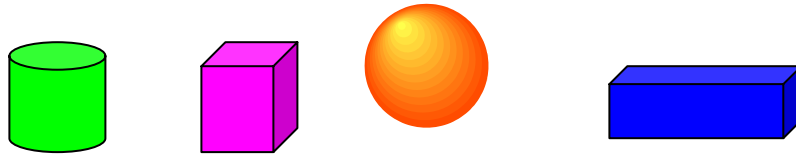


## Characteristics of Cells

Cells look flat in a picture but they are 3 DIMENSIONAL in shape. They also come in many shapes and sizes.



## Unicellular Organisms

- ★ Single-celled
- ★ Equipped to “do it all” - Must be very versatile because they do everything for themselves

Examples:

bacteria  
Amoeba  
Some algae  
Yeasts

## Multicellular Organisms

- ★ Many-celled
- ★ Each cell not necessarily equipped to “do it all” – rely on one another.
- ★ Consist of groups of specialized cells
  - ➔ Tissue – group of cells that have the same basic structure and function
    - Epithelial tissue
    - Muscle tissue
  - ➔ Organ - A structure composed of many different tissues that work together to perform a particular function
    - Stomach
    - Heart
  - ➔ System - A group of organs working together
    - Digestive system
    - Respiratory system

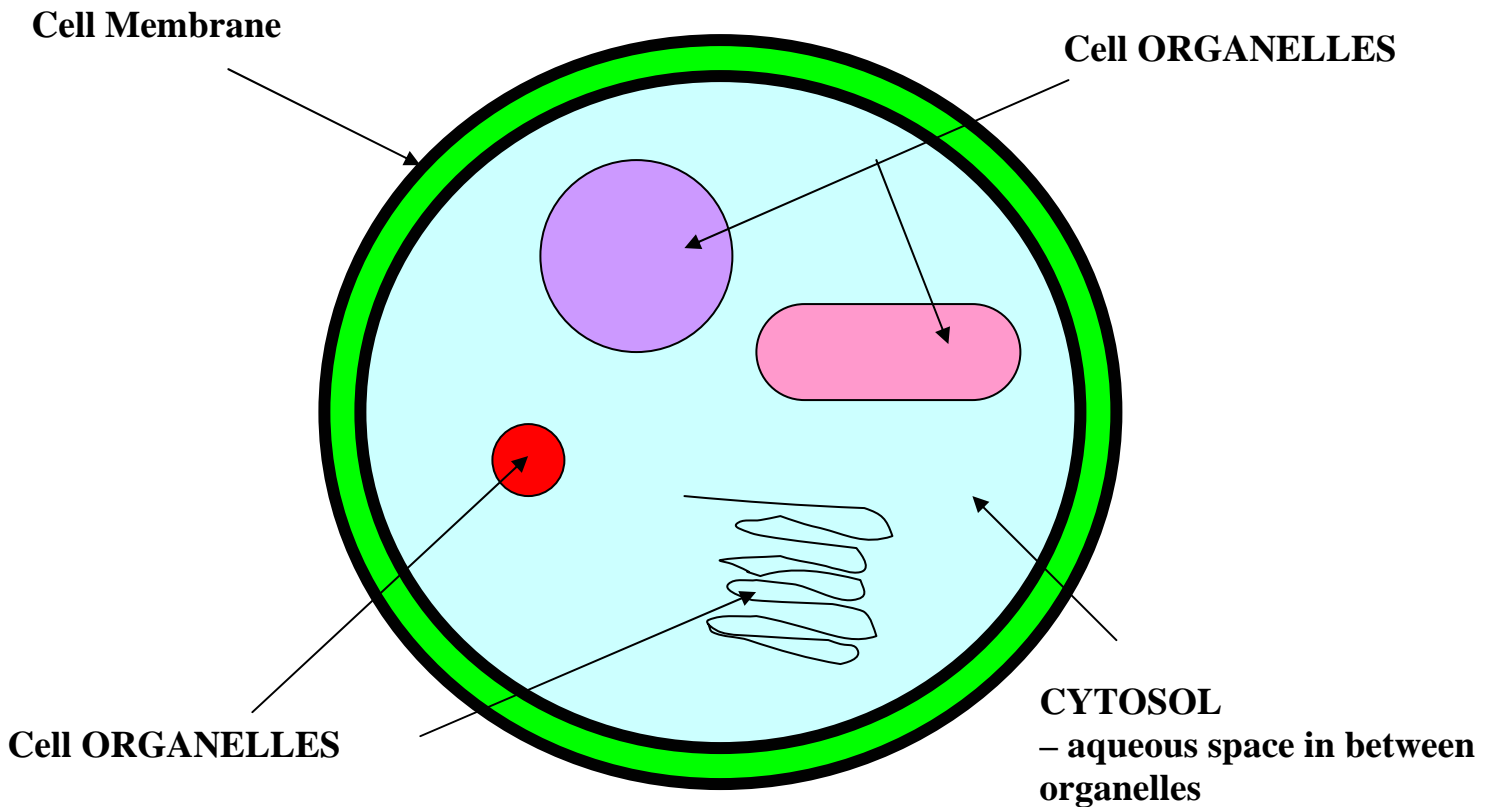
## Eukaryotic Cell Organelles

The **CYTOPLASM** of the cell (jelly like inside) consists of the **CYTOSOL** and **ORGANELLES**.

The cytosol is the aqueous space in between the organelles.

Organelles are specialized compartments inside the cytoplasm of a cell.

Each organelle carries out one or more specific functions for the cell.



## **What types of functions do organelles perform?**

- Some supply energy to other parts of the cell**
- Some use energy to make molecules for the cell**
- Some package these products for delivery to other sites inside or outside the cell**
- Some act as “highways” to traffic molecules throughout the cell**
- Some contain the genetic information of the organism**

**Organelles in a cell are constantly working 24 hours a day, 7 days a week, throughout our ENTIRE EXISTANCE on earth!!**

**Our different tissues, organs, and systems have organelles that are SPECIALIZED for the type of work that is necessary to keep each tissue, organ, and system working.**

**This SPECIALIZATION has allowed the single-celled eukaryotes to evolve into multicellular organisms!**