

What are Cells?

Name: _____

Date: _____

Cells

- Basic building blocks of _____
- _____: any life form that consists of one cell
- Many of the organisms that Leeuwenhock and Pasteur examined can live almost _____
 - Examples: bacteria, yeast, algae, and protozoa
 - Bacteria are among the _____ of the unicellular creatures
- The unit μm stands for _____
- Bacteria can be as small as _____
- Human hair is about _____
- Eggs laid by birds are _____, so the largest single cell is an ostrich egg!
- _____: organisms contain more than one cell
- Can contain millions or even _____ of cells
- Human body is thought to contain _____
- Animals and plant cells are _____
- Even at that size there's room for _____ on the period at the end of a sentence.

Cell Parts

- Cells are made up of many parts that form a _____.
- Cells are an organized collection of material protected by a thin “skin” or _____.
- Cell Membrane is formed by two layers of _____ molecules with special proteins scattered throughout.
- Things needed to _____ life are constantly passing in and out of cells.
- Cell membrane is selectively _____.
- _____ Permeable: controls what materials are allowed in and out of the cell.
- Water and gases can easily pass _____ and _____ of the cell through the cell membrane.
- _____ molecules do not enter and exit the cell as easily.
- The _____ in the cell membrane help the larger molecules pass through.

- Located throughout the inside of the cell is a fluid known as _____.
 - It is a complex _____.
 - Contains many tiny structures that make, package, store, and transport everything the cell needs to carry on the _____ of life.
- Cell membranes and cytoplasm are found in _____ plant and animal cells.
- Plant cells contain a _____.
- _____: provides additional structure to help plants hold their shape.

Cell Transport

- God designed the cell with some incredibly complex _____ systems.
- _____: the movement of molecules from an area of high concentration to an area of less concentration.
- If you have been in a _____ when strong-smelling foods are cooking, you have observed diffusion at work.
- Diffusion of molecules also happens in _____.
- _____ Diffusion: the process of proteins embedding in the cell membrane to help move molecules in and out of the cell.
- There are _____ in the cell membrane that allow some small molecules, like oxygen and carbon dioxide, to enter and exit.
- This process happens with water molecules by _____.
- _____: refers to the diffusion of water molecules through a membrane.
- Types of transportation to and from the cell
 - _____ Transport
 - _____ Transport
- Passive Transport: no _____ required to move molecules in and out of a cell.
 - Molecules from area of _____ concentration to areas of _____ concentration.
 - Examples: diffusion, facilitated diffusion, and osmosis
- Active Transport: _____ is required to move molecules in and out a cell.
 - Molecules go from areas of _____ concentration to areas of _____ concentration.
 - _____ specific types of active transport processes are endocytosis and exocytosis.

- _____ : if energy is used to send materials out of the cell.
- _____ : if energy is used to bring materials into the cell.