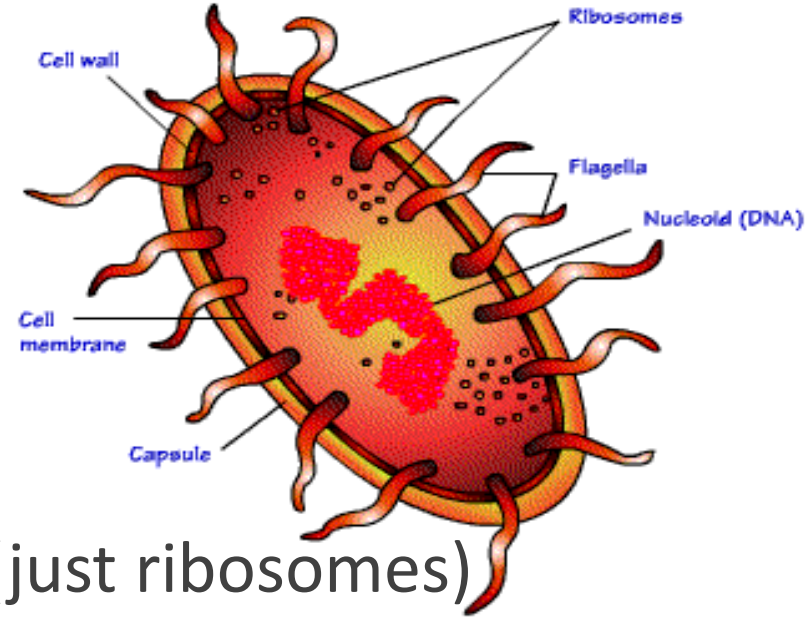


Eukaryotic

true

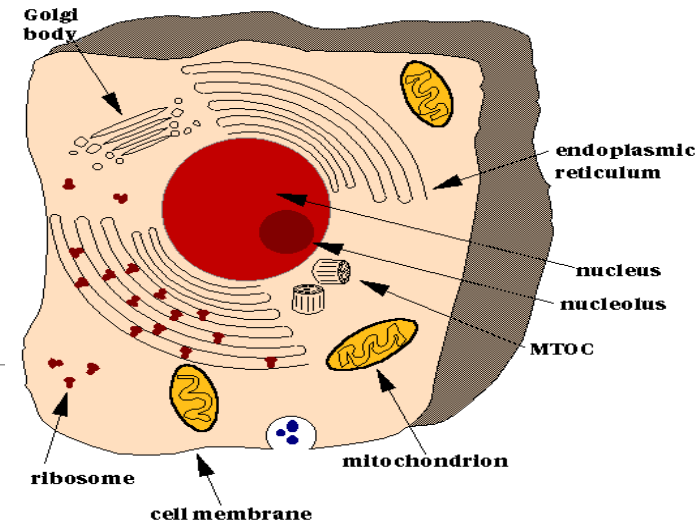
nucleus

Prokaryotes



1. **NO** nucleus
2. **NO** membrane bound organelles (just ribosomes)
3. ALL are unicellular
4. Smaller than eukaryotic cells
5. Forerunner to eukaryotic cells (smaller and more simple)
6. DNA – single strand and circular
7. Ex: ALL Bacteria

Eukaryotes



1. Has a nucleus with a nuclear envelope
2. Bigger and more complex than prokaryotes
3. **Have membrane bound Organelles (golgi, ER, lysosomes...etc)**
4. DNA – double-stranded and forms chromosomes (highly organized)
5. Can be uni- **OR** multicellular organisms
6. Ex: animals, plants, fungi