

Name _____

Date _____

Cells Vocabulary List & Definitions

cytoplasm	inherited genetic material in a cell not specified by its own nucleus.
mitochondrion	any of the very tiny rod like or string like structures that occur in nearly all cells of plants and animals, and that process food for energy.
nucleolus	a small spherical body in the nucleus of a cell, consisting of protein and RNA.
nucleus	in biology, the part of a cell that controls growth and reproduction.
organ	in a plant or animal, a specialized structure that performs a particular function, such as the heart.
tissue	the mass of like cells in an animal or plant body, esp. as they form a specific organ.
vacuole	a membranous enclosure within a cell that contains substances isolated from the protoplasm, such as dissolved acids.
cell membrane	the semi-permeable membrane that encloses the contents of a cell; plasma membrane.
cell wall	the rigid outermost layer of a plant cell, which is made of cellulose.
chlorophyll	the green pigment in the leaves and stems of plants that is necessary for the production of plant food by photosynthesis.
chloroplast	a small oval green bit of protoplasm that contains chlorophyll and is the location of photosynthesis.
chromosome	one of the tiny, threadlike, DNA-containing bodies found in the cell nuclei of all plants and animals, responsible for transmitting hereditary characteristics.

Cells Vocabulary Quiz

Directions: Match the vocabulary words on the left with the definitions on the right.

- | | |
|-------------------|---|
| 1. tissue | the central, essential, or highly concentrated part around which other parts are grouped. |
| 2. vacuole | a musical instrument consisting of a keyboard attached to a device that forces air through a number of pipes to produce a wide range of sounds; pipe organ. |
| 3. chromosome | a membranous enclosure within a cell that contains substances isolated from the protoplasm, such as dissolved acids. |
| 4. chlorophyll | the ground protoplasm of cells that is outside the nucleus. |
| 5. cell membrane | any of the very tiny rod like or string like structures that occur in nearly all cells of plants and animals, and that process food for energy. |
| 6. chloroplast | a small spherical body in the nucleus of a cell, consisting of protein and RNA. |
| 7. cell wall | the mass of like cells in an animal or plant body, esp. as they form a specific organ: |
| 8. nucleolus | one of the tiny, threadlike, DNA-containing bodies found in the cell nuclei of all plants and animals, responsible for transmitting hereditary characteristics. |
| 9. organ | the green pigment in the leaves and stems of plants that is necessary for the production of plant food by photosynthesis. |
| 10. cytoplasm | the rigid outermost layer of a plant cell, which is made of cellulose. |
| 11. nucleus | a small oval green bit of protoplasm that contains chlorophyll and is the location of photosynthesis. |
| 12. mitochondrion | the semi-permeable membrane that encloses the contents of a cell; plasma membrane. |

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Cell Organelles

Directions: Describe the functions of each organelle and draw a picture to remind of its function.

cell (plasma) membrane	Function	Draw
cytoplasm		
golgi complex		
lysosome		
mitochondria		
nuclear membrane		
nucleus		
nucleolus		
ribosome		
rough endoplasmic reticulum		
smooth endoplasmic reticulum		
vacuole		

Only In Animal Cells

centriole		
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Only In Plant Cells

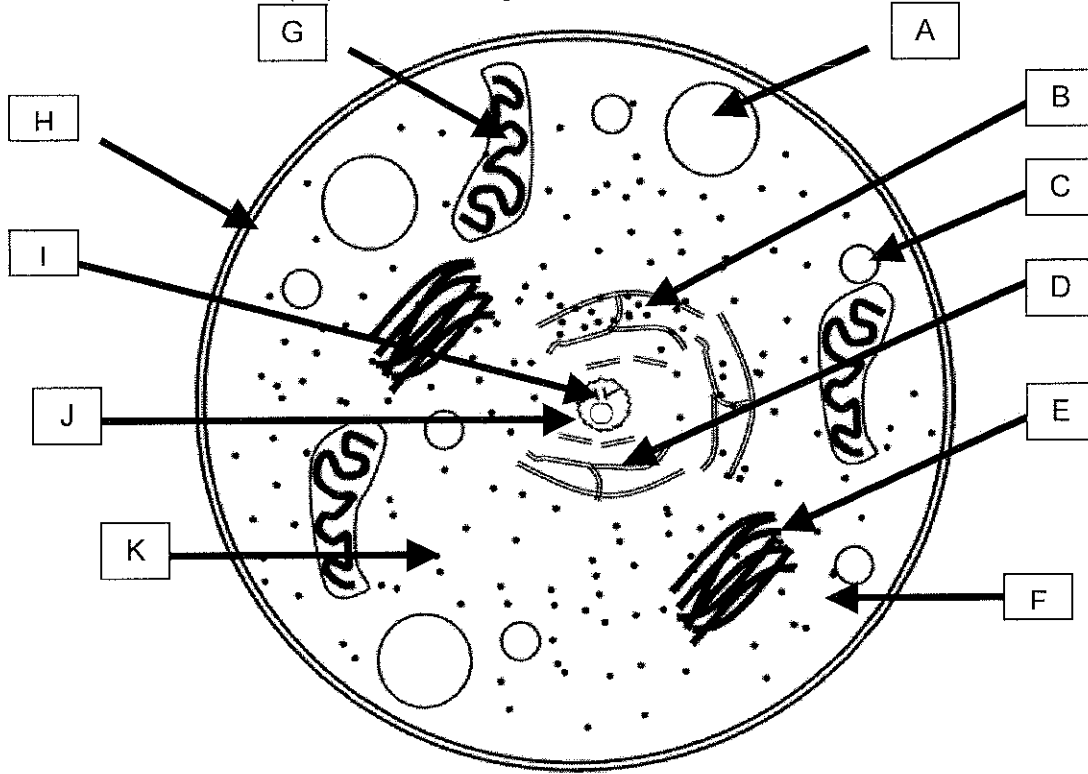
cell wall		
chloroplast		

Name _____

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The Animal Cell

Directions: Place the correct letter in the data table to indicate the correct organelle. Describe the function / purpose of each organelle in the cell.



Organelle	Diagram Location (Letter)	Function
cell (plasma) membrane		
centriole		
cytoplasm		
golgi complex		
lysosome		
mitochondria		
nucleus		
ribosome		
rough endoplasmic reticulum		
smooth endoplasmic reticulum		
vacuole		

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Animal Cell vs. Your School

If you think about it, your school has many parts that allow it to function properly, just like an animal cell. Relate the functions of an animal cell's organelles to parts of your school that have a similar function.

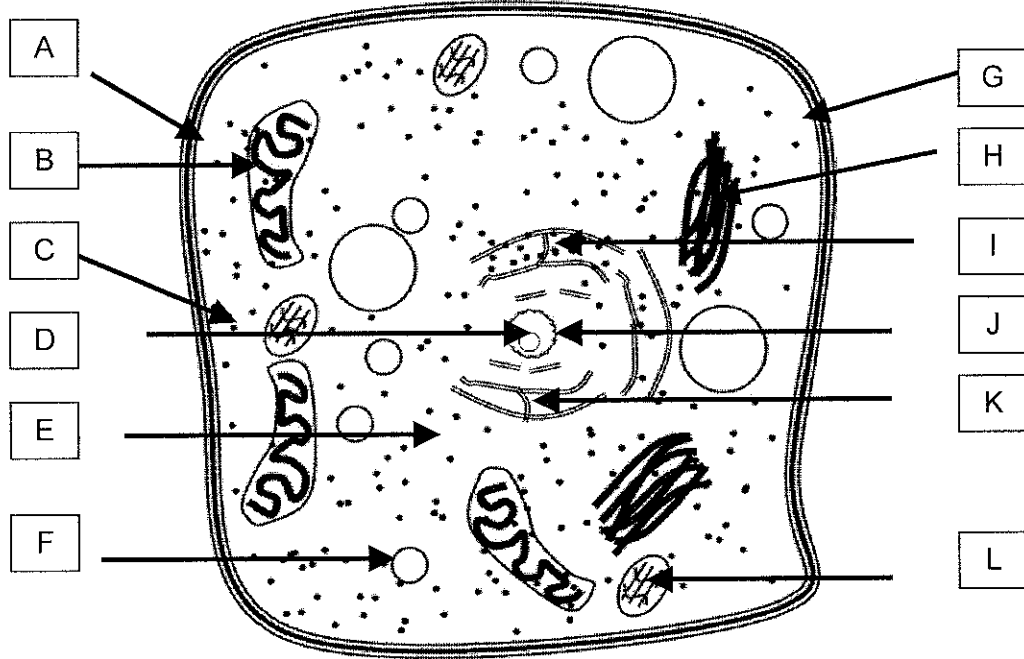
Organelle	Function of organelle in the cell	Name a part of your school that has a similar function
cytoplasm		
golgi complex		
lysosome		
mitochondria		
nuclear membrane		
nucleus		
nucleolus		
ribosome		
rough endoplasmic reticulum		
smooth endoplasmic reticulum		
vacuole		
centriole		
cell (plasma) membrane		

Name _____

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The Plant Cell

Directions: Place the correct letter in the data table to indicate the correct organelle. Describe the function / purpose of each organelle in the cell.



Organelle	Diagram Location (Letter)	Function
cell (plasma) membrane		
cell wall		
cytoplasm		
golgi complex		
chloroplast		
mitochondria		
nuclear membrane		
nucleus		
nucleolus		
ribosome		
rough endoplasmic reticulum		
smooth endoplasmic reticulum		
vacuole		

Name _____

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Plant Cell vs. Your Community

If you think about it, your local community has many parts that allow it to function properly, just like an plant cell. Relate the functions of a plants cell's organelles to parts of your community that have a similar function.

Organelle	Function of organelle in the cell	Name a part of your school that has a similar function
cytoplasm		
golgi complex		
chloroplast		
mitochondria		
nuclear membrane		
nucleus		
nucleolus		
ribosome		
rough endoplasmic reticulum		
smooth endoplasmic reticulum		
vacuole		
cell wall		
cell (plasma) membrane		

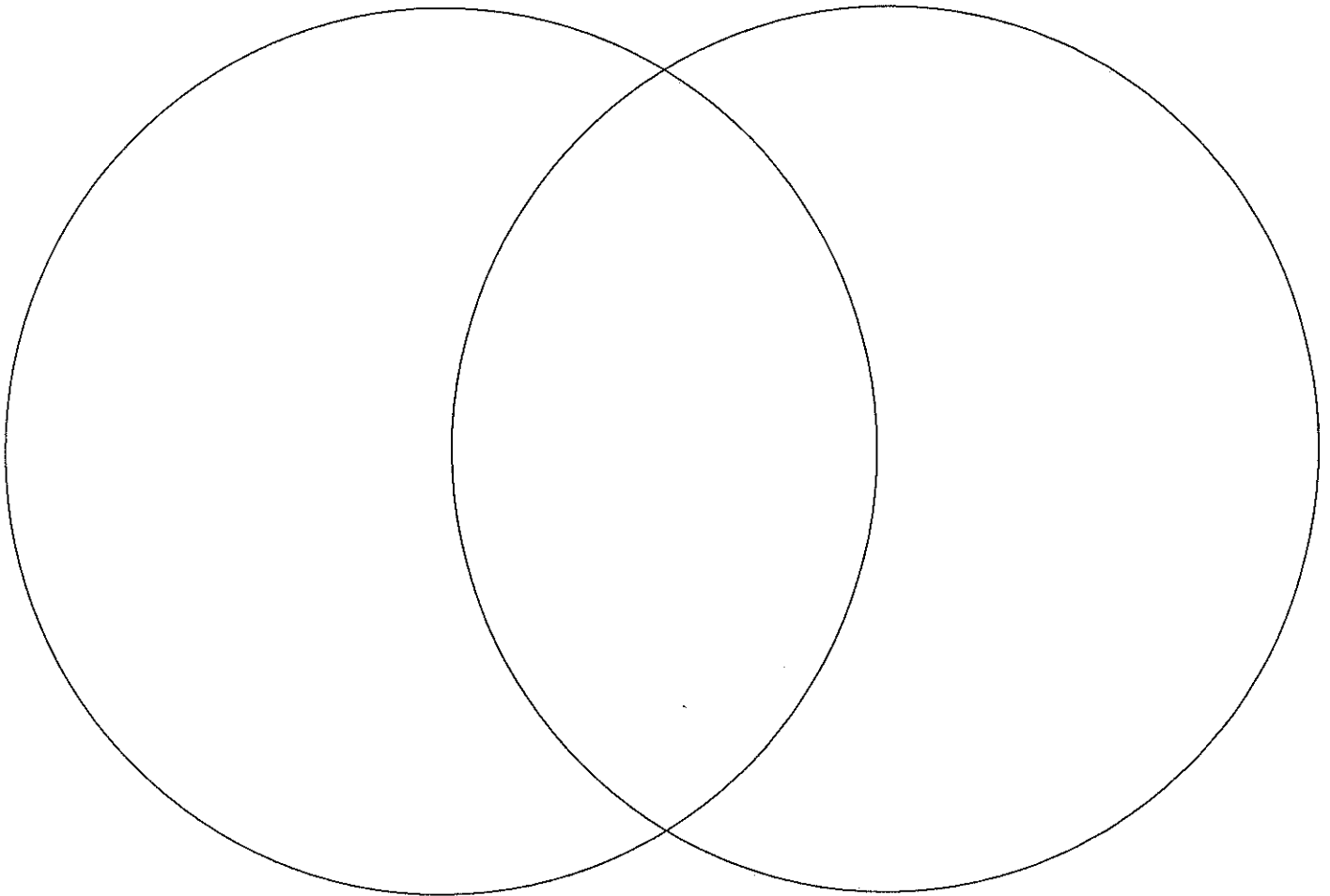
Name _____

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Animal and Plant Cell Venn Diagram

Animal Cell

Plant Cell



Name _____

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Cells Word Search Worksheet

Directions: All words are positioned left to right.

P O N T Z E J U I N N B M B R H R D B T B J D
A T I S C P M F B T J S Z D F P A J O A B A X
C J N Y T Z C H U N Z N U C L E O L U S B N C
E C H L O R O P L A S T G I X N R A Z H E D O
D W H R A Z P B C M N P F R L G H P X Z H N M
I P Y O C H R O M O S O M E Y C I T D C S Y X
N T A D G M Y W E M N L J X O R G A N S H X S
R T Z C I W D S Z E V K A J B L M V C A U K I
D E M P K A K R W J O D C J C W V F D I X I F
B F X O P I G S T I S S U E S V D Z L J G M R
Z W P I C H L O R O P H Y L L V B P I A H D W
L W I G E B J I D D E H V A C U O L E M O R L
T R Z I E O J G V S M P Y X L N U C L E U S E
E V H V P M M M U Q U B E A M O H W N T S G C
S N I D Y N Z M X C Y Q D Y O F L Y S M A L S
B M I T O C H O N D R I A V O C C F S A Y V I
C Y T O P L A S M W K L F L L A K U F O C G V
P B K T R R R Q T A M U T J W U R J B W G G G

MITOCHONDRIA	CHLOROPHYLL	TISSUES	CHROMOSOME
CYTOPLASM	NUCLEOLUS	ORGANS	
CHLOROPLAST	NUCLEUS	VACUOLE	

Name _____

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Cell Matching Quiz

Directions:

Place the letter that correct identifies the organelle in the space to the left.

- | | | |
|-------|--|---------------------------------|
| _____ | 1. area that stores and packages chemicals. | a. cell (plasma) membrane |
| _____ | 2. bubble-like storage vessel. | b. cytoplasm |
| _____ | 3. control center of the cell. | c. smooth endoplasmic reticulum |
| _____ | 4. stores chlorophyll; used in photosynthesis. | d. rough endoplasmic reticulum |
| _____ | 5. releases energy from nutrients. | e. golgi bodies |
| _____ | 6. internal transport system <u>with</u> ribosomes attached. | f. nucleus |
| _____ | 7. jelly-like materials between the nucleus and cell membrane. | g. nucleolus |
| _____ | 8. only found in animal cells; used during cell division. | h. cell wall |
| _____ | 9. membrane surrounding nucleus and organelles. | i. chloroplast |
| _____ | 10. internal transport system <u>without</u> ribosomes attached. | j. vacuoles |
| _____ | 11. located within nucleus. | k. mitochondria |
| _____ | 12. stiff outer covering of a plant cell. | l. ribosome |
| _____ | 13. site of protein synthesis. | m. centrioles |

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Cell Organelle Quiz

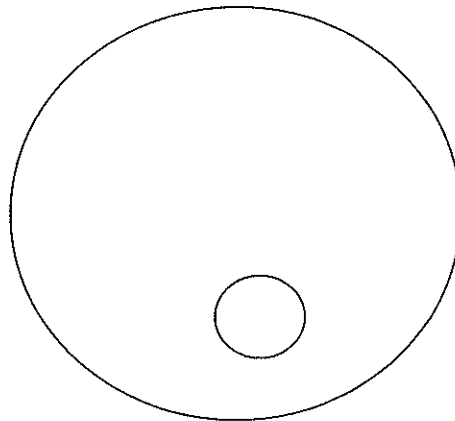
1. Name two differences between plant and animal cells?

2. What is the function of mitochondria in a cell?

3. If you were to compare a muscle cell of a human who is very active to that of an inactive person, what differences may you see in the organelles?

4. Where does photosynthesis take place within a plant cell?

5. Draw and label the function of at least three organelles in the animal cell below.



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Cell Word Search Clues

- Clue 1: **Basic unit of all organisms.**
- Clue 2: **Firm, fairly rigid structure located outside the plasma membrane of plants, fungi, most bacteria, and some protists.**
- Clue 3: **Light absorbing pigment in plants and some protists that is required for photosynthesis.**
- Clue 4: **Chlorophyll containing cell organelles found in the cells of green plants and some protists.**
- Clue 5: **Clear, gelatinous fluid in eukaryotic cells that suspends the cell's organelles and is the site of numerous chemical reactions.**
- Clue 6: **Organelles that contain digestive enzymes.**
- Clue 7: **Eukaryotic membrane bound organelles that transform energy stored in food molecules into ATP.**
- Clue 8: **Non-membrane bound organelles in the nucleus where enzymes and other proteins are assembled.**
- Clue 9: **Membrane bound fluid filled space in the cytoplasm of plant cells used for the temporary storage of materials.**
- Clue 10: **Found in animal cell; aids in cell division.**
- Clue 11: **Membrane bound organelle that manages cellular functions and contains DNA.**
- Clue 12: **Organelle in eukaryotic cell nucleus that produces ribosomes.**

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Cell Word Search

B F X H E K D Q W F S E E F H W C M U S
M V D B U R T F M V C O A A V F L Z V H
F N M K T T G W F A O R W R S R I M X R
V H A J I A F N L F I T K V F V P Y B I
L C E C Z C H L O R O P H Y L L W Z Q B
P E Q Z M B N L Y S O S O M E U J O E O
R N N O I K E C H L O R O P L A S T Z S
P T U M T S A I Y V X X X I B Z I N Y O
V R C Y O Z N P Y P D T Y R Y P F U I M
A I L T C F Y G Y Y P W U N T R W C V E
C O E Q H E U P D H E B X H V V Y L T L
U L O E O B E J A L H Y B E T O X E K L
O E L T N B P N Q T V V V S D Q O U C J
L Z U G D L E Q L P X K R B E G Z S O R
E T S Q R H H H A D D V V G L J I V I P
H M F T I C D D U C Y T O P L A S M F H
C E L L A A F W R Y N C E L L W A L L Y
G U Y J X U F D F O M B X C I K H B N K
F H Q N H V J Z U X Y A R X K P R P T W
E F X B H G M P H Z A M G Q Z O L J O F

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Cell Cryptogram

Riddle: What does "DNA" stand for?

nlsocleuu

—	—	—	—	—	—	—	—	—	—
8	9	10	1	2	10	8			

suelunc

—	—	—	—	—	—	—	—	—	—
8	9	10	1	8					

rondiothimca

—	—	—	—	—	—	—	—	—	—	—
5	2	9	2	7	11	4	5			

boreosmi

—	—	—	—	—	—	—	—	—	—	—
5	6	2	2	1						

soomsyel

—	—	—	—	—	—	—	—	—	—
3	2	2	1						

mltopascy

—	—	—	—	—	—	—	—	—	—	—
3	2	10								

lyrlhocphl

—	—	—	—	—	—	—	—	—	—	—
10	2	4	2	3	10	10				

sarlohoctlp

—	—	—	—	—	—	—	—	—	—	—
10	2	4	2	10						

ueoacvl

—	—	—	—	—	—	—	—
9	8	2	10	1			

ANSWER:

D

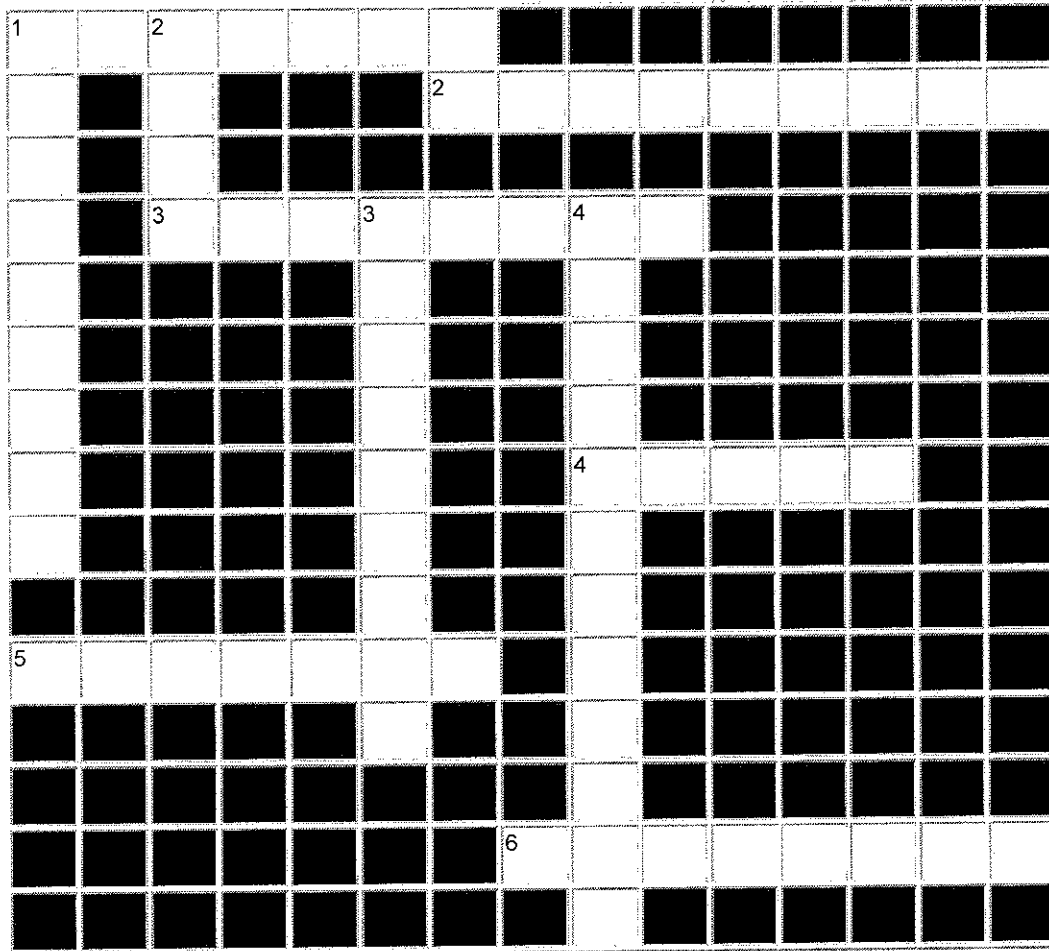
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	2	3	4	5	6	2	7	8	9	10	1	5	9	

X

A

—	—	—
9	5	11

Cell Crossword



ACROSS

1. In eukaryotic cells, the central membrane-bound organelle that manages cellular functions and contains DNA.
2. Clear, gelatinous fluid in eukaryotic cells that suspends the cell's organelles.
3. Organelles that contain digestive enzymes; digest excess or worn out organelles, food particles, and engulfed viruses or bacteria.
4. Short, numerous, hair-like projections composed of pairs of microtubules; frequently move in a wavelike motion; aid in feeding and locomotion.

5. Membrane-bound fluid filled space in the cytoplasm of plant cells used for the temporary storage of materials.

6. Nonmembrane-bound organelles in the nucleus where enzymes and other proteins are assembled.

DOWN

1. Organelle in eukaryotic cell nucleus that produces ribosomes.
2. Basic unit of life.
3. Membrane-bound structures within eukaryotic cells.
4. Eukaryotic membrane-bound organelles that transform energy stored in food molecules into ATP.

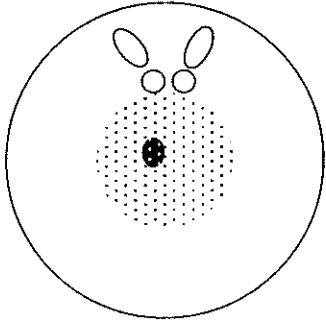
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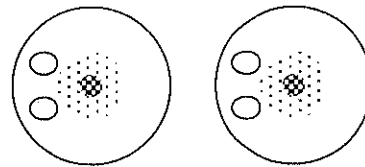
Stages of Mitosis

Number the following stages of mitosis in order and label each stage properly.

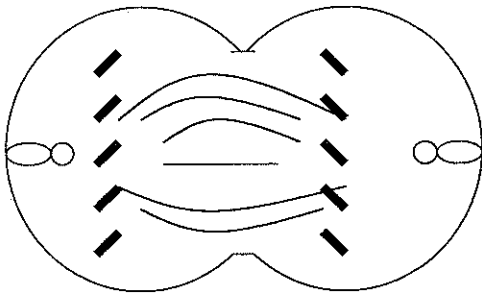
Labels: Metaphase, Telophase, Daughter Cells, Anaphase, Interphase, Prophase



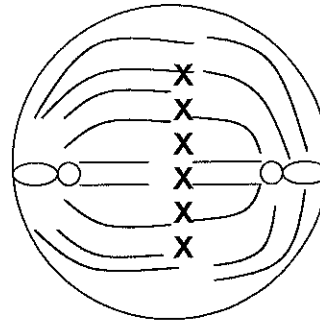
1. _____



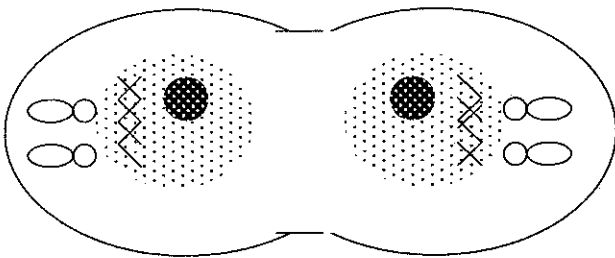
2. _____



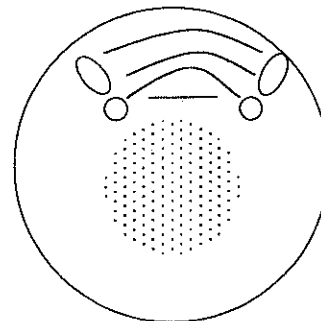
3. _____



4. _____



5. _____



6. _____

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Mitosis

Directions: Describe the events that take place for during each phase of mitosis below.

Phase	Describe Chromosomal Events	Describe Cytoplasmic Events	Describe Complete Cellular Events
Interphase			
Prophase			
Metaphase			
Anaphase			
Telophase			