CELL STRUCTURES AND PROCESSES

CUMULATIVE TEST REVIEW

Box 1:

Label the following structures on the cell diagram:

Cell Membrane	Ribosome	Endoplasmic Reticulum
Nucleus	Mitochondria	Golgi Body
Cytoplasm	Lysosome	

Box 2:

Copy down the t-chart and compare the three major types of cells: bacteria, plant, and animal.

Bacteria Cell	***Plant Cell***	***Animal Cell***
Prokaryote/Eukaryote?	Prokaryote/Eukaryote?	Prokaryote/Eukaryote?
Unique Features:	Unique Features:	Unique Features:

Box 3:

Match the functions to the following cell structures:

Outer layer of plant cells, provides protection.

Borders ALL cells, helps maintain homeostasis by controlling what goes in and out of cells.

Controls all cell activities, only found in eukaryotic cells.

Produces energy (ATP) for the cell through the process of cellular respiration.

Uses energy from the sun in order to produce glucose during photosynthesis.

Transports materials throughout the cell, can be “smooth” or “rough”.

Packages and proteins and other materials for transport.

Found in all cells, produces protein.

Contains digestive enzymes for breaking down waste, only in animal cells.

Large, central structure used for storage in plant cells.

Ribosome

Endoplasmic Reticulum

Chloroplast

Cell Wall

Nucleus

Mitochondria

Vacuole

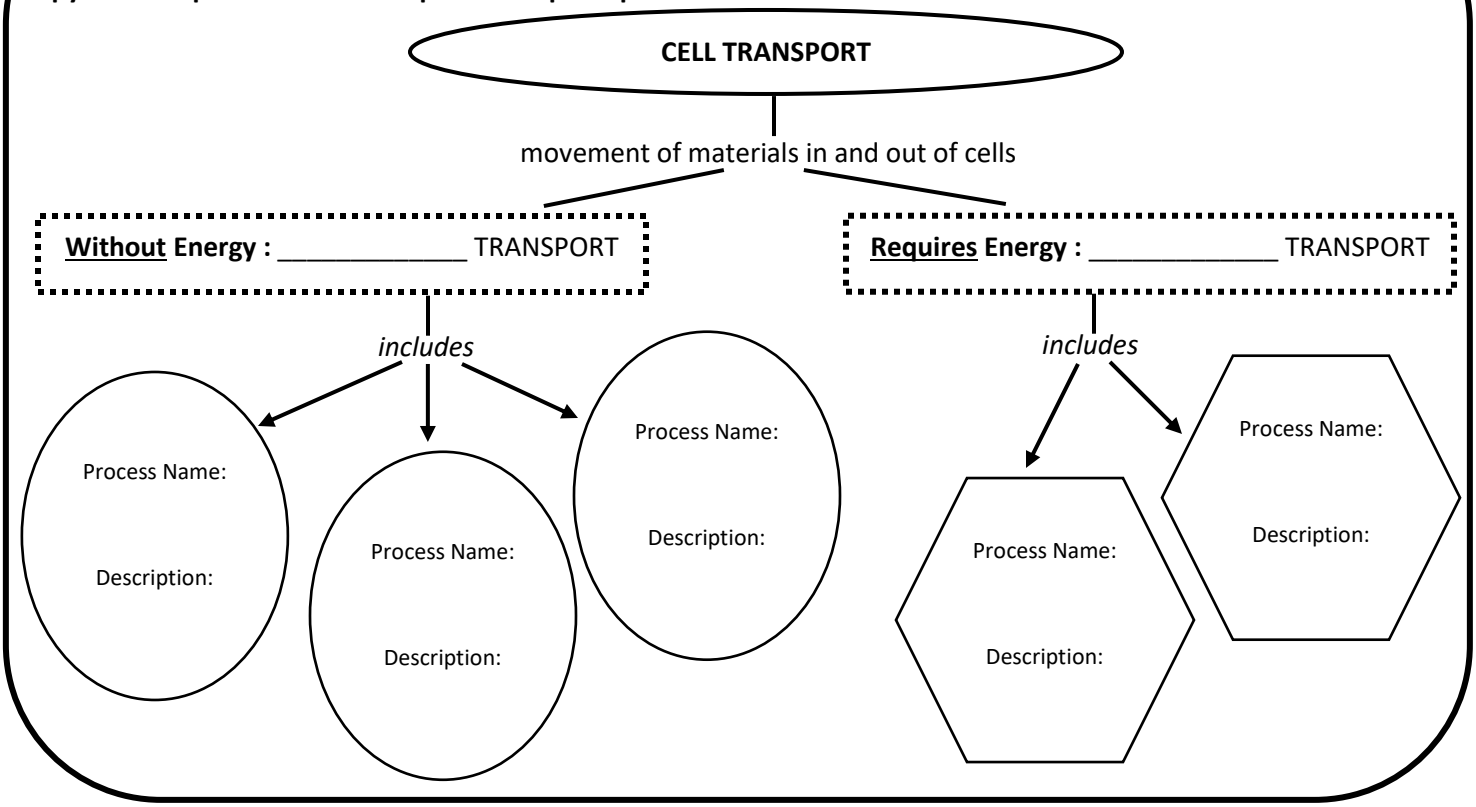
Cell Membrane

Lysosome

Golgi Body

Box 4:

Copy and complete the cell transport concept map.



Box 5:

Place the terms in the correct location on your venn diagram comparing and contrasting passive and active transport.

High → Low	Requires energy	Against concentration gradient
Low → High	Does not require energy	Movement of materials
Maintains homeostasis	Along concentration gradient	Passes through cell membrane

Box 6:

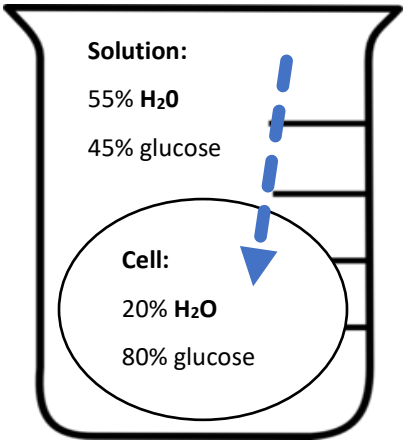
Draw an arrow to show the movement of water in each of the four beakers.

Describe what happens to the water AND to the cell.

Identify the osmotic condition (hypotonic, hypertonic, isotonic).

One has been done for you to the right.

*****Keep in mind, water moves through osmosis from a HIGH concentration → a LOW concentration! ******



Water rushes in, cell swells.
HYPOTONIC solution.

Box 7:

Label the following structures on the cell membrane diagram.

Phospholipid Bilayer	Hydrophobic Fatty Acid Tails	Cholesterol
Hydrophilic Phosphate Heads	Transport (Helper) Proteins	Carbohydrate Chain

Box 8:

Carbon Dioxide

Glucose

Place the following reactants/products in the correct location, illustrating the connection between photosynthesis and cellular respiration.

Water

Oxygen

Box 9:

Copy and complete the T-chart comparing photosynthesis and cellular respiration.

PHOTOSYNTHESIS	CELL RESPIRATION
Purpose:	**Purpose:**
Reactants:	**Reactants:**
Products:	**Products:**
Organelle:	**Organelle:**
Energy Type:	**Energy Type:**
Word Equation:	**Word Equation:**
Chemical Equation:	**Chemical Equation:**

Name _____ Date _____ Period _____

CELL STRUCTURES AND PROCESSES

CUMULATIVE TEST REVIEW

1

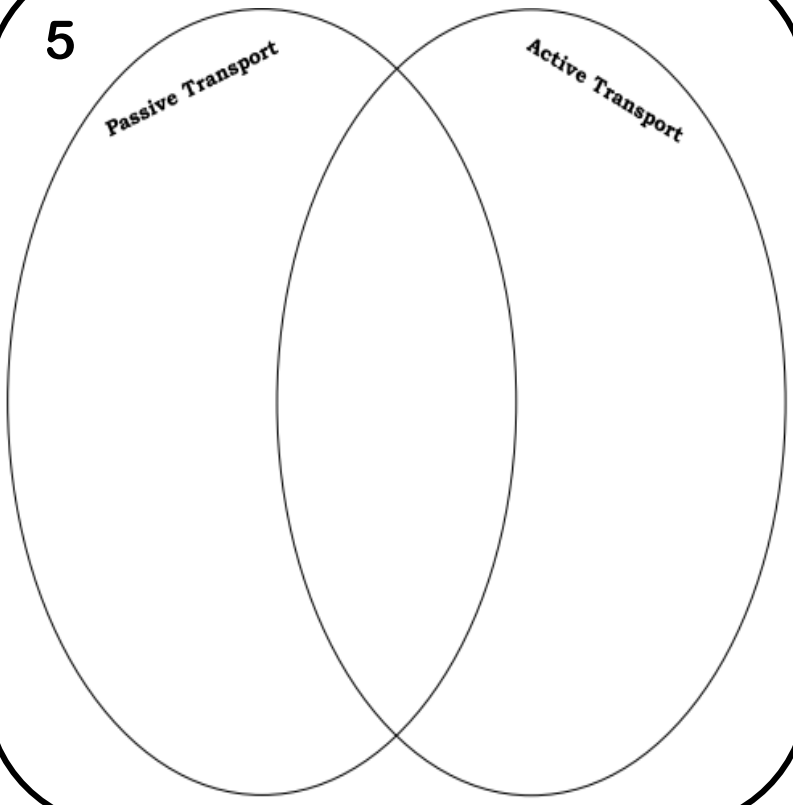
This is a picture of a (prokaryotic / eukaryotic) (plant / animal) cell.

2

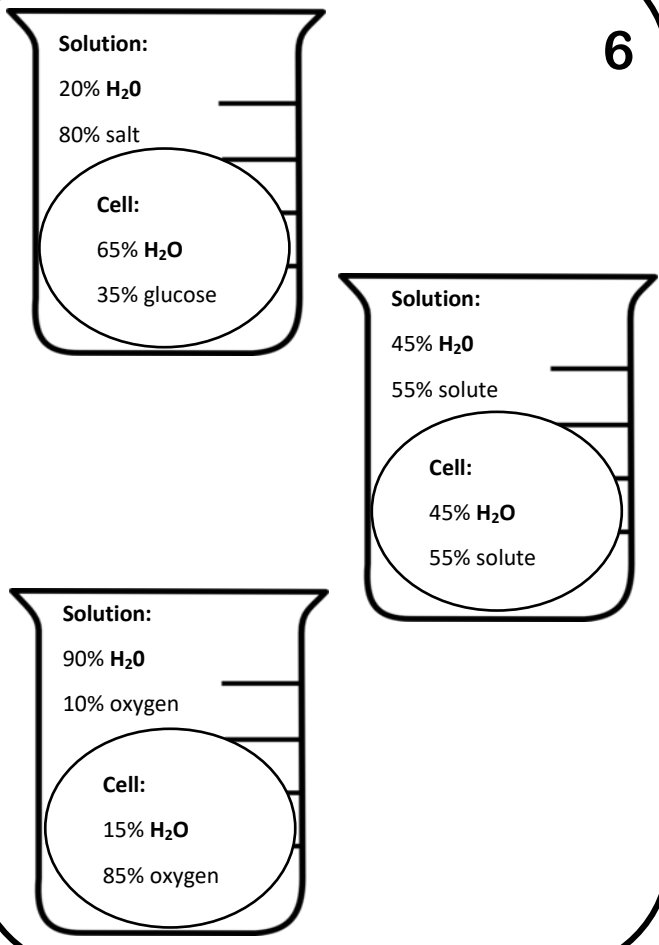
3

4

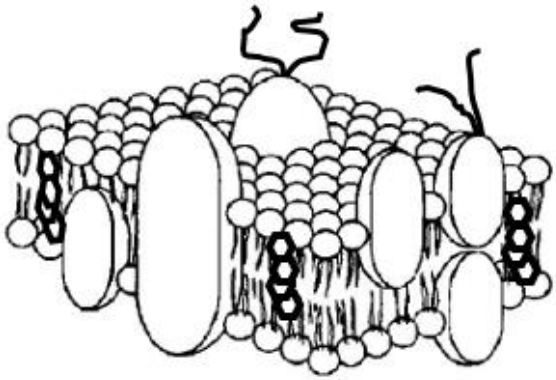
5


Passive Transport
Active Transport

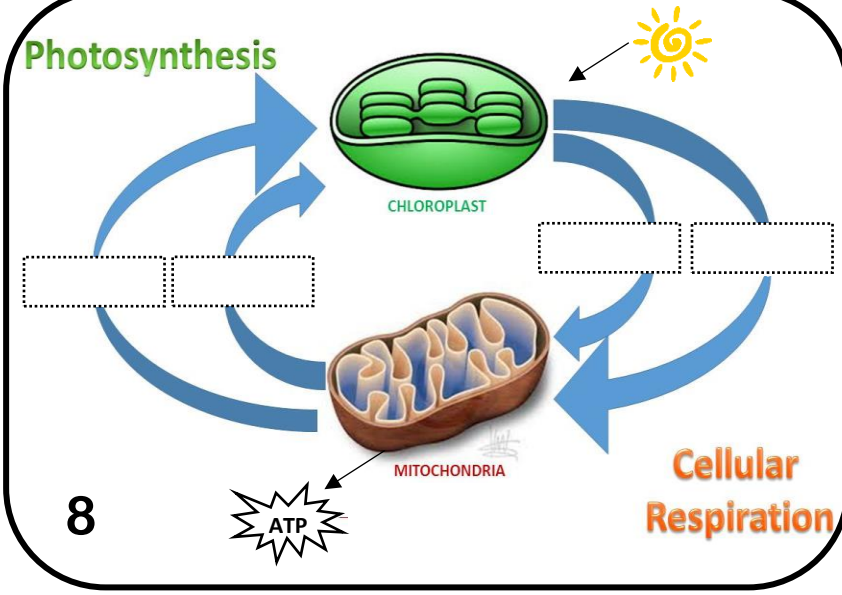
6


Solution:
20% H20
80% salt
Cell:
65% H2O
35% glucose
Solution:
45% H20
55% solute
Cell:
45% H2O
55% solute
Solution:
90% H20
10% oxygen
Cell:
15% H2O
85% oxygen

7



8


Photosynthesis
CHLOROPLAST
MITOCHONDRIA
ATP
Cellular Respiration

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