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| **Cell Membrane and Cellular Transport** |
| 1. **Explain** 1 of the three main functions of the plasma membrane. |
| 1. The plasma membrane is a double-layered sheet of lipids and is known as the… |
| 1. **Explain** why we call the plasma membrane a “**Fluid Mosaic**.”   **Fluid: Mosaic:** |
| 1. **Label** the plasma membrane below using the terms from the word bank.   http://ts1.mm.bing.net/th?id=H.4688859949564884&pid=15.1  \*Carbohydrate Chain  \*Cholesterol  \*Glycoprotein  \*Lipid Tails  \*Peripheral Protein  \*Phosphate Head (2x)  \*Phospholipid  \*Phospholipid Bilayer  \*Transport/Channel Protein |
| 1. **True or False (correct the statement if false):** **Proteins** embedded within the plasma membrane act as chemical id cards and help cells communicate with each other. |
| 1. **Label** the phospholipid below using the terms phosphate head and lipid tails. Then indicate which part of the phospholipid is hydrophilic and which part is hydrophobic.   **[https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSOSDHkAX2iyy3yYsxRKyjyEIeN6AqmdSgHILFA8AO-AOWeB0YS](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=X0gRoGpGhQCgrM&tbnid=apOE2sGL2U73jM:&ved=0CAUQjRw&url=http://healthspotlight.com/liposomes.html&ei=LJePUtKhDIyekAfVh4GoBQ&bvm=bv.56988011,d.eW0&psig=AFQjCNGk5DQ6XoIiY1xa9P7nnGXubH0KFQ&ust=1385228426719108)** |
| 1. **True or False (correct the statement if false): Diffusion** is the movement of WATER across a semi-permeable membrane from an area of higher concentration to an area of lower concentration. |
| 1. **Explain** the difference between active and passive transport. |
| 1. A **hypertonic solution** has a higher concentration of solute particles than the inside of a cell. What will happen to a cell placed in this solution (i.e. will it get bigger, smaller, or stay the same)? |
| 1. **True of False (correct the statement if false):** In an isotonic solution, there is **NO movement** of molecules across the cell membrane. |
| 1. Which statement BEST describes the plasma membrane of a living plant cell?    1. It is a double protein layer with floating lipid molecules.    2. It is composed of proteins and carbohydrates.    3. It selectively regulates the passage of substances into and out of the cell.    4. It has the same permeability to all substances found inside or outside of the cell. 2. The main function of the cell wall is to…    1. Store DNA.    2. Help the cell move.    3. Direct the activities of the cell.    4. Support and protect the cell. 3. The net movement of molecules into cells is MOST dependent upon the…    1. Number of nucleoli.    2. Selectivity of the plasma membrane    3. Selectivity of the cell wall.    4. Number of vacuoles. 4. Which of the following statements does NOT accurately describe a characteristic of the plasma membrane?    1. Maintains homeostasis.    2. Consists of a variety of organic molecules.    3. Controls the movement of material in and out of the cell.    4. Controls the movement of material in and out of the nucleus. 5. A biologist diluted a blood sample with distilled water. While observing the sample under a microscope, she noted that the red blood cells burst. This bursting is most likely the result of which process?    1. Active Transport    2. Ingestion    3. Osmosis    4. Phagocytosis 6. Which process would include a net movement of sugar molecules through a membrane from a region of lower concentration to a region of higher concentration?    1. Osmosis    2. Pinocytosis    3. Passive Transport    4. Active Transport 7. Which process BEST explains why a small beaker of methylene blue will disperse when placed into a larger beaker of distilled water as illustrated below?    1. Osmosis    2. Diffusion    3. Pinocytosis    4. Active Transport 8. http://DeltaBiology.com/wp-content/uploads/2012/01/08-10-DiffusionMembrane-L-550x445.gifIf an animal cell is placed in a solution in which the concentration of the solutes are the same on the outside of the cell as the concentration of the solutes are on the inside of the cell , what affect will this have on the cell itself? 9. The cell will burst. 10. The cell will shrink. 11. The cell will not be affected. 12. The cell will be affected negatively. 13. Explain what is happening in the picture to the right/above. What is this process called? |