

Cell Boundaries

Cell membrane- thin flexible barrier that contains lipids, proteins and carbohydrate
 Cell wall- strong supporting layer around a membrane
 lipid bilayer- a double layered sheet consisting of two layers of lipids. (Due to it being hydrophilic and hydrophobic)
 concentration- the mass of solute in a given volume of solution or mass/volume
 diffusion-the movement of particles from an area of high concentration to an area of low concentration.
 equilibrium-when the concentration of solute is the same throughout the system
 osmosis- the diffusion of water through a selectively permeable membrane
 isotonic- two solutions have the same concentration
 hypertonic- one solution is more concentrated when compared to another solution
 hypotonic- one solution is less concentrated when compared to another solution
 facilitated diffusion- proteins help larger or highly charged molecules to cross the membrane no energy required
 active transport- materials are moved across the membrane from an area of low concentration to high concentration.

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endocytosis- process of taking material into the cell by means of infoldings of the cell membrane
 exocytosis- the membrane of the vacuole surrounding the material fuses with the cell membrane
 pinocytosis- tiny pockets form along the cell membrane, fill with liquid, and pinch off to form vacuoles within the cell.
 phagocytosis- extensions of the cytoplasm surround a particle and package it within a food vacuole.
 mitochondria- organelle responsible for cellular respiration
 glycolysis- releases a small amount of energy and takes place in the cytoplasm
 cellular respiration- the process that releases energy by breaking down glucose and other food molecules in the presence of oxygen
 chloroplast- organelle responsible for photosynthesis
 photosynthesis- uses energy from the sun to convert water and carbon dioxide into high energy sugars and oxygen

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1. Diagram of membrane
2. a) Protein channels- help to move material through the membrane
 b) Carbohydrate chains- used as identification cards
3. Fluid mosaic model- concept used to describe the characteristics of the cell membrane in that it moves and it is composed of different molecules such as lipids, proteins and carbohydrates
4. gasses and water
5. gasses and water
6. the mass of a solute in a given volume of solvent
7. diffusion is the movement of particles from an area of high concentration to low concentration.
8. diffusion is the movement of particles high to low concentration, osmosis is the movement of water from high to low concentrations.
9. hypertonic- above strength, hypotonic- below strength, isotonic- equal strength
10. a) water leaves the cell (hypertonic) b) water enters the cell (hypotonic) c) isotonic- equal
11. facilitated diffusion requires a protein whereas simple diffusion does not.
12. facilitated diffusion goes from an area of high to low, no energy active transport goes from an area of low to high, energy required
13. glucose, larger molecules, highly charged
14. potassium, sodium
15. endocytosis- process of taking material into the cell by means of infoldings of the cell membrane
 exocytosis- the membrane of the vacuole surrounding the material fuses with the cell membrane
16. pinocytosis- take in liquid phagocytosis- take in solids
- 17, 18, 19, 20- refer to last sheet

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Cell Membrane Crossword

Across

Down

- 3. chloroplast
- 6. diffusion
- 9. exocytosis
- 13. lipid bilayer
- 14. mitochondria
- 16. concentration
- 18. hypotonic
- 20. osmosis
- 21. facilitated diffusion

- 1. glycolysis
- 2. phagocytosis
- 4. isotonic
- 5. equilibrium
- 7. membrane
- 8. active transport
- 10. pinocytosis
- 11. respiration
- 12. photosynthesis
- 15. endocytosis
- 17. hypertonic
- 19. wall

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