

Name _____ My unit test is on: _____

Cells: UNIT STUDY GUIDE

Cell Theory:

All living things are composed of **CELLS**

Cells are the basic units of **LIFE** and are found in all living things.

All cells are produced from other **CELLS**.

The invention of the **MICROSCOPE** made it possible for people to discover and learn about cells.

A microscope is a scientific instrument that makes small objects look **LARGER**.

GROWTH is the process by which a living thing becomes larger.

Cells take in **NUTRIENTS** to grow and develop.

REPRODUCTION is the process by which cells or organisms make more cells or organisms like themselves.

All **LIVING** things reproduce.

During reproduction living things pass **GENETIC** information (DNA) to their offspring.

Asexual reproduction requires only **ONE** parent cell (the cell splits).

New cells produced by asexual reproduction are **EXACT** copies of the parent cell.

Sexual reproduction requires **TWO** parent cells.

The two parent cells combine **GENETIC** information (sperm & egg).

The new cells have a combination of characteristics of **BOTH** parents.

An **ORGANELLE** is a part of the cell that has a specific function.

A **VACUOLE** is the storage area for the cell and stores needed materials.

The **CELL MEMBRANE** controls what comes into the cell and what leaves the cell.

The **NUCLEUS** is the control center and directs the cell's activities.

CHLOROPLASTS are found in plant cells and capture energy from sunlight.

The **CYTOPLASM** is a gel-like fluid that fills the cell.

Cells take in nutrients, grow and divide through a process called **MITOSIS**.

DIFFUSION is the movement of a substance from high concentration to low concentration.

OSMOSIS is the diffusion of water molecules across a semi-permeable membrane.

PASSIVE transport is the movement of materials through the cell membrane without using the cell's energy.

ACTIVE transport is the movement of materials through the cell membrane that requires energy.

A **CELL** is the basic unit of structure and function for all living things.

ORGAN is a structure in the body composed of many tissues. Ex: Heart, Lung

Any living thing is called an **ORGANISM**. Ex: Human, Flower, Dog, Grass, Deer

An **ORGAN SYSTEM** is many organs together that perform specific functions in an organism's body. Ex: Circulatory, Skeletal

TISSUES are similar cells grouped together that perform the same function.

On the test you should be able to label the following organelles on a cell diagram:

- cytoplasm**
- nucleus**
- cell membrane**
- mitochondria**
- chloroplasts**
- cell wall**

WORD BANK:

active
both
cell
cell membrane
cells
cells
chloroplast
cytoplasm
Diffusion
exact
genetic

genetic
growth
larger
life
living
microscope
mitosis
nucleus
nutrients
one
organ

organ system
organelle
organism
osmosis
passive
reproduction
tissues
two
vacuole