**Cell Structure and Types:** [**https://www.youtube.com/watch?v=URUJD5NEXC8**](https://www.youtube.com/watch?v=URUJD5NEXC8)

There are two broad categories of cells. **Prokaryotic and** **Eukaryotic**

**All cells have three things in common:**

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells are found in multi-cellular, complex organisms. These cells contain membrane bound organelles which have specific roles in the cells.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells are found in unicellular, simple organisms like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. These cells do not contain membrane bound organelles or a nucleus. But the cells do contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Eukaryotic cells are found in Plant and Animals. Not all organelles are found in both plant and animal cells.

|  |  |  |
| --- | --- | --- |
| **Organelle** | **Role or Function of in the Cell** | **Location: In plant or animal cells or Both** |
|  | * Separates inside of cell from the outside environment * Controls what enters or leaves a cell |  |
| Cytoplasm | * Jelly like fluid that suspends the cell’s organelles and carries life-supporting materials such as water and sugar |  |
|  | * Control centre of the cell * Contains the genetic material (DNA) as   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  -dictates what particular cell does and how it does it |  |
| Nuceolus |  | **In both** – located in the  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | * Synthesize or make proteins | * **In both** - Either attached to the Endoplasmic Reticulum or free floating in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the cell |
| Rough Endoplasmic - contains  \_\_\_\_\_\_\_\_\_\_\_\_\_ and  Smooth Endoplasmic Reticulum (ER) does not contain  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * A membrane enclosed passageway for transporting materials made in the cell |  |
|  | * Receives vesicles from the ER * Proteins are repackaged (customized into forms the cell can use for cell processes) |  |
| Central \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Large sac like structure * that store different materials such as water |  |
| Lysosomes | * Garbage \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Filled with enzymes that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cellular debris | Found in only \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | * Powerhouse * Make ATP molecules that provide energy for all cell activities |  |
| Chloroplast |  | Found in only \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | -a tough, rigid structure that surrounds the cell membrane  -provides support and box like shape to cells  -extra protective layer | Found in only \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Flagella | -tail like structure helps cell move or swim | - in humans a \_\_\_\_\_\_\_\_\_\_\_\_\_\_  Cell has this structure |

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| https://www.sciencefacts.net/wp-content/uploads/2020/01/Animal-Cell-Diagram.jpg | **Plant Cell**  Plant Cell - The Definitive Guide | Biology Dictionary |