

# Biology Warm-up 11/9/17

Draw two columns in your journal; label one “agree” and one “disagree”. Write the following statements in one of your columns!

\*Cells are all pretty much the same shape.

\*All cells have a nucleus.

\*All living things are made of cells.

\*All organisms are multicellular.

\*Cells are full of a fluid called cytoplasm.

\*Animal cells have cell walls.

\*Living things grow because their cells get larger.

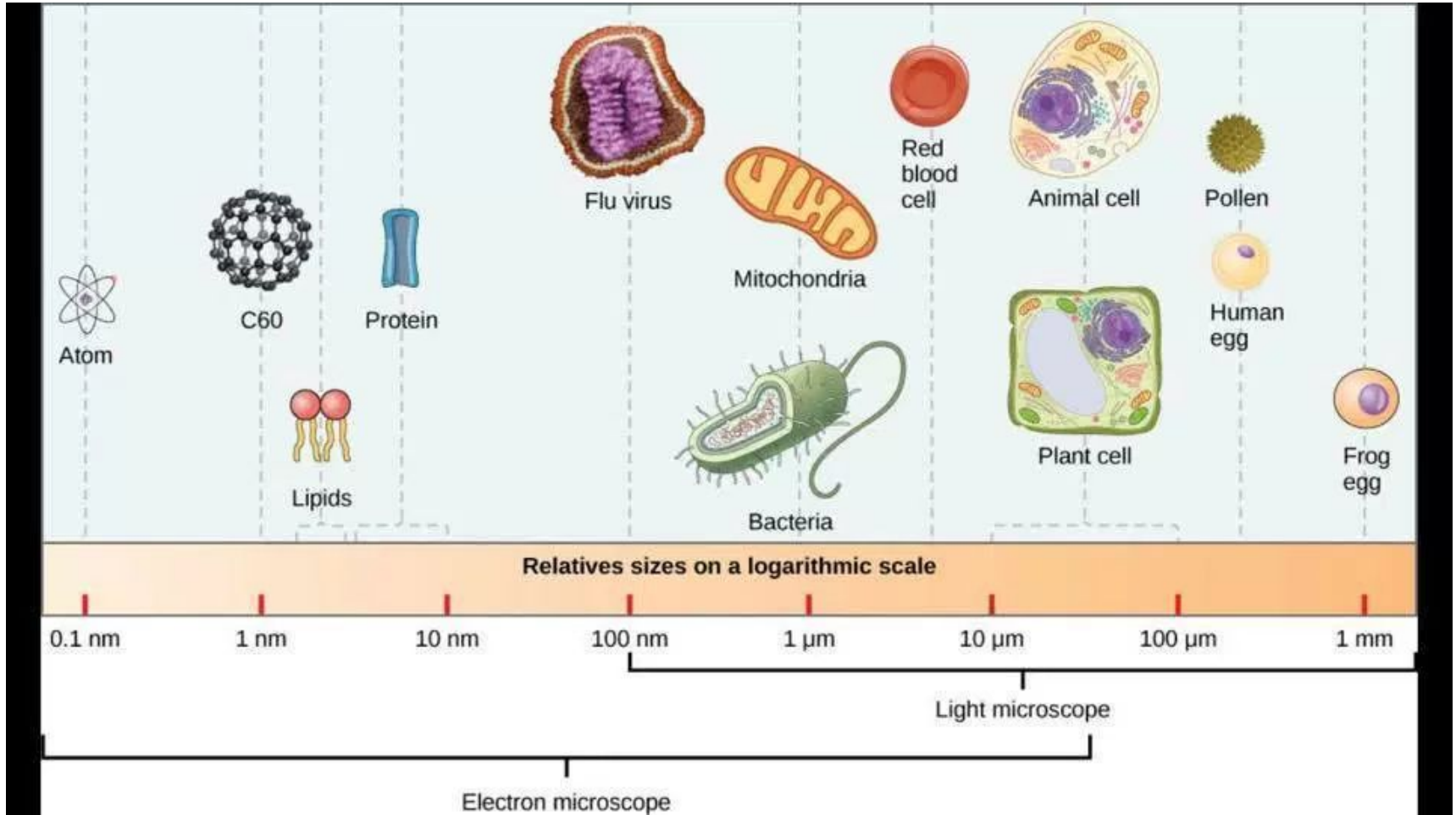
\*Plant cells have cell walls.

\*Cells have lipids, proteins, DNA, and carbohydrates inside them

A decorative border composed of a repeating pattern of dark gray triangles with white outlines, arranged in a larger triangular shape. The triangles are oriented with their vertices pointing towards the center of the border.

**[https://www.biologycorner  
.com/microquiz/](https://www.biologycorner.com/microquiz/)**

# Cells come in many shapes and sizes





# All Cells:

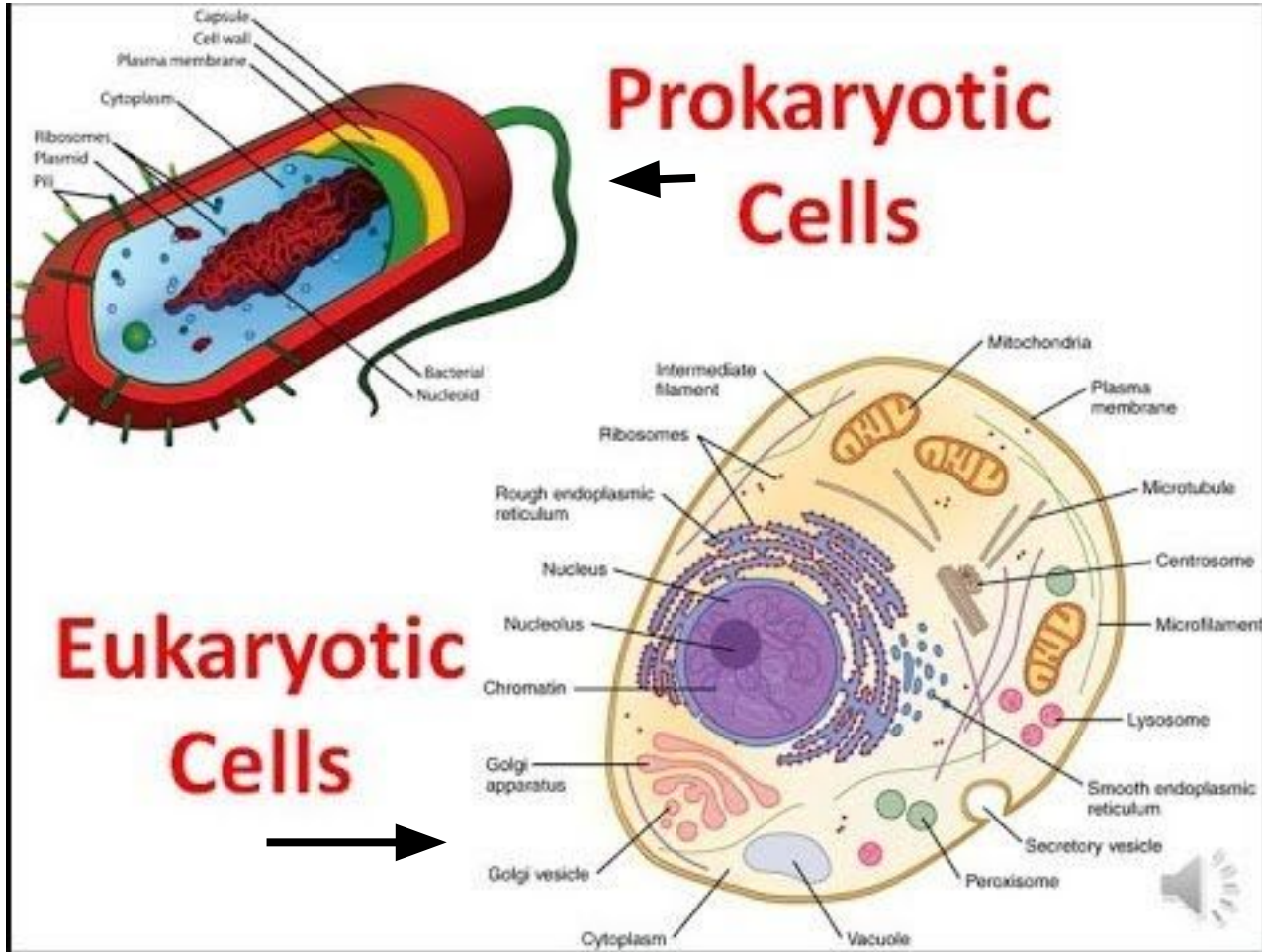
- have **cell membranes** made of lipids, which protects the cell from its surroundings
- are filled with **cytoplasm**, a watery gel
- come from the division of other cells
- contain DNA



# Two Types of Cells

How are they different?

# Cells can be separated into two broad categories.



# Vocab Flipbooks!

Prefix:

Meaning:

Example:

Pro-

“before”

Prokaryote

Eu-

“true”

Eukaryote

Root:

Meaning:

Example:

Karyon

“nut”

Prokaryote/Eukaryote

# Prokaryotes:

- no nucleus (Pro-No!)
- small (0.1 - 5  $\mu\text{m}$  )
- no organelles, everything happens in the cytoplasm
- examples: bacteria, archaea



Bacilli



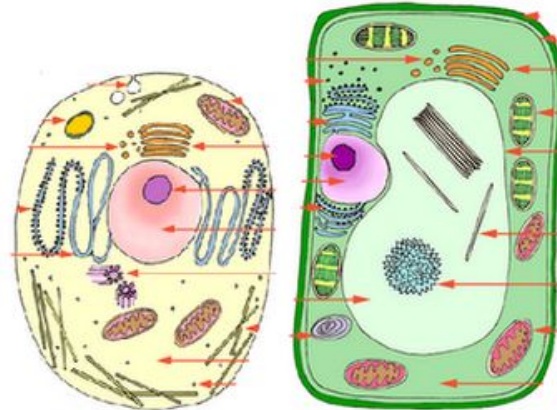
Cocci



Spirilli

# Eukaryotes:

- DNA housed in nucleus
- bigger (10-100  $\mu\text{m}$ )
- organelles provide spaces for specialized functions
- examples: plants, animals (You are a Eu-!)



Animal cell

Plant cell





# Microscope “Mystery”!!

Visit the 8 different microscope stations. Sketch and describe what you see, then try to identify each type of cell!

# Identification Guide

Multicellular; long, thin rectangular cells with nuclei. *Onion root.*

Hair-like, skinny cells; no inner structures visible; tend to clump. *Bacillus subtilis*

Tiny, clear circles *Azotobacter chroococcum*

Long strings of connected cells; spiralling structures; large round organelles in some; *Spirogyra (algae)*

Squishy cells with no shape, swirled together; large pockets, nuclei; *human skin*

Rounded diamond-shaped cells, striped, lots of nuclei; *heart muscle*

Extension Activity: [www.cellsalive.com](http://www.cellsalive.com)

- Interactive Cell Models - be able to name cell structures!
  - Plant/Animal
  - Bacteria
- Use your textbook (7.2) to learn more about the organelles!