

Cytology -----

It is the study of the structure and function of cells.

Cytoplasm

Area of space outside the nucleus; contains the organelles & cytosol.

Organelles

Are tiny structures in the cytoplasm which perform various jobs of the cytoplasm.

Cytosol

Is the fluid part of the cytoplasm.

Prokaryotic cells

They lack a nuclear membrane as well as any other membrane covered organelles in their cytoplasm.

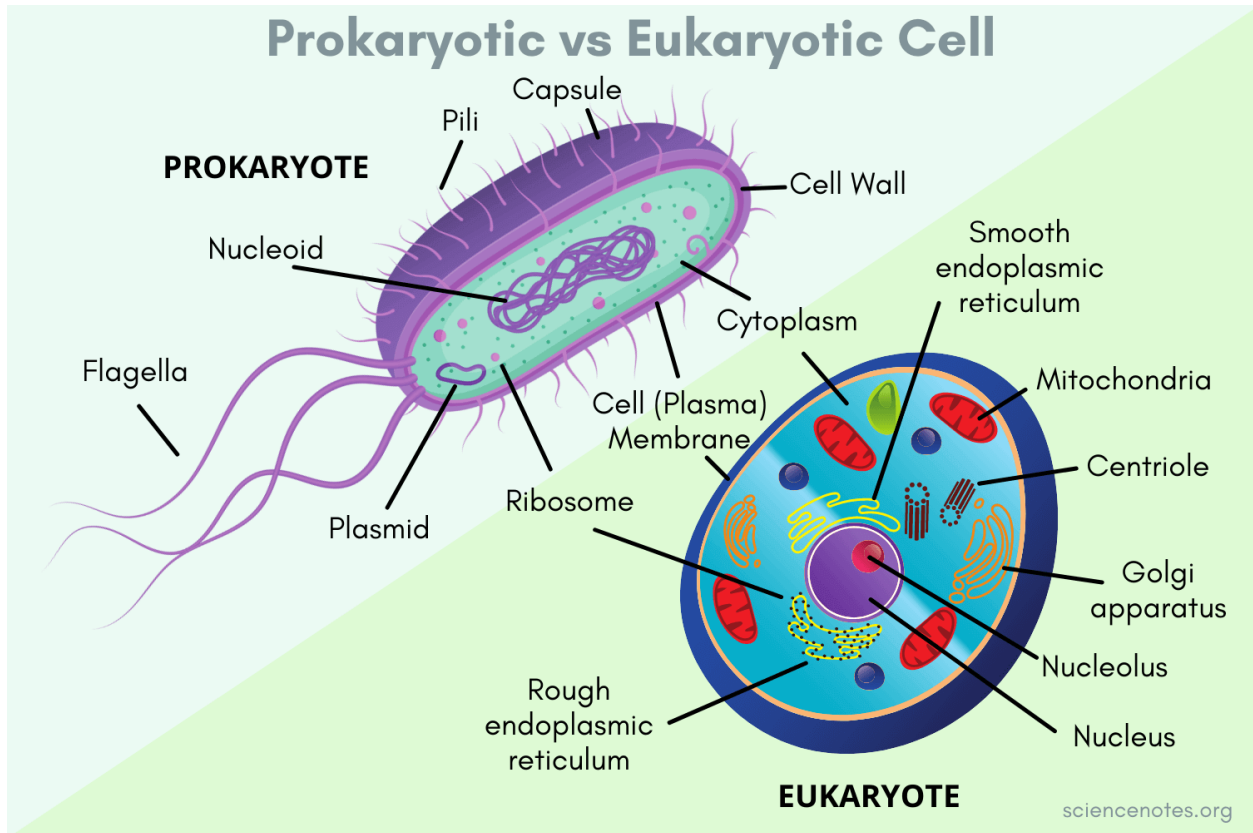
Considered to be primitive cells

Ex, bacteria.

Eukaryotic cells

They possess a nuclear membrane as well as membrane bound organelles in their cytoplasm

Ex, plant & animal cell.



The Nucleus

Is the computer or control center of the cell.

Contains the genetic material of life DNA molecule consists of nucleotides connected together.

Nucleotide

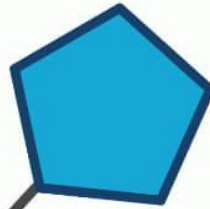
Consists of

- phosphate group
- Deoxyribose sugar
- Nitrogen base 4 types:

Phosphate



Sugar



Nitrogenous
Base

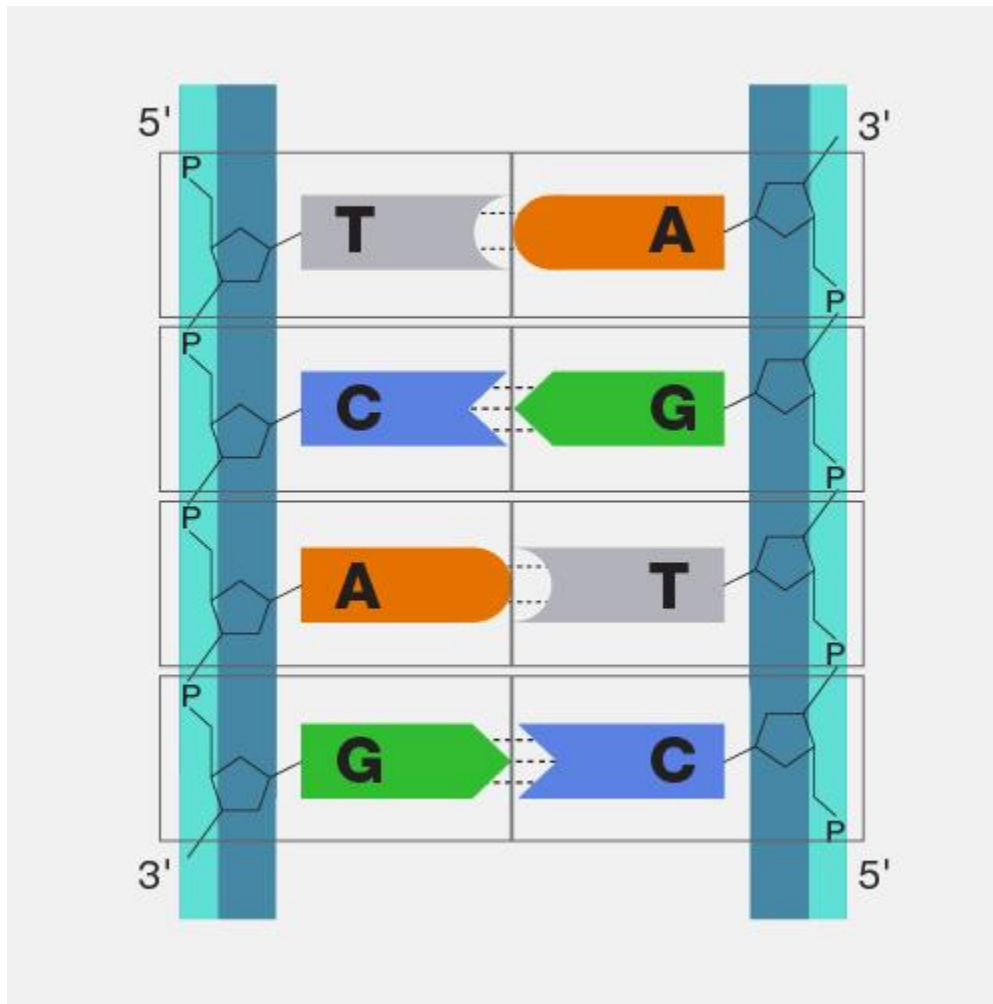
Nucleotide

Adenine (A)

Thymine (T)

Cytosine (C)

Guanine (G)



Nucleolus

A dark spherical structure that is the site of ribosome formation.

Ribosome and other important chemical messages leave the nucleus through the nuclear pores.

The membrane around the nucleus is called the nuclear membrane or envelope.

Nucleus

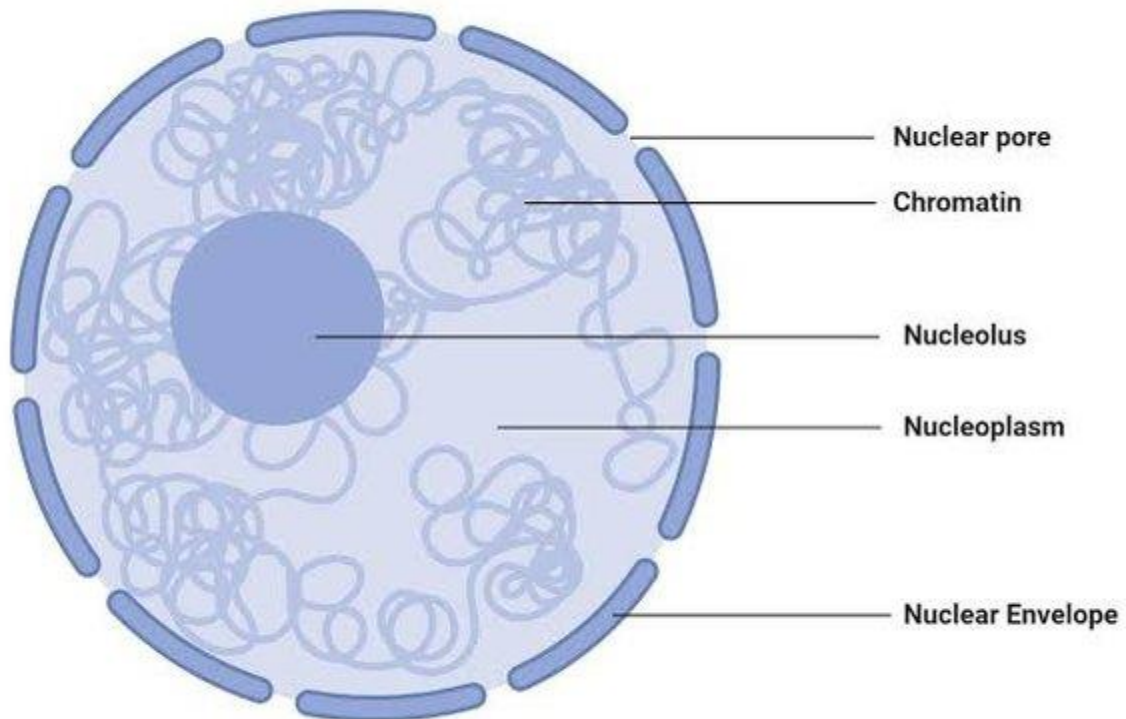


Figure: Nucleus, Image Copyright © Sagar Aryal, www.microbenotes.com