

Some Important Distinctions in Cellular and Nucleic Acid Structure

DNA vs. RNA

<u>DNA</u>	<u>RNA</u>
Deoxyribonucleic acid	Ribonucleic Acid
Has deoxyribose sugar	Has ribose sugar
Nitrogenous bases present are : 1. Adenine (A) 2. Thymine (T) 3. Cytosine (C) 4. Guanine (G)	Nitrogenous bases present are : 1. Adenine (A) 2. Uracil (U) 3. Cytosine (C) 4. Guanine (G)
Double-stranded	Single-stranded
Contains genetic information	Involved in Protein Synthesis

Plant Cells vs. Animal Cells

<u>PLANT CELL</u>	<u>ANIMAL CELL</u>
Cell wall and cell membrane present (cells when put in water will swell but not burst due to presence of cell wall).	Only have a cell membrane (cells when put in water will burst due to absence of cell wall).
Contain chloroplasts.	Do not contain chloroplasts.
Most of the space inside a plant cell is filled with sap in a large vacuole.	Contain small vacuoles, if at all
Usually has very regular shape.	Often irregularly shaped.

Prokaryotic vs. Eukaryotic Cells

<u>PROKARYOTIC CELLS</u>	<u>EUKARYOTIC CELLS</u>
Lack nucleus	Have membrane bounded nucleus.
Cytoplasm lacks membranous organelles.	Cytoplasm is compartmentalized by membranous organelles.
Single celled organisms.	Mostly multicellular organisms.
Have circular DNA that is not bounded within a nucleus—called the nucleoid	Have distinct chromosomes localized in the nucleus
Example – bacteria.	Example – plants and animals.

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