

# Do Now

2-3-11

Together, up here on the board, lets draw a picture of a eukaryotic animal cell

# Cells: The Building Blocks of Life

2-3-11

# Agenda

1. Do Now (5 min)
2. Objectives (2.5 min)
3. Characteristics of Life (10 min)
4. Cell Theory (10 min)
5. Eukaryotic vs. Prokaryotic (22.5 min)
6. Closing (2.5 min)
7. Exit Slip (5 min)
8. Participation Grades (2.5 min)

# Objectives (2.5 min)

- Content (The objectives you'll master today)
- **SWBAT:**
  1. *Compare and contrast Eukaryotic and Prokaryotic Cells*
- Language (How you will master the objectives)
- **By:**
  1. *Writing notes based on the PowerPoint*
    - a) *Discussing the topic with a partner*

**SWBAT:** Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner



# I. The Cell

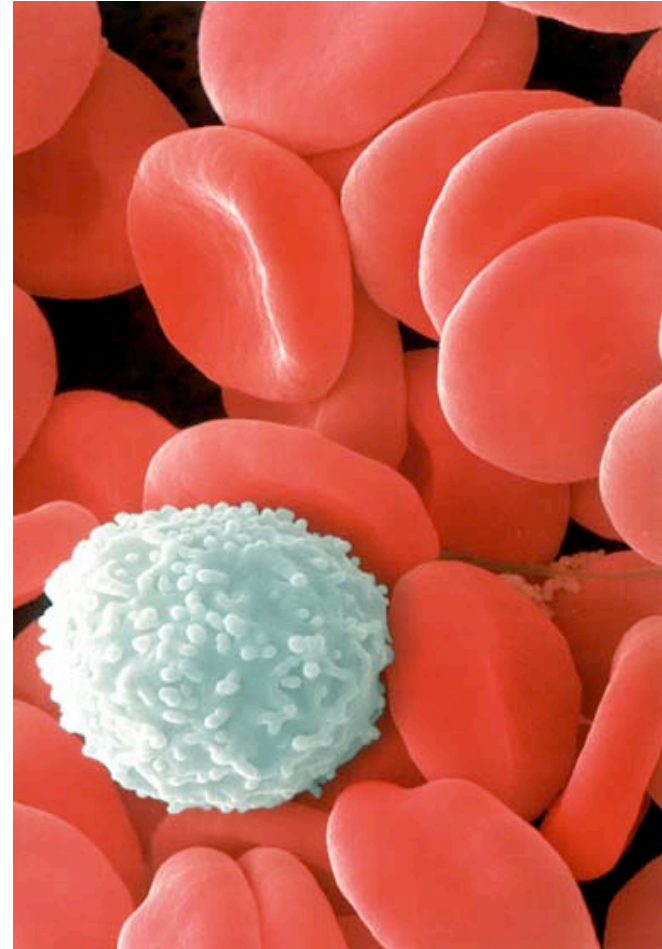
-The cell is the basic building block of life; all living things are made up of cells.



*SWBAT: Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner*

# Some Specialized Functions of Cells

- Red Blood Cells carry oxygen around the body
- Neurons (brain cells) send electrical signals around the brain
- Bacteria can invade the body
- White blood cells attack invaders and defend the body
- Muscles cells contract and relax to move the body (or pump blood)



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# Characteristics of Life (10 min)

What makes something alive?

- has an orderly structure
- reproduces
- grows and develops
- adjusts to changes in the environment

**SWBAT:** Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner

# Are these things alive?

Plant

air

wind

animals

bacteria

viruses

protests

rocks

fungi

soil

fire

water



# Cell Theory (10 min)

-In the 1830's something called the "Cell Theory" became a popular way of describing life in terms of cells.

-The **cell theory** is made up of three main ideas:

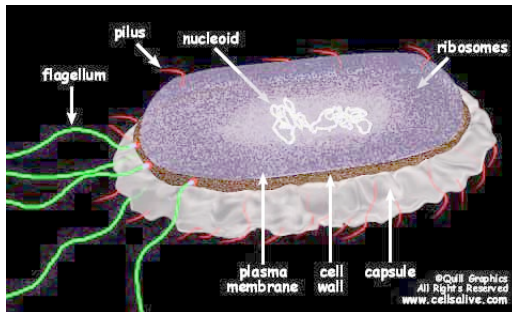
1. **All living things are made up of one or more cells.** An organism may be made up of one cell, such as bacteria, or may be multicellular, that is have many cells, such as plants and animals.
2. **Cells are the basic unit of structure and organization of organisms.** Although organisms such as humans, dogs and trees can become very large and complex, the cell remains the simplest, most basic part of an organism.
3. **All cells come from preexisting (other) cells.** This means that a cell comes from a parent cell (one parent cell divides to become two daughter cells).

***SWBAT:** Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner*

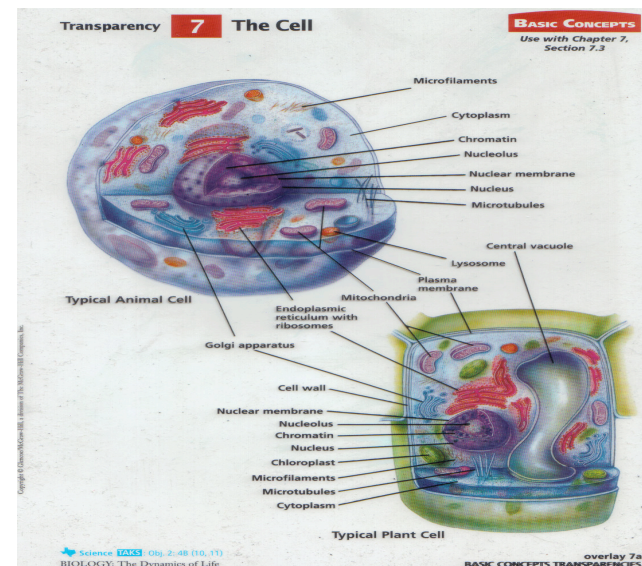
# 2 Types of Cells (22.5 min)

-There are two types of cells:

1. Prokaryotic cell



2. A Eukaryotic cell

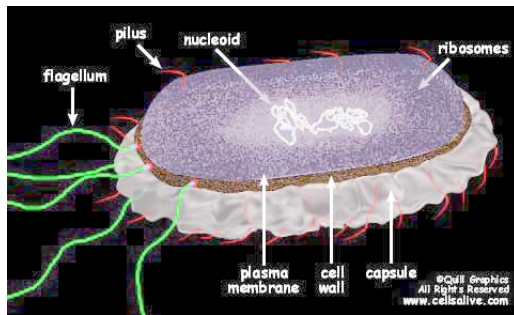


**SWBAT:** Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner

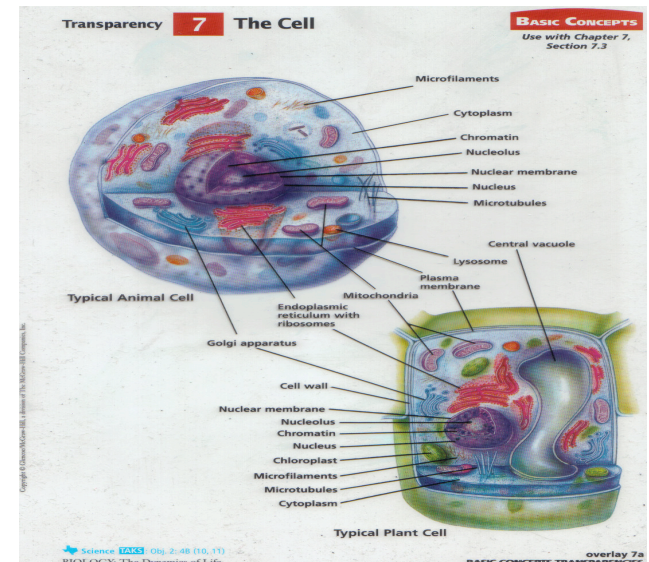
## 2 Types of Cells (22.5 min)

**Cell organelles:** structures that perform certain jobs within a cell (enclosed by a membrane)

1. Prokaryotic cell:  
have **no** organelles (no nucleus).



2. A Eukaryotic cell:  
has organelles (nucleus).

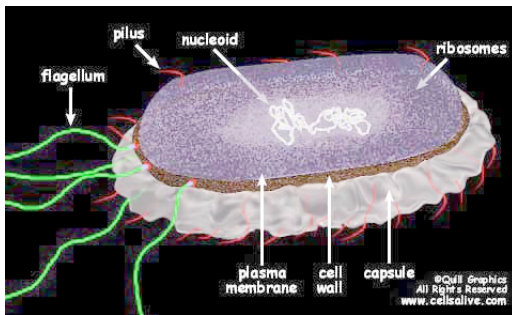


*SWBAT: Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner*

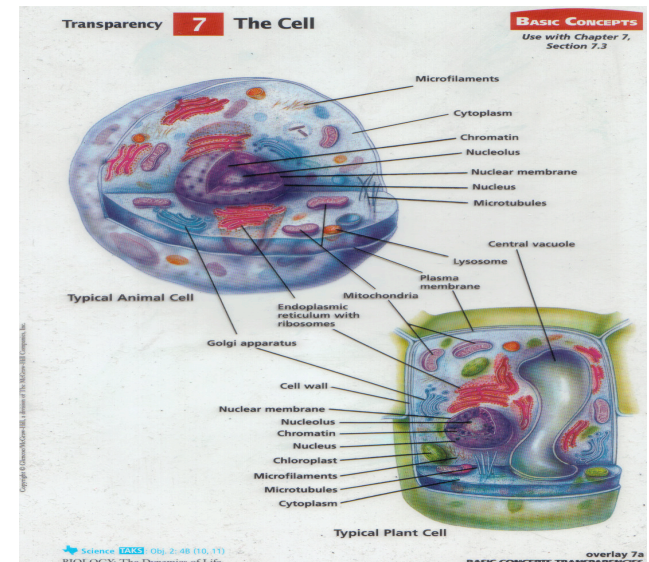
## 2 Types of Cells (22.5 min)

**Cell organelles**: structures that perform certain jobs within a cell (enclosed by a membrane)

1. Prokaryotic have no organelles (no nucleus).  
Ex: Bacteria or viruses



2. A Eukaryotic cell has organelles (nucleus).  
Ex: Plant and animal cells.





# 2 Types of Cells (22.5 min)

**SWBAT:** Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner

**Composite Cell:** (a diagram of a cell that contains all of the possible cell organelles)

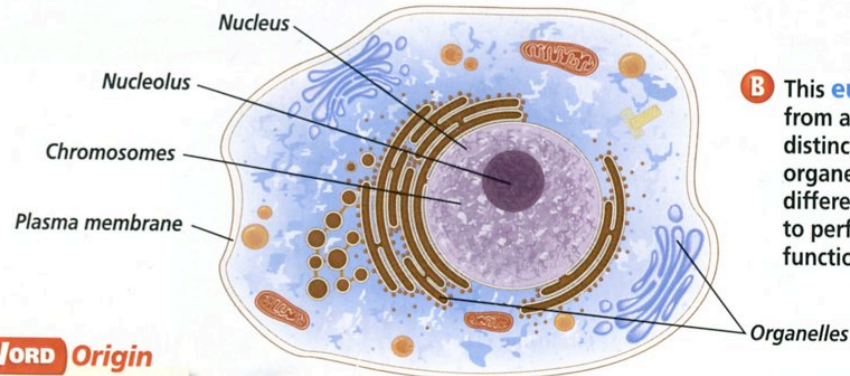
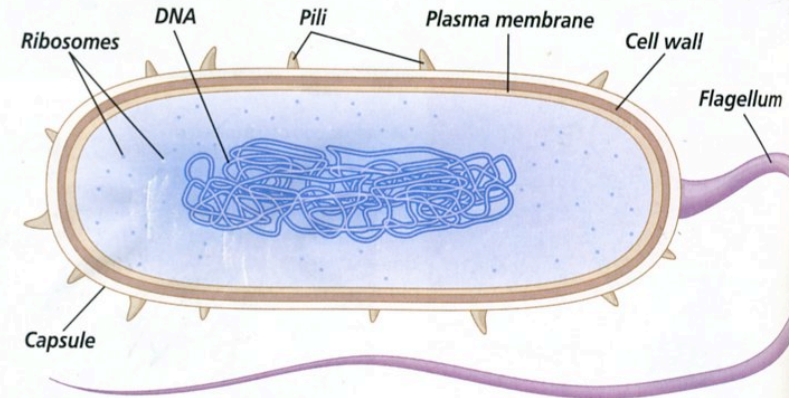
-real cells do not have all of these parts...

-a **composite cell** just shows you all of the organelles a cell could possibly have 😊

**Figure 7.2**

Bacteria and archaeobacteria are prokaryotes. All other organisms are eukaryotes.

**A** A **Prokaryotic cell** does not have internal organelles surrounded by a membrane. Most of a prokaryote's metabolic functions take place in the cytoplasm.



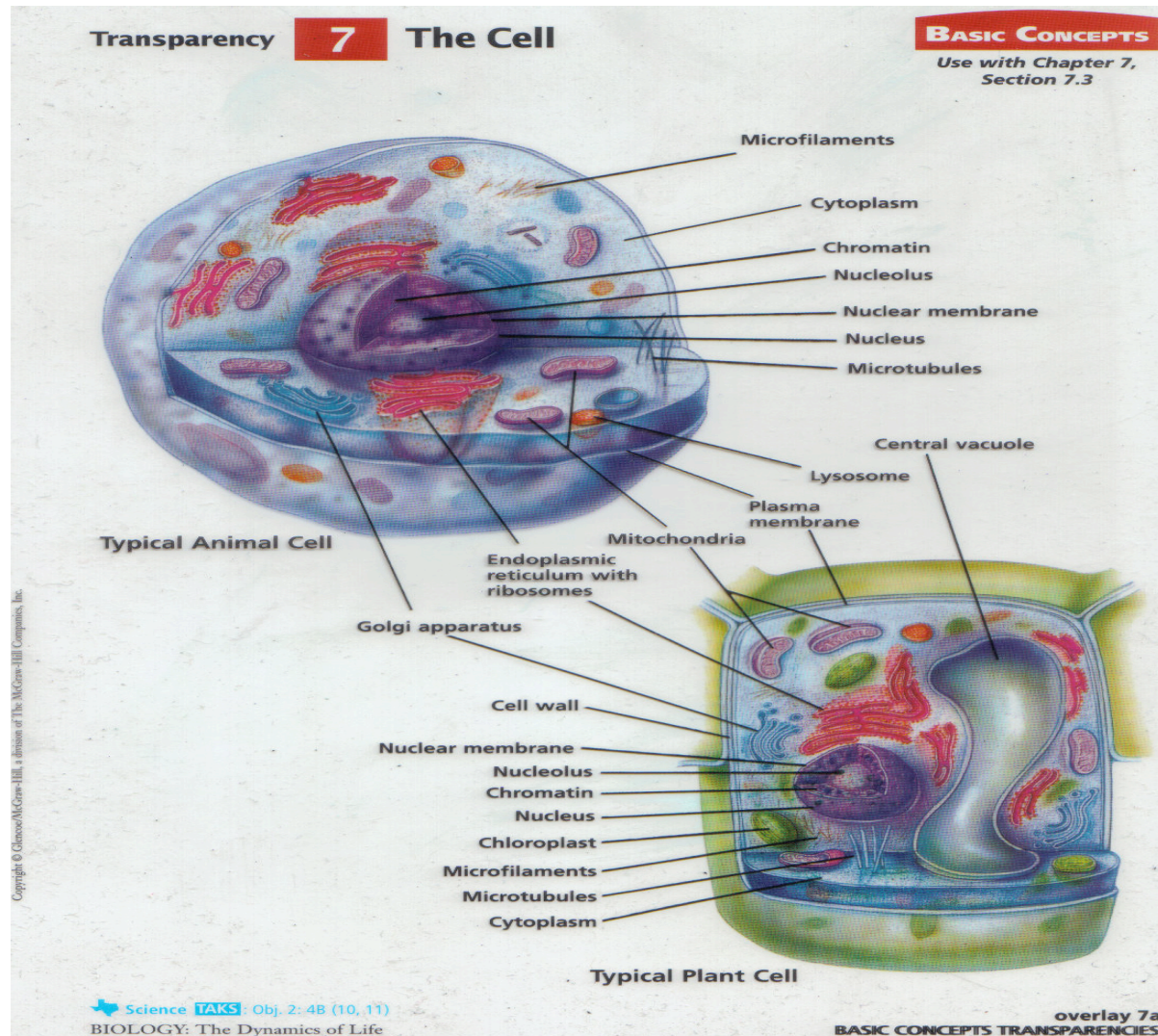
**B** This **eukaryotic cell** from an animal has distinct membrane-bound organelles that allow different parts of the cell to perform different functions.

**WORD** Origin  
organelle

**SWBAT:** Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner

# On Which Type Will We Focus?

Plant and Animals



**SWBAT:** Compare and contrast Eukaryotic and Prokaryotic Cells by writing notes based on the PowerPoint and by discussing the topic with a partner

# Prokaryote vs. Eukaryote

Prokaryote:

Eukaryote:

# Prokaryote vs. Eukaryote

Prokaryote:

(bacteria)

-has no

nucleus

-has no

organelles

Both:

-are living

-have DNA

-have

ribosomes

-are cells

Eukaryote:

(plants, animals)

-has organelles (has  
a nucleus)



# Closing/**HW** (2.5 min)

- Did you master the following objectives?

Content (The objectives you'll master today)

**SWBAT:**

1. *Compare and contrast Eukaryotic and Prokaryotic Cells*

Language (How you will master the objectives)

**By:**

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## Exit Slip (5 min)

- On a separate sheet of paper, write your **NAME, DATE, and BLOCK at the top.**

None today!

# Participation Grades (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?