

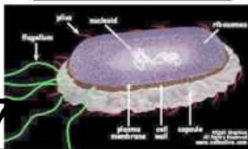
Do Now (5 min)

2-9-11

Bonus question:
What is a *composite*
cell?

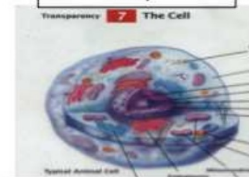
List any/all details you know about the
following types of cells

Prokaryotic



- virus
- bacteria
- no nucleus
- flagella
- no organelles

Eukaryotic



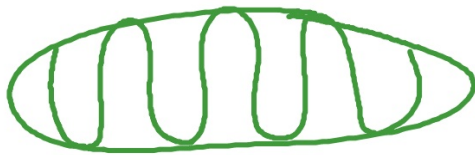
- have nucleus
- plant/animal
cells
- no flagella
- have organelles

Do Now :-) (5 min)

2-10-11

Draw a **Mitochondria**, and write one or more sentences describing its *function*.

Picture



Sentence

- Power center
of the cell

- has 2 membranes
(like a skin)
- Outer is smooth
- inner is rough

T:

Cells Part #2: The Organelles Inside

2-9-11
9

Agenda

- ~~1.~~ Do Now (5 min)
 - ~~2.~~ Objectives (2.5 min)
 3. Organelles (5 min)
 - ~~4.~~ Website Exploration (40 min)
 - ~~5.~~ Closing (1 min)
 - ~~6.~~ Exit Slip (5 min)
 - ~~7.~~ Participation Grades (2.5 min)
-

30 min → you

Objectives (2.5 min)

70 min → us

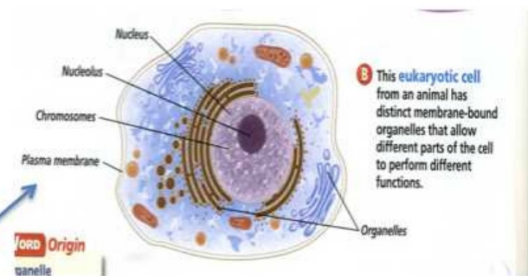
- Content (The objectives you'll master today)
- **SWBAT:**
 1. *Explain the function and draw pictures of all the major organelles in a eukaryotic cell*
- Language (How you will master the objectives)
- **By:**
 1. *Reading about eukaryotic cells on a website*
 - a) *Writing notes on a worksheet*
 - b) *Drawing pictures of the organelles on a worksheet*

SWBAT: Explain the function and draw pictures of all the major organelles in a eukaryotic cell by reading about eukaryotic cells on a website, writing notes on a worksheet and also drawing pictures of the organelles



| : Organelles (5 min)

-The cell is made up of many organelles:
(structures that perform certain jobs within a cell)



Some organelles we will learn about 😊

SWBAT: Explain the function and draw pictures of all the major organelles in a eukaryotic cell by reading about eukaryotic cells on a website, writing notes on a worksheet and also drawing pictures of the organelles

Website Exploration (40 min)

Directions:

Step #1: Navigate to

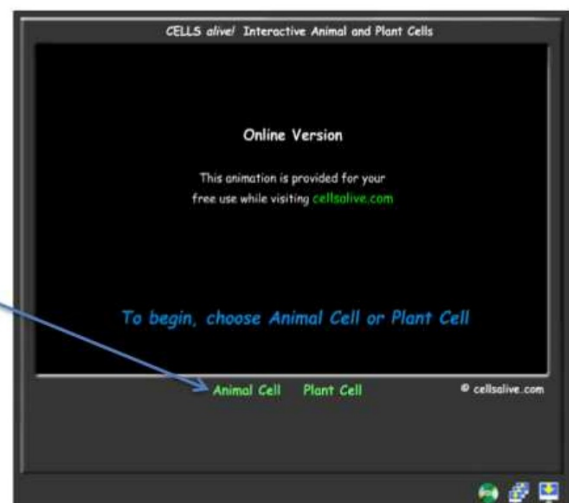
http://www.cellsalive.com/cells/cell_model.htm

Step #2: Click on "Animal Cell"

Step #3: Explore the website to fill out your worksheet (We will do one together first!)

Step #4: When you are done, call over Mr. Schy to review your work

NOTE If you do not finish...HW!

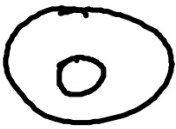


SWBAT: Explain the function and draw pictures of all the major organelles in a eukaryotic cell by reading about eukaryotic cells on a website, writing notes on a worksheet and also drawing pictures of the organelles

Name _____ Date _____ Block _____
 A&P Organelles (Function/Drawings)
 2/8/11
 Schy

Use the website: http://www.cellsalive.com/cells/cell_model.htm to complete the following chart ©



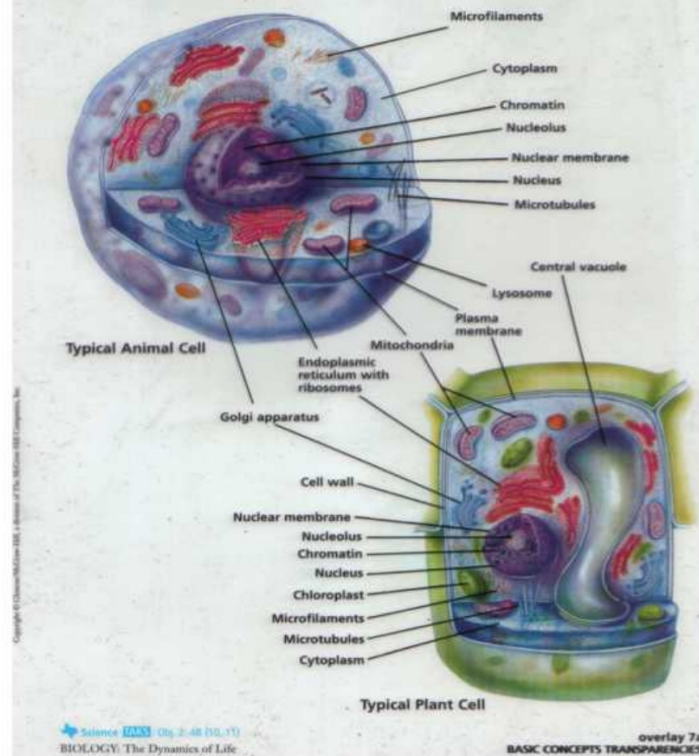
Name of Organelle	Drawing of Organelle	Function in an Animal Cell	Other Important Details
Nucleus		- communicates w/ other cell parts - contains DNA	- DNA tells the cell its job (Boss)
Nucleolus			
Cytosol			

II. Parts of the Cell

-
- The cell is made up of many **organelles**:
structures that perform certain jobs within a cell (enclosed by a membrane)
 - Just like jobs in a factory, organelles do different specific jobs
-

Transparency **7** The Cell

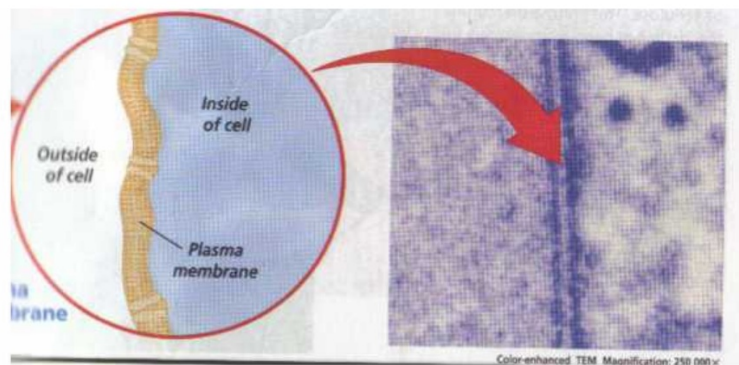
BASIC CONCEPTS
Use with Chapter 7,
Section 7.3



Cell

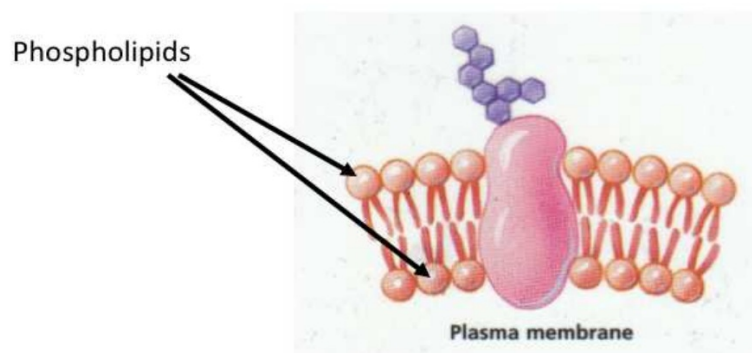
Plasma Membrane's Job in the Cell

- A thin sheet-like boundary between the cell and the outside environment
- Keeps a balance in the cell called homeostasis



Composition of the Plasma Membrane

- The plasma membrane is made up of two layers of phospholipids:

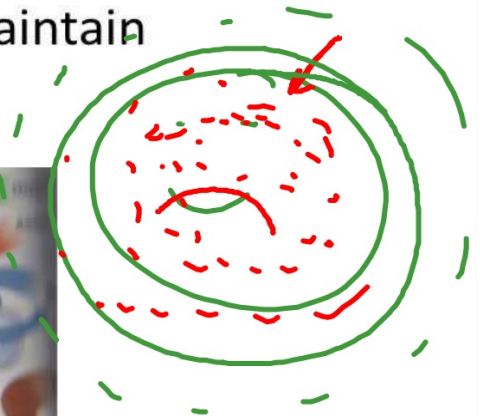
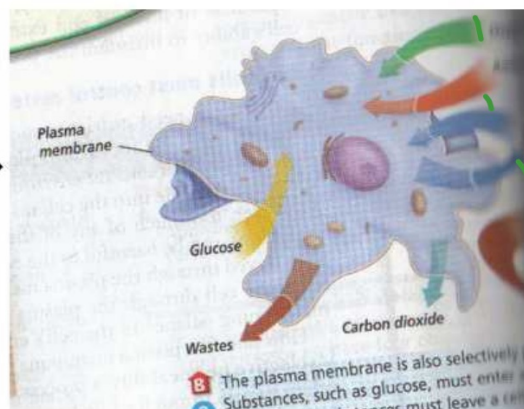


cell

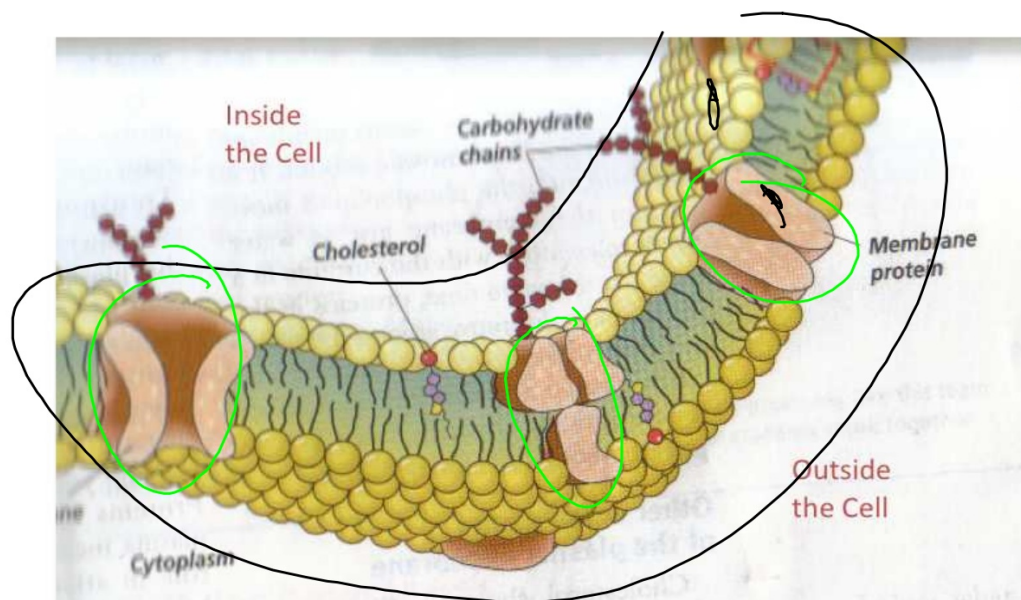
Key Terms (Plasma membrane)

Selective permeability - when the plasma membrane only allows certain molecules into and out of the cell. This helps maintain homeostasis.

Selective Permeability →

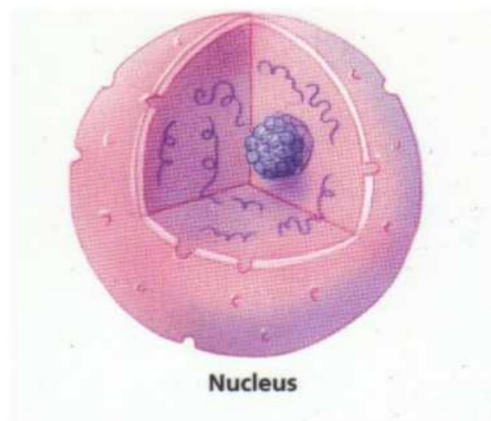


Picture of the Plasma Membrane

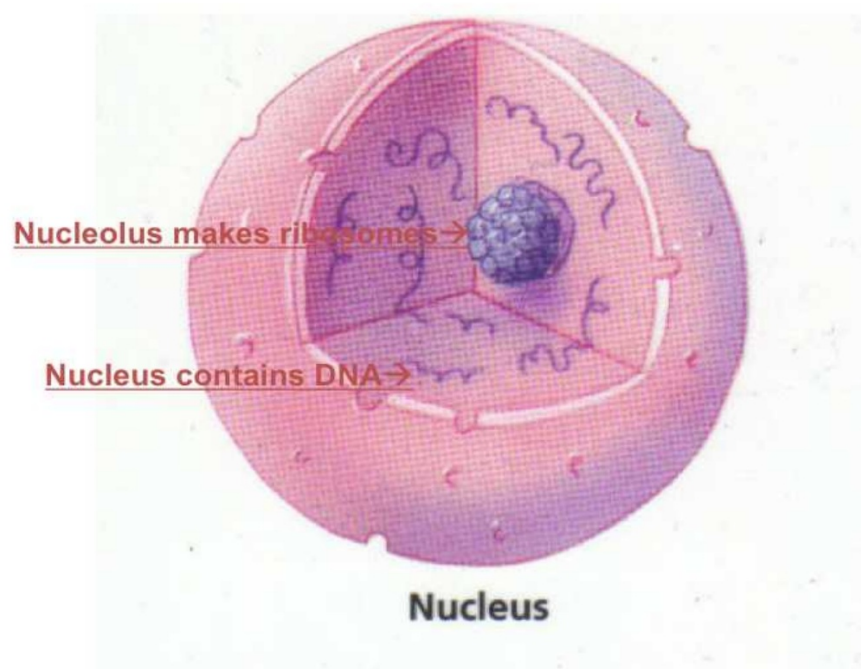


Nucleus

- the control center of the cell
- stores DNA which contain directions for making proteins.



Picture of the Nucleus

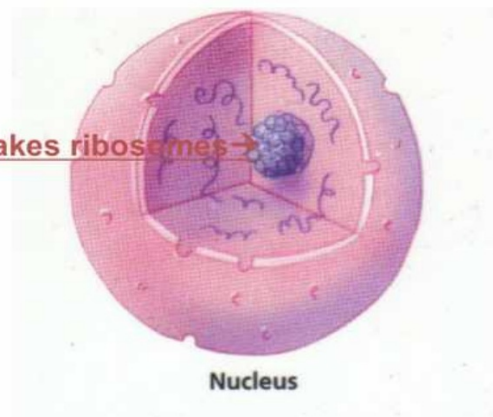


Nucleolus

- found inside the nucleus
- produces ribosomes (makers of protein)

-Picture of the nucleolus:

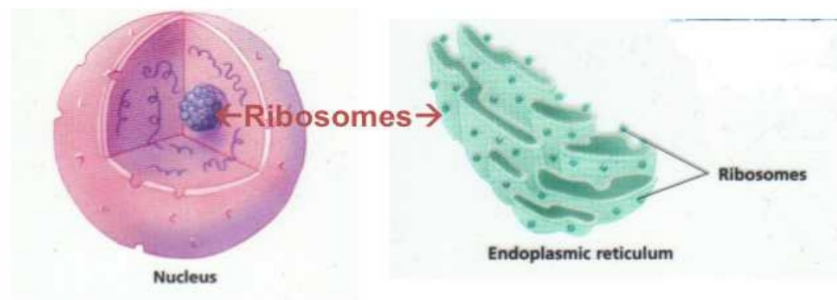
Nucleolus makes ribosomes →



Ribosomes

- make protein
- made up of rRNA
- after ribosomes are made inside the nucleolus, they leave the nucleus by the nuclear pores and attach to the E.R. where they make proteins.

Picture of
Ribosomes:

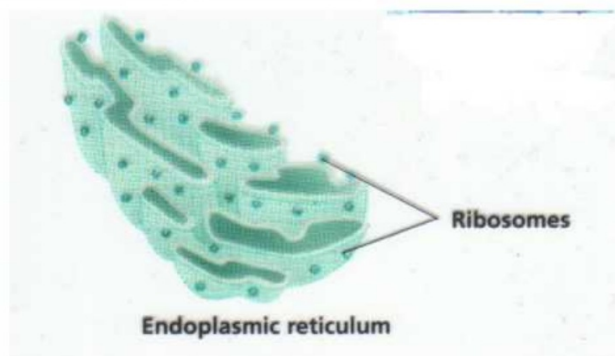


Endoplasmic Reticulum (E.R.)

- There are 2 kinds of E.R.:
 - Rough E.R. makes proteins.
 - Smooth E.R. makes lipids (fats).
- The E.R. is made up of long tubes which provide a place for protein and lipid synthesis to occur.
- Synthesis means to make.

E.R.

Picture of Rough E.R.:

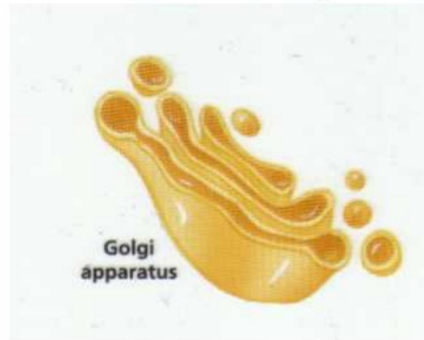


-Smooth E.R. looks the same except there are no ribosomes on it.

Golgi Complex

- sorts and packages proteins and lipids made in the E.R.
- made up of vesicles which send proteins and fats around the cell
- The Golgi Apparatus is like the post office of the cell!

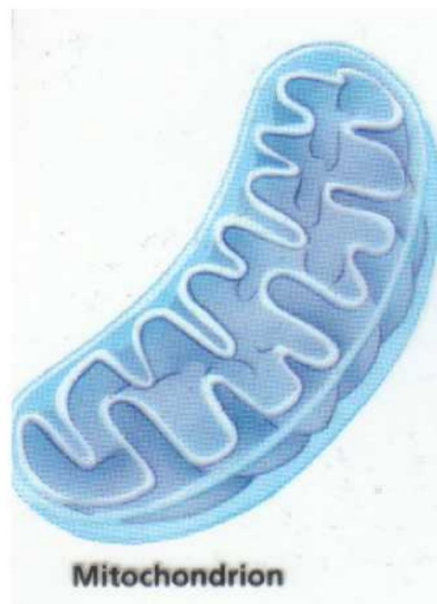
Picture of
the Golgi:



Mitochondria

- the “powerhouse” of the cell because it breaks down sugar into energy in the form of ATP.
 - is a double, membrane-bound structure
 - ATP is the energy the cell can use to complete its life processes
-

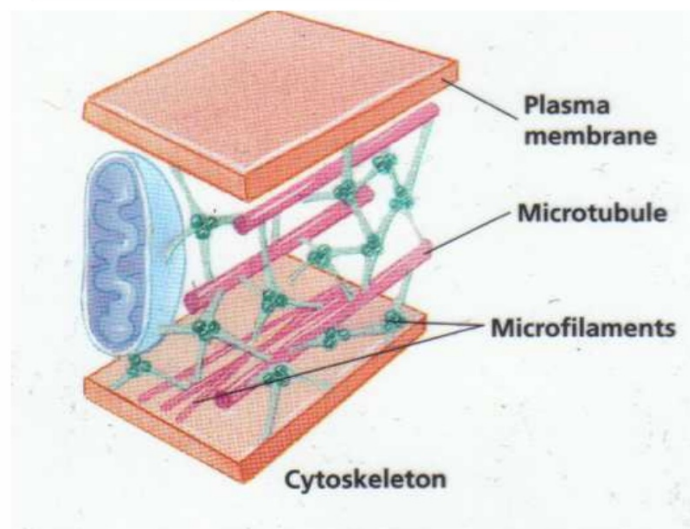
Picture of the Mitochondria



Cytoskeleton

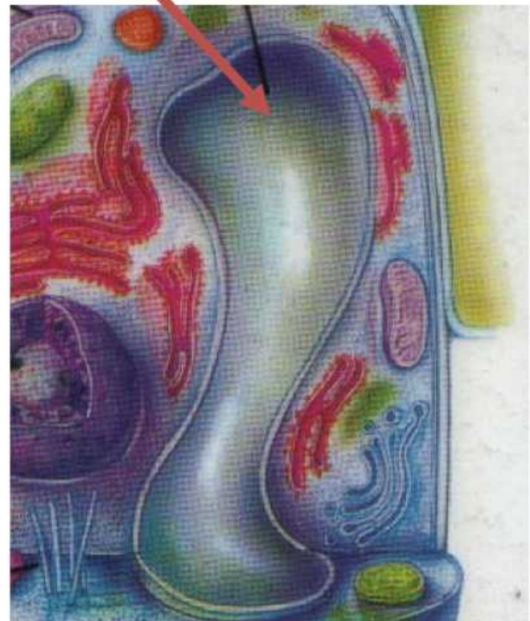
- supports organelles inside the cell
- acts as the “skeleton” of the cell
- made up of microtubules and microfilaments

Picture of the Cytoskeleton:



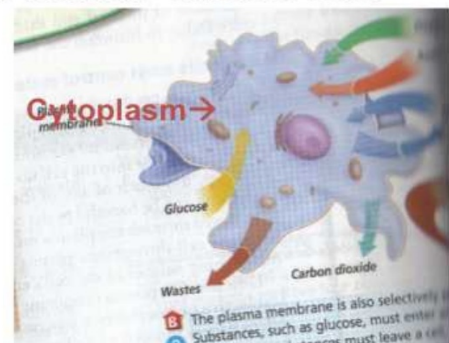
Vacuole

- stores food and water
- a bag-like structure
- Large** vacuoles are only found in plants!



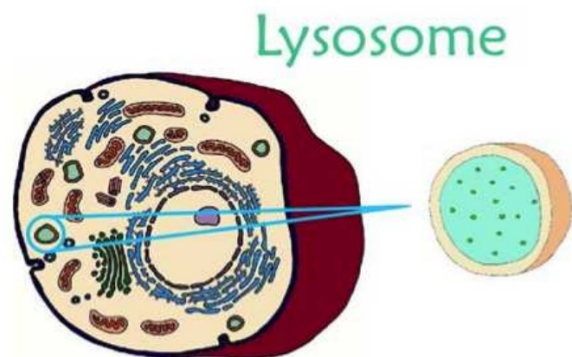
Cytoplasm

- provides support for the organelles
- jelly-like fluid inside the cell
- The cytoplasm moves around to provide nutrients to the different organelles inside the cell. The cytoplasm helps circulate materials inside the cell.



Lysosome

- -contain digestive enzymes
 - Digest old/worn out organelles, nutrient particles, viruses, bacteria



Closing/**HW** (1 min)

- Did you master the following objectives?

Content (The objectives you'll master today)

SWBAT:

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By:

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Exit Slip (5 min)

(Try) Without using your notes...

1. Draw a **Mitochondria**
 2. What is the function of a **Mitochondria** in an animal cell?
 3. What is some other important information to know about the **Mitochondria**?
-

Participation Grades (2.5 min)

- Each day **YOU** will decide the grade you deserve...Though, I reserve the right to change these.
 - Your 5-point daily participation grade is based on CLA's core-values:
 - CLA Students are S.M.A.R.T.
 - S = Self-Controlled
 - M = Motivated
 - A = Accountable
 - R = Respectful
 - T = Timely
 - One point for each core-value
 - (5 points possible each day)
 - What do you deserve today?
-