Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Study Guide: Cells & Mitosis**

**TEST: FRIDAY, OCTOBER 11, 2013**

1. Match the following terms & definitions. Draw a line from the term to the definition.
2. A network of membranous canals filled with fluid. CELL THEORY I

They carry materials throughout the cell. This is the

"transport system" of the cell. ENDOPLASMIC RETICULUM

1. They can store materials such as food, water, sugar, ORGANELLE J

minerals and waste products. VACUOLE

C. A structure inside the nucleus where RNA is made NUCLEOLUS

D. a body structure that works to perform a specialized CELL MEMBRANE L

function. Examples include the lung or heart. ORGAN

E. A large number of cells that work together to perform

a specific function. TISSUE CYTOPLASM H

F. Shaped like a bean, this cell organelle helps take food

and manufacture energy from it. Also called the

“powerhouse” of the cell. MITOCHONDRIA RIBOSOME O

G. stacks of flattened membranes that temporarily

store protein which can then leave the cell through

vesicles pinching off from this structure GOLGI BODY NUCLEUS M

H. A jelly-like substance composed mainly of water,

is constantly moving and is where the organelles CELL WALL N

are found. CYTOPLASM

1. A basic principle of biology that states that cells TISSUE E

are the basic unit of structure and function in

living organisms CELL THEORY CHLOROPLAST K

J. The structures of the cell that carry out the

activities that keep the cell alive ORGANELLE MITOCHONDRIA F

K. This organelle is where photosynthesis

takes place. CHLOROPLAST ORGAN D

L. This encloses the cell, only allows certain

things in or out of the cell, provides protection ENDOPLASMIC

and stability CELL MEMBRANE RETICULUM A

M. The “brain” or “control center” of the cell.

It contains DNA. NUCLEUS GOLGI BODY G

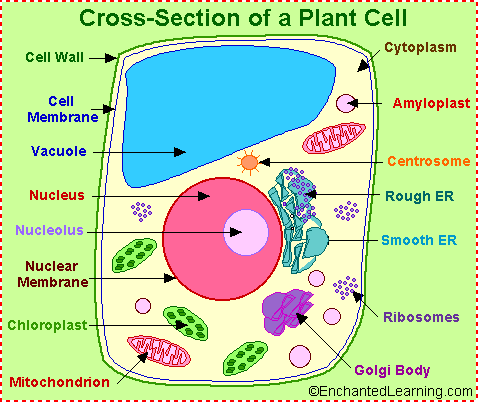
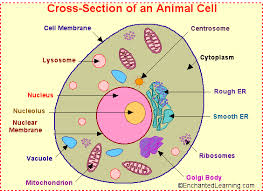
N. Mostly made of cellulose, this is the tough

and rigid outer layer of plant cells. CELL WALL VACUOLE B

O. They produce proteins and can be found

individually in the cytoplasm of on rough ER. RIBSOME NUCLEOLUS C

1. Name the type of cell and identify the missing organelles.

[](http://www.enchantedlearning.com/subjects/biology/cells/) [](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=JfOTm3UGV8uVpM&tbnid=Z2MksMDue0b5eM:&ved=0CAUQjRw&url=http://www.enchantedlearning.com/subjects/animals/cell/&ei=KahVUsuUK5Li9gSQo4HQAQ&bvm=bv.53760139,d.eWU&psig=AFQjCNEmQvDcvr7oENwri07mCImTHMgSDw&ust=1381431577245703)

Type of Cell: \_\_PLANT\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Type of Cell: \_\_\_\_\_\_\_ANIMAL\_\_\_\_\_\_\_\_

A: \_\_\_\_RIBOSOMES\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A: \_\_\_\_\_\_\_\_NUCLEUS\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B: \_\_\_\_VACUOLE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B: \_\_\_\_\_CELL MEMBRANE\_\_\_\_\_\_\_\_\_\_\_

C: \_\_\_\_CELL WALL\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ C: \_\_\_\_\_CYTOPLASM\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. List the 3 components of the Cell Theory (Hint: Look in your Cells Notes)

* ALL LIVING THINGS ARE MADE UP OF CELLS
* THE CELL IS THE BASIC UNIT OF STRUCTURE
* ALL CELLS COME FROM CELLS

1. Who first dicovered cells? \_\_\_\_\_\_\_ROBERT HOOKE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. List the Cell Hierarchy in order from the cell up.

CELL TISSUE ORGAN ORGAN SYSTEM ORGANISM

1. Why do cells divide or undergo Mitosis? List the 3 reasons

* REPRODUCTION
* GROWTH
* REPAIR

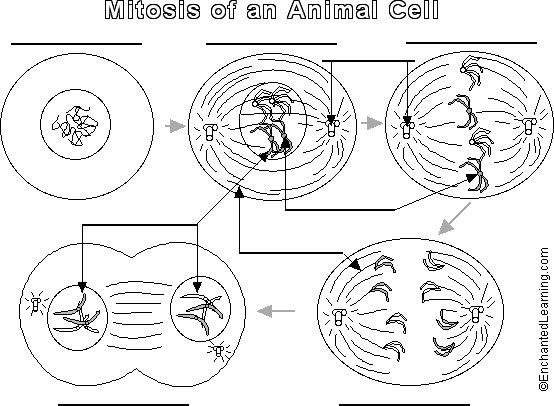
1. Is the statement TRUE or FALSE. Circle your answer.

TRUE FALSE 1. Mitosis takes 1 hour to complete. (24 HRS)

TRUE FALSE 2. Interphase is the longest phase of the cell’s life cycle.

TRUE FALSE 3. At the end of mitosis, 1 daughter cell is produced. (2 DAUGHTER CELLS)

1. Label the Diagram below.

[](http://www.enchantedlearning.com/label/biology.shtml)

CHROMOSOMES

TELOPHASE

ANAPHASE

SPINDLE FIBERS

CENTROMERES

CENTRIOLES

METAPHASE

PROPHASE

INTERPHASE

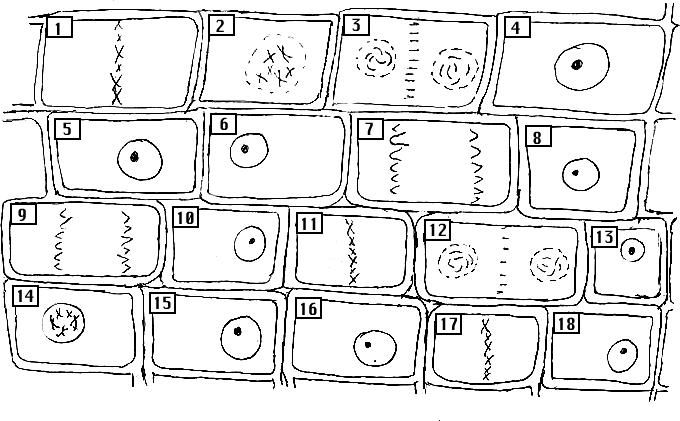
WORD BANK FOR DIAGRAM:

TELOPHASE PROPHASE INTERPHASE ANAPHASE

METAPHASE CENTRIOLES SPINDLE FIBERS CENTROMERES

CHROMOSOMES

1. Identify the stages of Mitosis from the section of onion.



1. \_\_\_\_\_ metaphase\_\_\_\_\_\_

2. \_\_\_\_\_ prophase\_\_\_\_\_\_\_\_

3. \_\_\_\_\_TELOPHASE\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_interphase\_\_\_\_\_\_

5. \_\_\_\_\_INTERPHASE\_\_\_\_\_\_\_\_\_\_\_\_

6. \_\_\_\_\_\_interphase\_\_\_\_\_\_\_

7. \_\_\_\_\_ANAPHASE\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. \_\_\_\_\_\_interphase\_\_\_\_\_\_

9. \_\_\_\_\_\_anaphase\_\_\_\_\_\_

10. \_\_\_ interphase\_\_\_\_\_\_

11. \_\_\_\_\_METAPHASE\_\_\_\_\_\_\_\_\_\_\_

12. \_\_\_\_\_telophase\_\_\_\_\_\_\_

13. \_\_\_\_\_interphase\_\_\_\_

14. \_\_\_\_\_PROPHASE\_\_\_\_\_\_\_\_\_\_\_\_

15. \_\_\_\_interphase\_\_\_\_\_

16. \_\_\_\_\_INTERPHASE\_\_\_\_\_\_\_\_\_\_\_

17. \_\_\_\_\_metaphase\_\_\_\_\_

18. \_\_\_\_\_INTERPHASE\_\_\_\_\_\_\_\_\_\_\_

Which phase appears the most? \_\_\_INTERPHASE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why do you think that phase appears the most? \_\_\_BECAUSE IT’S THE PHASE THE CELL SPENDS MOST OF ITS LIFE CYCLE IN \_\_\_\_\_\_\_