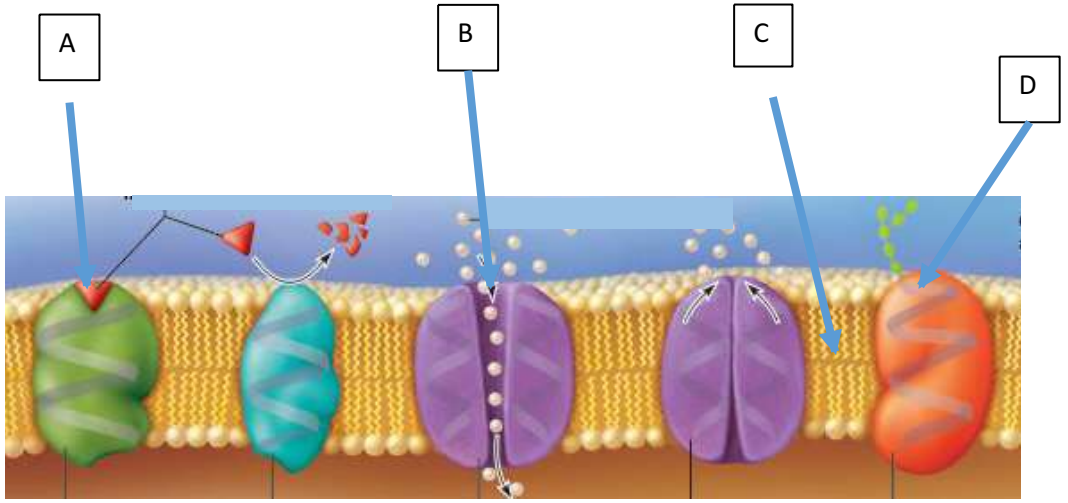
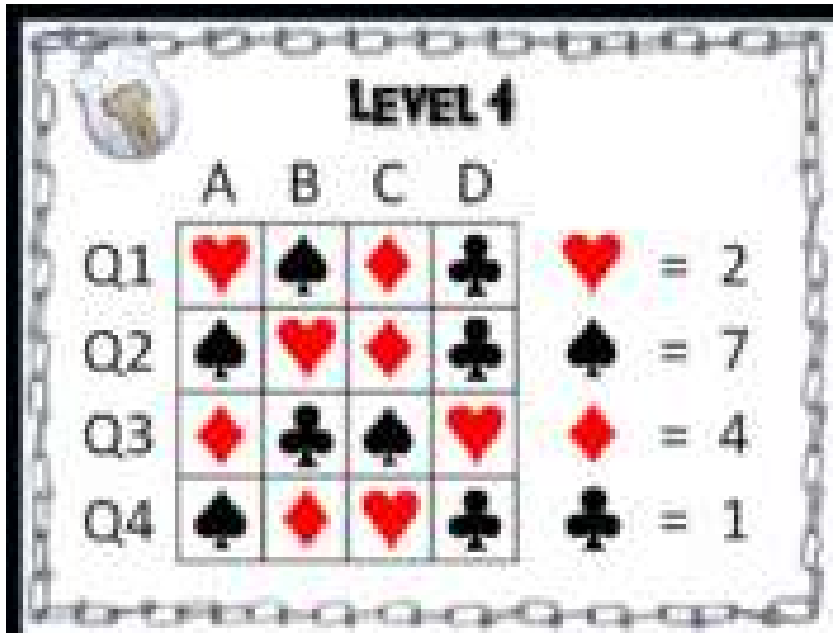
Plasma Membrane Structure & Function Digital Escape

- For the digital escape,
  - I had to make .jpeg's for each of the clues so I could put them onto Google forms.
    - Copy each station slide separately into it's own PowerPoint & save as a .jpeg.
- Start a Google form.
  - Level 1: I added an image from my folder. For the answer, choose short answer, number only, equals. Select required response. I added "try again" for incorrect answers. Enter the correct answer.
- Select the option to the right of the question: Add SECTION.. This will make it so only one level shows at a time.
- Level 2, 3,4: Repeat step 1, but it will be text and not a number answer.
  - For the triangle vocab (level 2): I have the pieces already cut out and in an envelope, so when they get to it they can come get the material. Also,I added instructions that the answer will start with the number 1 so they read from the correct top…it was the only thing I could think of
  - For the Up, Down puzzle (level 4), I printed a copy for them because I found that trying to make a .jpeg and posting was too small.
- Lastly: Go to the settings menu, choose presentation, and under confirmation message, type "congratulations… you have escaped the cell…
- Hopefully this makes sense…

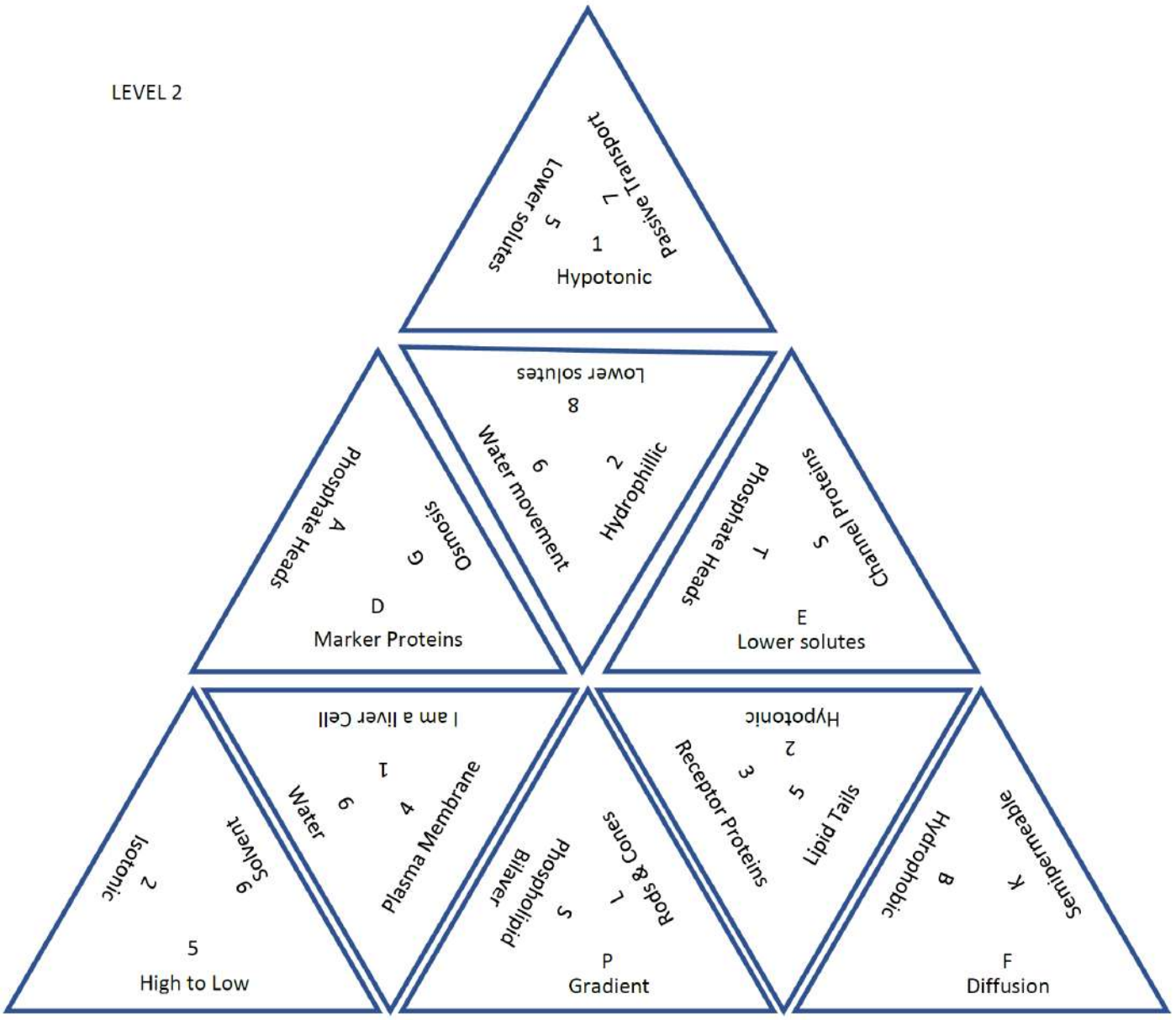
Plasma Membrane Digital Escape Room

Q1. Lipid Tails
Q2. Marker Protein
Q3. Receptor Protein
Q4. Channel Proteins





LEVEL 2



SOLVE THE PUZZLE BY MATCHING WORDS & PHRASES. FOR YOUR CODE SELECT ONLY THE CLUES THAT ARE RIGHT-SIDE-UP.

Choose the following options below for each of the questions 1-4 to move up to escape the cell!!

..- . **Both** the ***statement*** and the ***reason*** are correct.

.- . The ***statement*** is correct, but the ***reason*** is incorrect.

...-- The ***statement*** is incorrect, but the ***reason*** is a fact or a principle.

.-- Both the ***statement*** and the ***reason*** are incorrect.

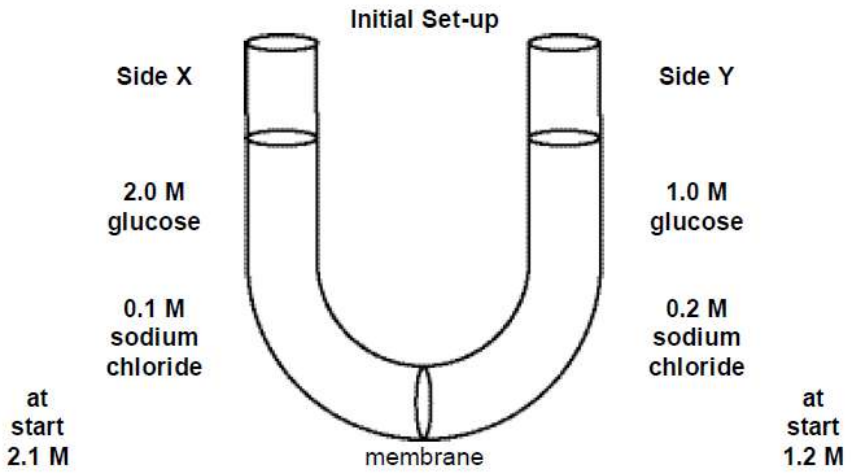
Q1. The sodium chloride solution on Side X will become more concentrated and that on Side Y less concentrated ***because*** a substance tends to diffuse from regions of lower concentration to regions of higher concentration of that substance.

Q2. The concentrations of the glucose solutions on Sides X & Y will remain unchanged ***because*** the membrane is impermeable to glucose and so glucose cannot diffuse from one side to the other.

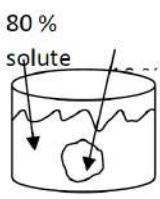
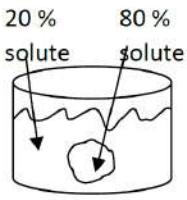
Q3. Water molecule will have a net movement from Side X to Side Y, ***because*** water molecules move from regions of higher to regions of lower concentration.

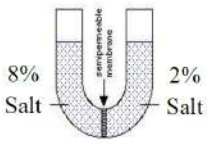
Q4. The fluid on Side X will rise ***because*** the solution in Side X had lower water concentration than the solution in Side Y.

The solutions in the two arms of the U-tube are separated at the bottom of the tube by a selectively permeable membrane. At the beginning of the experiment the volumes in both arms are the same, and the level of the liquid is therefore at the same height. The membrane is permeable to water and to sodium and chloride ions, but ***not*** to glucose. The apparatus is allowed to stand for three days.

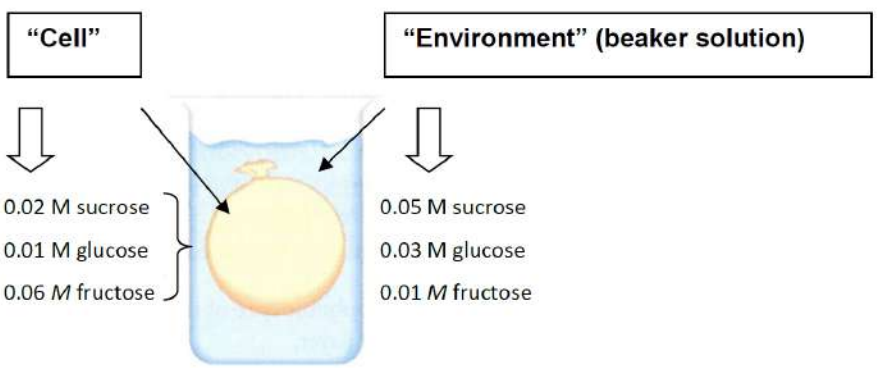


A·-	B-···	C-·-·
D-··	E·	F··-·
G--·	H····	i··
J·---	K-·-	L·-··
M--	N-·	O---
P·--·	Q--·-	R·-·
S···	T-	U··-
V···-	W·--	X-··-
Y-·--	Z--··	
0-----	1·----	2··---
3···--	4····-	5·····
6-····	7--···	8---··
9----·		

Stop	After the cell is placed into the beaker, which of the following changes would occur? **UP)** The artificial cell would become more flaccid (*"shriveled"; ie, would shrink).* **DOWN)** The artificial cell would become more turgid *("stiff; hard"; ie, would expand).* **RIGHT)** The entropy of the system (cell plus surrounding solution) would decrease. **LEFT)** The overall free energy stored in the system would increase.	Which of the following is NOT a function of the plasma membrane **UP)** assist the passage of materials into the cell **DOWN)** interact & recognize other cells **RIGHT)** communicate with inside of the cell **LEFT)** produce lipid molecules
An example of diffusion is: **UP)** water molecules moving into a plant cell after rain **DOWN)** red food coloring moving through water until the water is pink **RIGHT)** water molecules leaving the cells of a fresh water fish, when placed in a salt water tank **LEFT)** none of the above	Up to 60% of all medicines used today exert their effects by influencing what structures in the cell membrane? **UP)** Phospholipid bilayer **DOWN)** Marker proteins **RIGHT)** Channel proteins **LEFT)** Receptor proteins	If a red blood cell is placed in a hypotonic solution, it will eventually: **UP)** swell and burst **DOWN)** swell and not burst **RIGHT)** no change will occur **LEFT)** shrink up
Outside solution: hypotonic, hypertonic, or isotonic? direction of osmosis? What will cell do? **UP)** Hypotonic, out, swell **DOWN)** Hypertonic, in, swell **LEFT)** Hypertonic, out, shrink **RIGHT)** Isotonic, no movement, stay the same 	1. In which direction will there be a net osmotic movement of water AFTER diffusion has occured? Refer to the diagram below **UP)** From the cell into the environment (outside solution). **DOWN)** From the environment (outside solution) into the cell. **RIGHT)** From the top of the beaker to the bottom of the beaker **LEFT)** From the bottom of the beaker to the top of the beaker	Outside solution is: hypotonic, hypertonic, or isotonic. direction of osmosis what will cell do? **UP)** Hypotonic, in, swell **DOWN)** Hypotonic, out, swell **LEFT)** Hypertonic, out, shrink **RIGHT)** Isotonic, no movement, stay the same 
With respect to the ABO blood group, a transfusion of AB blood may be give to a person who has blood type **UP)** A **DOWN)** B **RIGHT)** AB **LEFT)** O	Which solute(s) will exhibit a net diffusion out of the cell? Refer to the diagram below **UP)** Glucose and fructose **DOWN)** Glucose and sucrose **RIGHT)** Fructose **LEFT)** Glucose	Which blood type is the universal recipient? **UP)** AB+ **DOWN)** A+ **RIGHT)** B+ **LEFT)** O-
The universal blood donors for the ABO system are type: **UP)** A **DOWN)** B	*Which of the following statements is true regarding the ABO blood system?* **UP)** People who have the A antigen normally would not produce the anti-A antibody.	A tube is separated by a selectively permeable membrane for water and salt only. Side A=8% salt/2% glucose solution; Side B =2% salt/8% glucose solution

RIGHT) O **LEFT)** AB	**RIGHT)** The only ABO type blood that normally does not have either A or B antigens is AB **LEFT)** People who are type AB normally produce both anti-A and anti-B antibodies	Which molecule(s) will move across the membrane and in which net direction(s)?  **UP)** Salt to B, Water & Glucose no movement **DOWN)** Salt to B; Glucose to A; Water no movement **RIGHT)** Salt & Glucose to A; Water to B **LEFT)** Salt to A; Glucose to B; Water to A

The membrane is permeable to water and to the simple sugars glucose and fructose, but is impermeable to the sucrose.



STATION 4