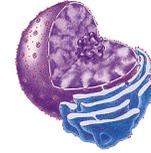


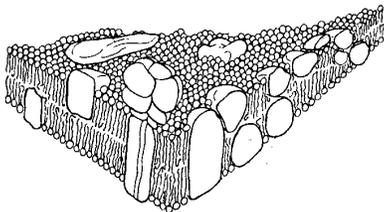
# Parts of Prokaryotic & Eukaryotic Cells



## CELL THEORY

1. All living things are made of \_\_\_\_\_.
2. Cells are the basic unit of \_\_\_\_\_ & \_\_\_\_\_ in an organism.
3. All cells come from the reproduction of \_\_\_\_\_ cells.

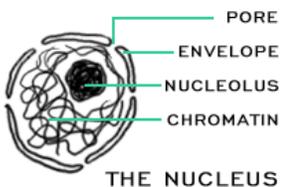
## CELL MEMBRANE MODEL



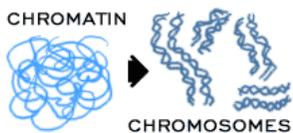
- Phospholipids and proteins move \_\_\_\_\_ or side to side for short distances.
- Proteins make a pattern on the surface known as the \_\_\_\_\_ model.

## NUCLEUS and NUCLEOLUS

### NUCLEUS is:



- Surrounded by \_\_\_\_\_ MEMBRANE called the NUCLEAR \_\_\_\_\_
- Serves as the \_\_\_\_\_ CENTER OF CELL
- Nuclear \_\_\_\_\_ allow molecules in and out
- CONTAINS CELL'S GENETIC MATERIAL ( \_\_\_\_\_ )
- Contains NUCLEOLUS (Dark spot) which makes \_\_\_\_\_ (RNA)

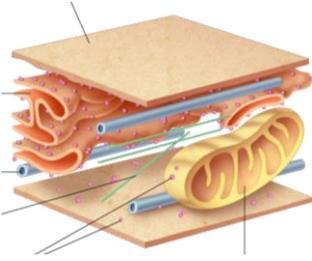


### DIVIDING CELLS

DNA is scrunched up as \_\_\_\_\_ in DIVIDING CELLS

DNA is spread out as \_\_\_\_\_ in NON-

# CYTOSKELETON



Made of PROTEINS called \_\_\_\_\_ and \_\_\_\_\_

FUNCTION: \_\_\_\_\_  
\_\_\_\_\_

# LYSOSOMES

Sac containing \_\_\_\_\_

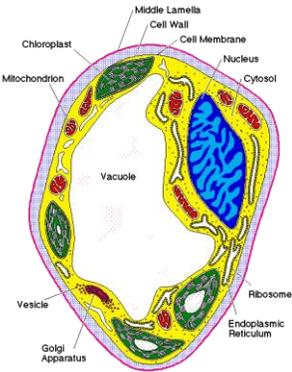
FUNCTION:

Digests: \_\_\_\_\_

Plays a role in \_\_\_\_\_ "programmed cell death"  
Cell suicide for the good of the \_\_\_\_\_

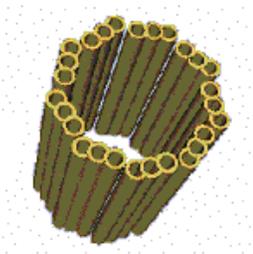
# VACUOLE

STORAGE SPACE FOR: \_\_\_\_\_



Huge in \_\_\_\_\_ cells, small in \_\_\_\_\_  
cells, NOT in \_\_\_\_\_ cells.

# CENTRIOLES



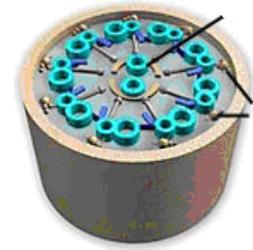
Made of PROTEINS called \_\_\_\_\_

Only seen in \_\_\_\_\_ cells during cell division

Function: \_\_\_\_\_

## ***CILIA & FLAGELLA***

Made of **PROTEINS** called \_\_\_\_\_  
organized in a \_\_\_\_\_ arrangement  
that help with \_\_\_\_\_



**CILIA:** \_\_\_\_\_ & \_\_\_\_\_  
**FUNCTION** \_\_\_\_\_

**FLAGELLA:** \_\_\_\_\_ & \_\_\_\_\_  
**FUNCTION** \_\_\_\_\_

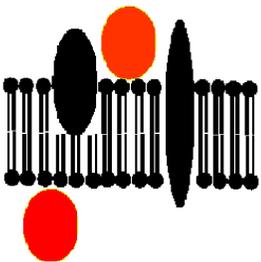
## ***RIBOSOMES***

Can be \_\_\_\_\_ in the cytosol or \_\_\_\_\_ to  
the surface of Rough ER

**MADE OF** \_\_\_\_\_ & \_\_\_\_\_  
**FUNCTION:** \_\_\_\_\_

## ***CELL MEMBRANE or PLASMA MEMBRANE***

Made mainly of \_\_\_\_\_ and \_\_\_\_\_



**HYDROPHOBIC** "tails" of phospholipids make molecules line up  
as a **LIPID** \_\_\_\_\_ with **POLAR** heads facing  
\_\_\_\_\_ and **NON-POLAR** tails facing \_\_\_\_\_

Proteins attached to surface (inside or outside)=  
\_\_\_\_\_

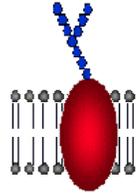
Proteins stuck into membrane = \_\_\_\_\_  
(can go part way in or all the way through)

Membranes are \_\_\_\_\_ when  
they allow certain molecules to pass through; but keep others out.

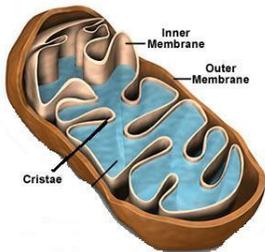
\_\_\_\_\_ is the "gel-like material + organelles" between nucleus and cell membrane

### OTHER MOLECULES:

- **GLYCOPROTEINS** with attached \_\_\_\_\_ tails to recognize self
- Contain the steroid \_\_\_\_\_ to make membranes more flexible



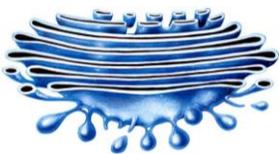
### MITOCHONDRION (plural: MITOCHONDRIA)



Surrounded by \_\_\_\_\_ membrane.  
Contains its own \_\_\_\_\_.  
Called the \_\_\_\_\_ of cell  
Burns \_\_\_\_\_ to release energy.  
Stores energy released as \_\_\_\_\_.  
\_\_\_\_\_ outer membrane

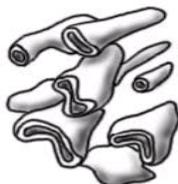
Folded inner membrane = \_\_\_\_\_ (increases  
\_\_\_\_\_ for more chemical reactions)

### GOLGI APPARATUS (BODY)



Looks like a stack of flattened \_\_\_\_\_.  
FUNCTION: Modify, sort, and package substances from ER for \_\_\_\_\_ out of cell.

### ENDOPLASMIC RETICULUM(ER)



Internal network of \_\_\_\_\_.

Rough ER: Attached ribosomes make \_\_\_\_\_ which are modified & exported.

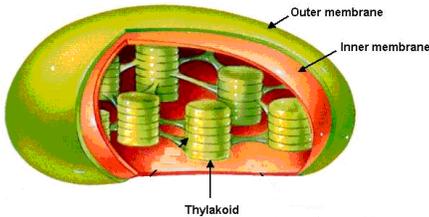
## ROUGH ER / SMOOTH ER

Rough ER has \_\_\_\_\_ on its surface, while \_\_\_\_\_ does not.

FUNCTION ROUGH ER: \_\_\_\_\_

FUNCTION SMOOTH ER: \_\_\_\_\_

## CHLOROPLASTS



Surrounded by \_\_\_\_\_ membrane

Has its own \_\_\_\_\_

Outer membrane \_\_\_\_\_

\_\_\_\_\_ membrane sacs called  
\_\_\_\_\_ contain CHLOROPHYLL where

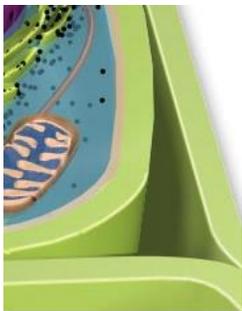
\_\_\_\_\_ happens. Stacks of thylakoids called

\_\_\_\_\_. Gel like material around thylakoids called

\_\_\_\_\_.

FOUND ONLY IN \_\_\_\_\_ CELLS

## CELL WALL



Found OUTSIDE the \_\_\_\_\_.

Provides \_\_\_\_\_ & \_\_\_\_\_.

\_\_\_\_\_ in the cell wall makes plant cells  
sturdy.

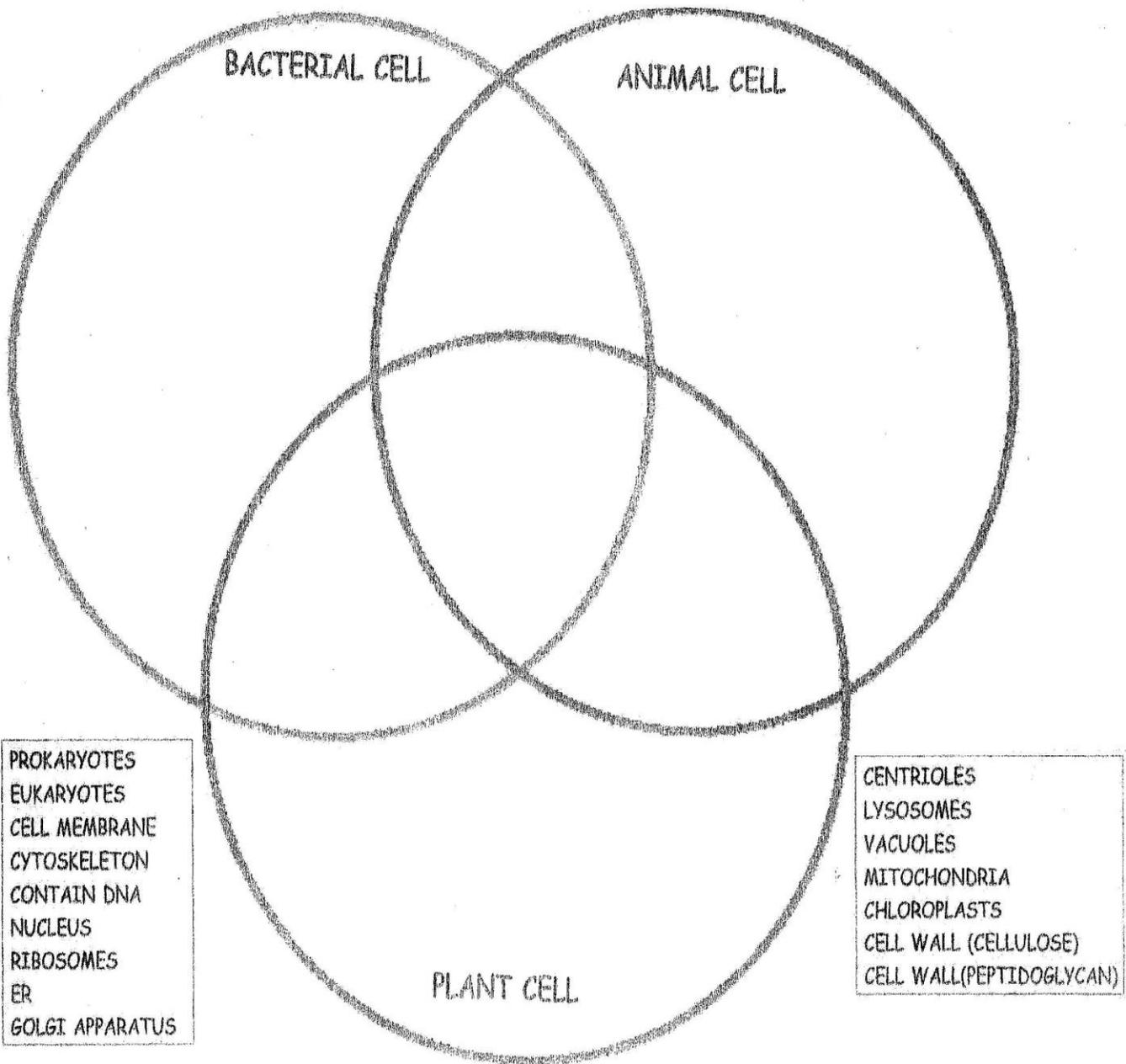
Bacteria have cell walls made of \_\_\_\_\_ instead of  
cellulose.

## PROKARYOTES

\_\_\_\_\_ are the most common prokaryotic cell. They do not have a  
\_\_\_\_\_, but do contain a single \_\_\_\_\_ made of DNA.

Like all cells, bacteria are surrounded by a \_\_\_\_\_ which  
contains the gel-like \_\_\_\_\_ of the cell.

USE WORDS FROM THE WORD BANKS TO COMPLETE THE VENN DIAGRAM COMPARISON



Modified from: [http://brookings.k12.sd.us/biology/other\\_units.htm](http://brookings.k12.sd.us/biology/other_units.htm)