

Definition

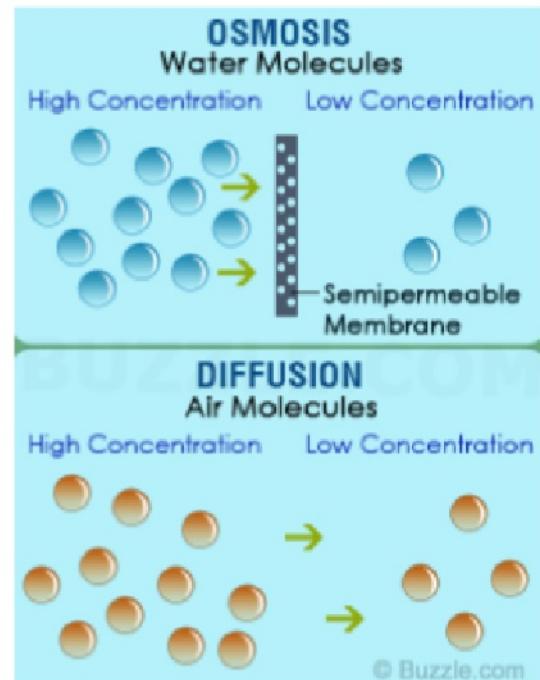
Definition

Equilibrium

Recap

- If two solutions of differing concentration are separated by permeable membrane then:
 - the solute diffuses through the membrane from the solution having the greater solute concentration into the solution having the lesser solute concentration
 - water diffuses into the solution having the greater solute concentration.
- Osmosis is the diffusion of water across a membrane into a solution having a greater solute concentration.
- Diffusion stops when the concentration on either side of a membrane is equalized.

Concentration Gradient

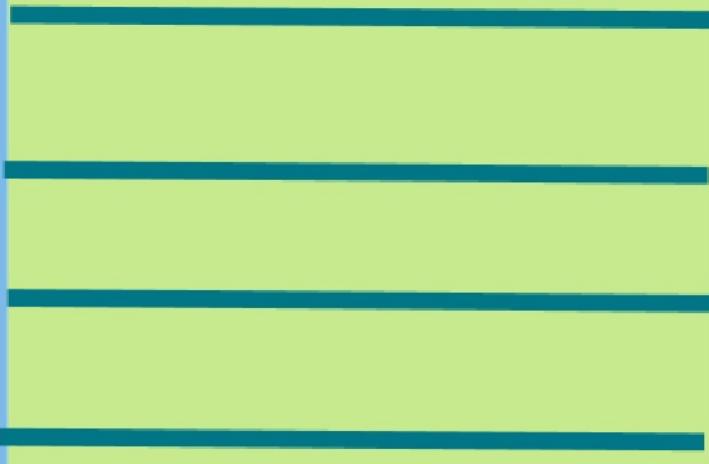


Diffusion

Selective Permeability

Draw a diagram of selective permeability

Definition

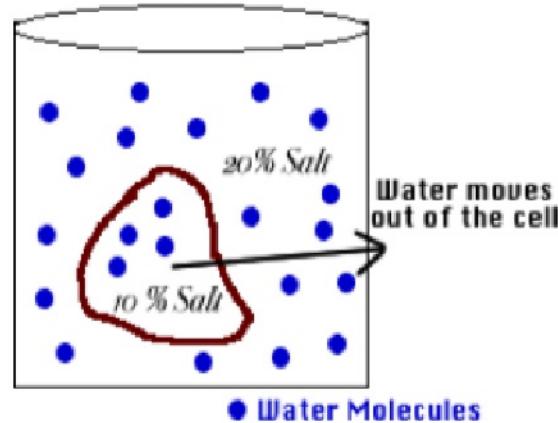


Hypertonic

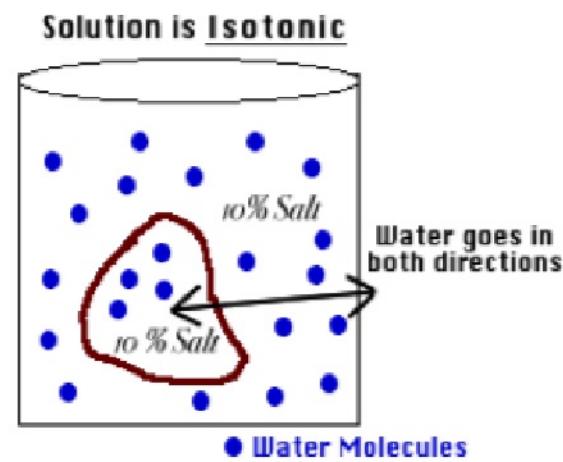
Passive Transport

Types of Solutions

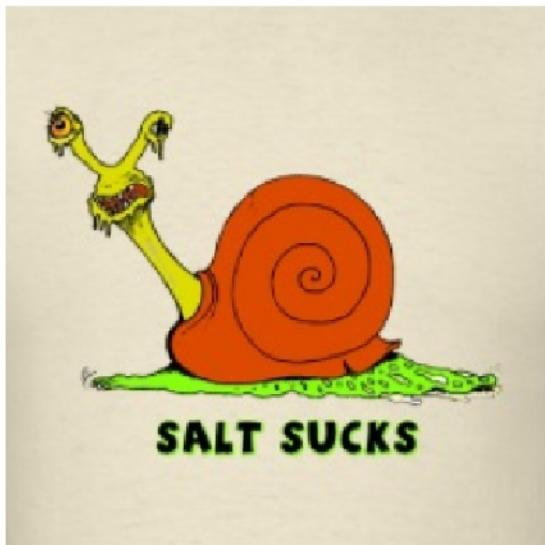
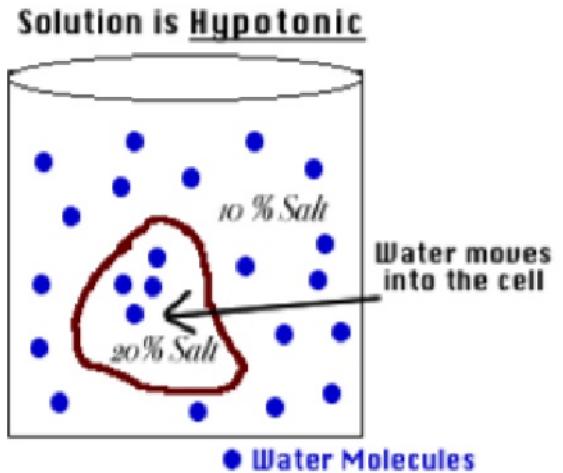
Solution is Hypertonic



Isotonic



Hypotonic

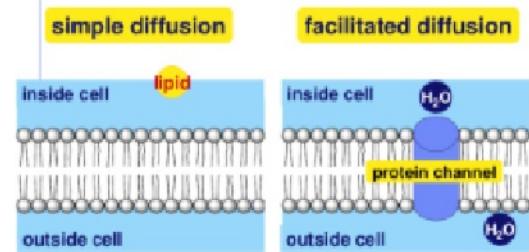


Salt is a solute, when it is concentrated inside or outside the cell, it will draw the water in its direction.

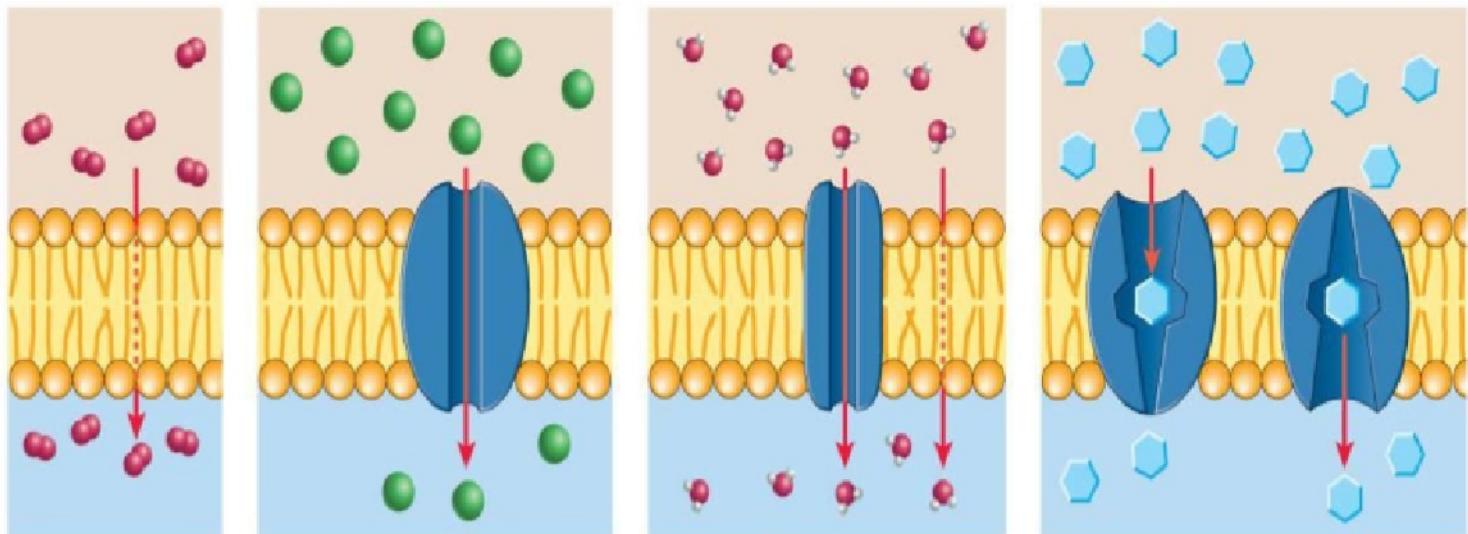
Simple Diffusion

Facilitated Diffusion

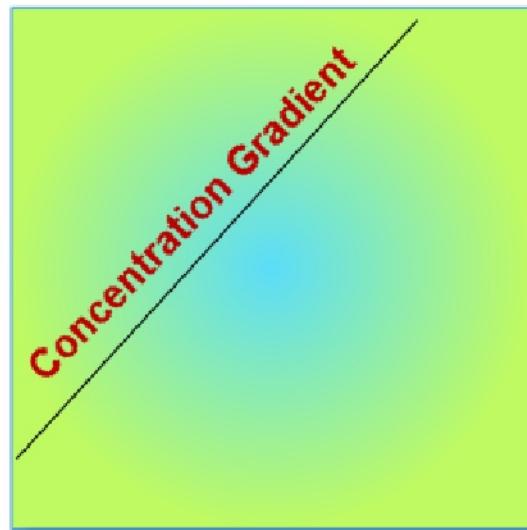
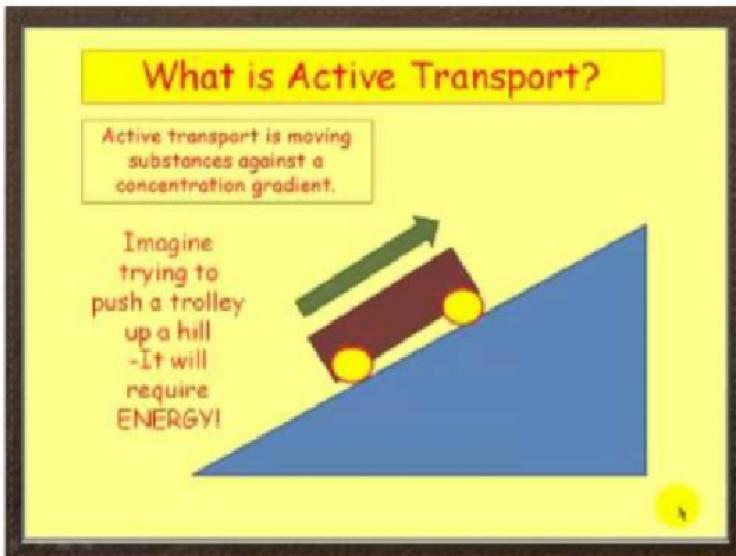
Simple vs. facilitated diffusion



Label these:



Active Transport



Active Transport

Passtive Transport

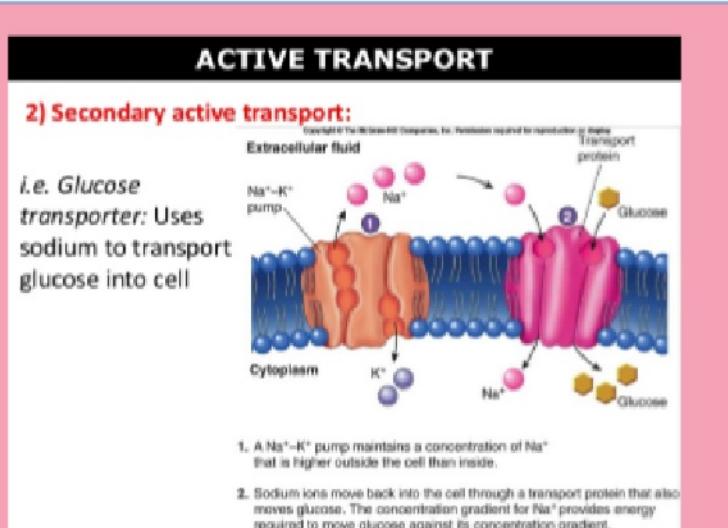
Concentration
Gradient?

ATP?

Types?

ACTIVE TRANSPORT: PRIMARY AND SECONDARY

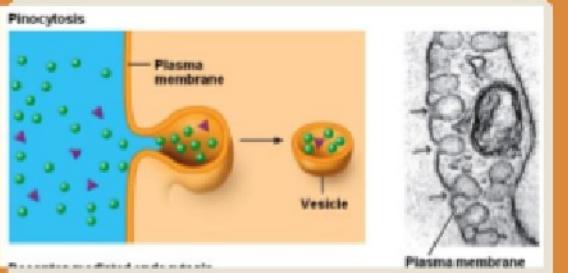
- PRIMARY ACTIVE TRANSPORT INVOLVES THE DIRECT COUPLING OF METABOLIC ENERGY (ATP) TO MASS TRANSPORT
- SECONDARY ACTIVE TRANSPORT INVOLVES THE PUMPING OF ONE CHEMICAL SPECIES AGAINST AN ELECTROCHEMICAL GRADIENT AT THE EXPENSE OF A SECOND



<http://www.slideshare.net/mrtangextrahelp/tang-06-transport-across-membranes>

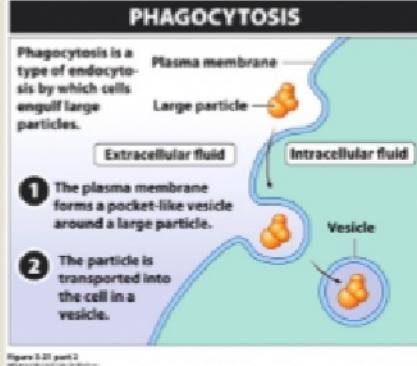
Secondary Active Transport

Endocytosis
&
Exocytosis



Definition

Pinocytosis



Definition

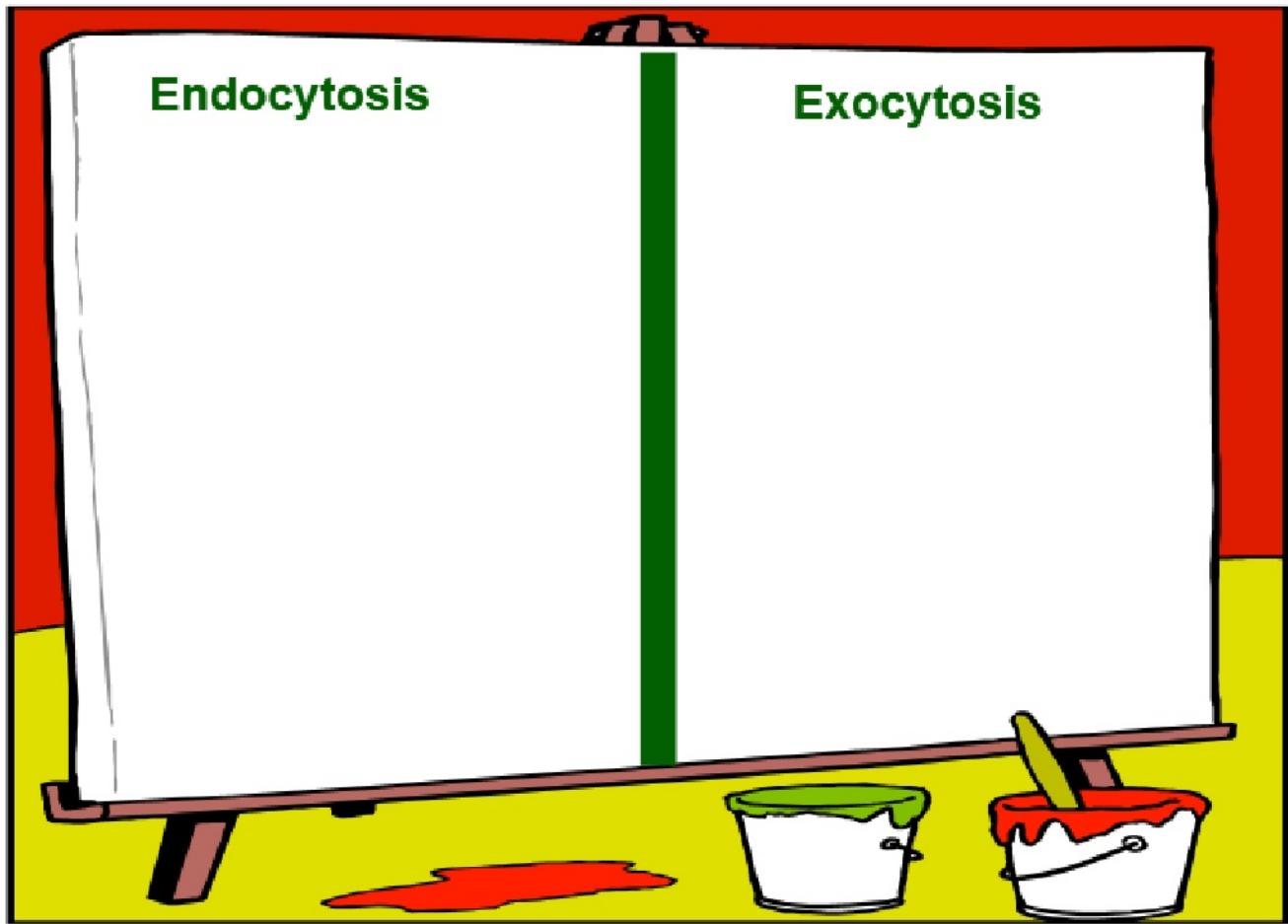
Phagocytosis

Endo --

EXO --

Endocytosis

Exocytosis



Diffusion:

http://highered.mheducation.com/sites/0072495855/student_view0/chapter2/animation__how_diffusion_works.html

<https://www.khanacademy.org/science/biology/cellular-molecular-biology/cell-division/v/diffusion-and-osmosis>

<http://esminfo.prenhall.com/science/BiologyArchive/lectureanimations/closerlook/diffusion.html>

Osmosis:

http://highered.mheducation.com/sites/0072495855/student_view0/chapter2/animation__how_osmosis_works.html

http://highered.mheducation.com/sites/9834092339/student_view0/chapter38/animation_-_osmosis.html

<http://www.stolaf.edu/people/giannini/flashanimat/transport/osmosis.swf>

Facilitated Diffusion:

The Difference Between Simple and Facilitated Diffusion: <https://www.youtube.com/watch?v=U9ZfowGuLfk>

http://highered.mheducation.com/sites/0072495855/student_view0/chapter2/animation__how_facilitated_diffusion_works.html

<http://bcs.whfreeman.com/thelifewire/content/chp05/0502001.html>

Active Transport:

http://highered.mheducation.com/sites/0072495855/student_view0/chapter2/animation__how_the_sodium_potassium_pump_works.html

<http://sites.sinauer.com/neuroscience5e/animations04.02.html>

How the Sodium/Potassium Pump Works: <https://www.youtube.com/watch?v=P-imDC1txWw>

Secondary Active Transport:

Secondary Active Transport: https://www.youtube.com/watch?v=nYC3_3hb54Q

http://highered.mheducation.com/sites/9834092339/student_view0/chapter5/secondary_active_transport.html

<http://bcs.whfreeman.com/thelifewire/content/chp05/0502002.html>

Endocytosis and Exocytosis:

<http://highered.mheducation.com/olcweb/cgi/pluginpop.cgi?it=swf::535::535::sites/dl/free/0072437316/120068/bio02.swf>: Endocytosis+and+Exocytosis

http://bcs.whfreeman.com/thelifewire8e/content/cat_040/0504003.html

Membranes and Transport: <https://www.youtube.com/watch?v=dPKvHrD1eS4>

Diffusion and Osmosis: http://www.biologycorner.com/bio1/notes_diffusion.html

Active Transport: http://www.biologycorner.com/bio1/notes_active_transport.html