

Review ppt

Cell membrane and Transport

Review the Cell organelles and what they do

- Mitochondria- powerhouse of the cell
- Nucleus- control center of the cell
- Chloroplast- converts the energy from the sun into food
- Golgi- modifies, sorts and distributes proteins
- Etc....

What are the characteristics of a prokaryote?

- No nucleus
- No membrane bound organelles
- Has ribosomes
- Has a cell wall and cell membrane
- Never has cilia
- Considered ancient.

What are the characteristics of an eukaryote?

- Has a nucleus
- Has membrane bound organelles
- All have a cell membrane, only plants have a cell wall
- Considered modern.

What is passive transport?

- Doesn't require energy
- Goes with the concentration gradient
- Example: diffusion

What is active transport?

- Requires energy
- Goes against the gradient
- Uses transport proteins

What is the function of the cell membrane?

- Gate keeper of the cell
- Controls what goes in and out
- Separates the inside of the cell from the outside of the cell

Why does diffusion happen?

- The kinetic energy of molecules causes them to collide/ bounce off of and away from each other.

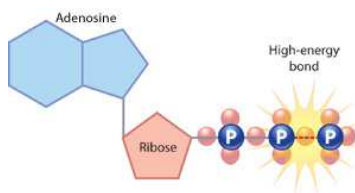
What is ATP?

- Energy storing molecule

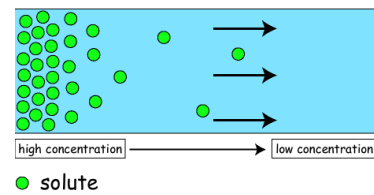
How is ATP made? (general)

- ATP is made when energy is stored in ADP, by adding a phosphate

What are the parts of ATP?



What is this?



What are the osmotic environments?

What happens to a cell in a hypertonic solution?

What happens to a cell in a hypotonic solution?

What happens to a cell in an isotonic solution?

What happens when equilibrium is reached?

Figure 2 • Equilibrium conditions of reaction $A \rightleftharpoons B$

4 moles of reactant A 4 moles of product B

3 moles of A \rightarrow B

3 moles of B \rightarrow A

http://chem.wiki.ucdavis.edu/@api/dek/files/14817/-Figure_2.png

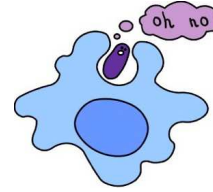
Is osmosis active or passive?

- Passive

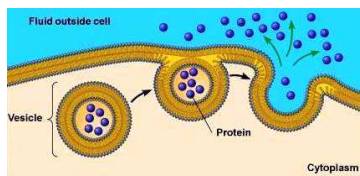
What do the proteins in the cell membrane do?

- Move things that are too big to pass through the membrane

What process is this?



What process is this?



What happens to the osmotic pressure of a cell in a hypertonic solution?

- The pressure goes up.

Define diffusion

- The net movement of molecules from high concentration to low

Define osmosis.

- The net movement of water from high concentration to low

Define passive transport

- Movement of materials from high concentration to low concentration w/o energy.

Define facilitative diffusion

- The movement from high concentration to low using protein transport molecules.

What is the best way to describe active transport?

- Requires energy
- Goes against the gradient
- Uses protein carriers