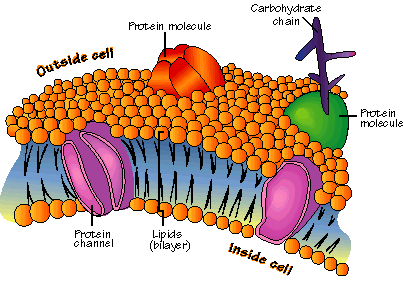
**Cell Membranes and Movement Notes Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Substances move in and out of the cell in order for the cell to function**

**properly and maintain homeostasis.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -- the ability of an organism to maintain a constant internal balance even when the conditions around it change.**

**Cell (plasma) membrane**

* **Cells need an inside & an outside…**
  + **separate cell from its environment**
  + **cell membrane is the\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**IN OUT**

**Food Waste**

**Products**

* **Cell needs materials \_\_\_\_\_\_ and products or waste \_\_\_\_\_\_**

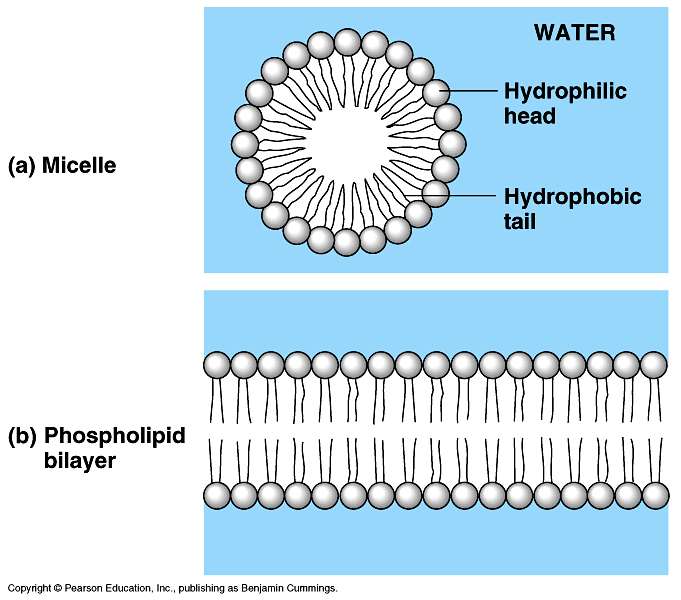
**Cell membrane controls what gets in or out**

**Need to allow \_\_\_\_\_\_\_\_\_ materials — but not all — to pass through the membrane**

**semi-permeable**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Membrane is made of special kind of lipid**



inside cell

outside cell

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **“split personality”**

**Membrane is a double layer**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Crossing the cell membrane**

**What molecules can get through the cell membrane directly?**

* **\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_ can pass directly through**

**Cell membrane channels**

**Need to make “doors” through membrane**

* **\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ allow substances in & out**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ channels allow specific material in & out**
* **H2O channel, salt channel, sugar channel, etc.**

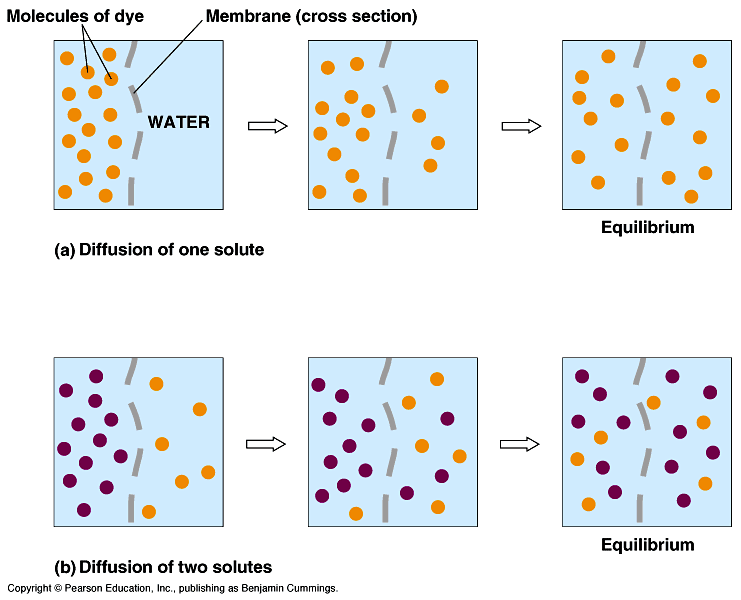
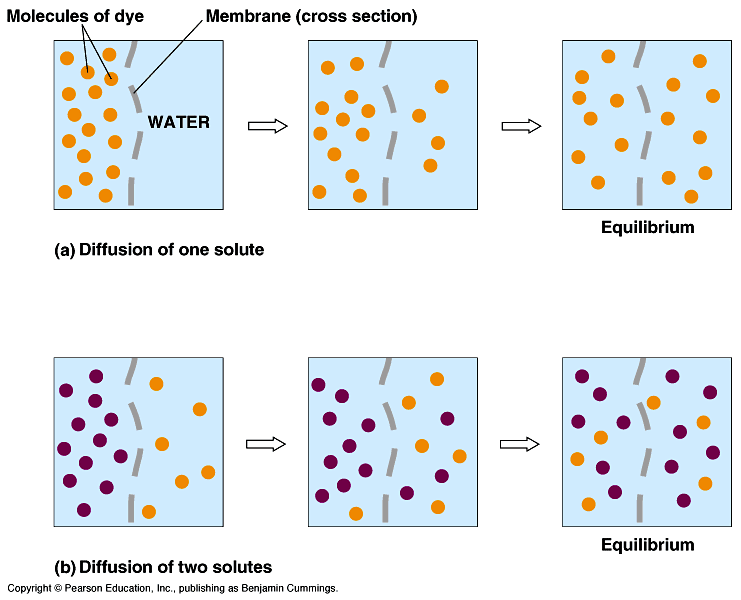
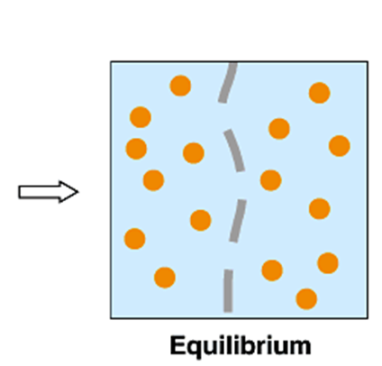
**Proteins act as doors in the membrane**

* **\_\_\_\_\_\_\_\_\_\_\_\_ to move specific molecules through cell membrane**

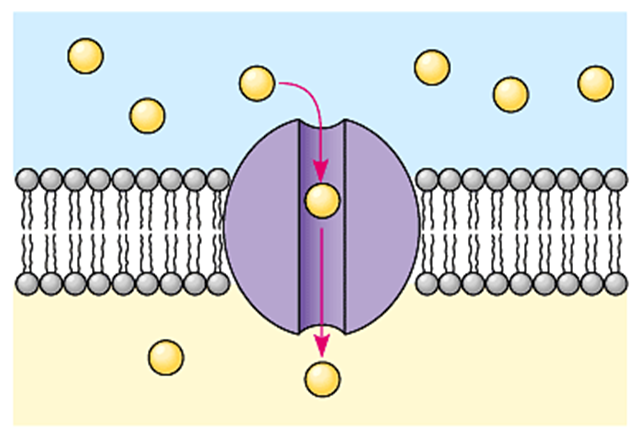
**Molecules move from high to low**

**Diffusion**

* **move from \_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_ concentration**

**Move from HIGH to LOW concentration**

* **\_\_\_\_\_\_\_\_\_\_\_ transport**
* **\_\_\_\_\_ energy needed**

**Facilitated Diffusion**

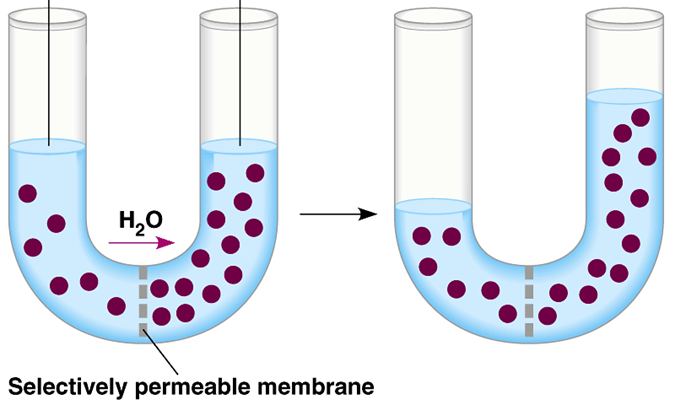
* **Move from HIGH to LOW through a \_\_\_\_\_\_\_\_\_\_\_\_**

**directly through membrane**

* **\_\_\_\_\_\_\_\_ diffusion**
* **\_\_\_\_\_energy needed**

**help through a protein channel**

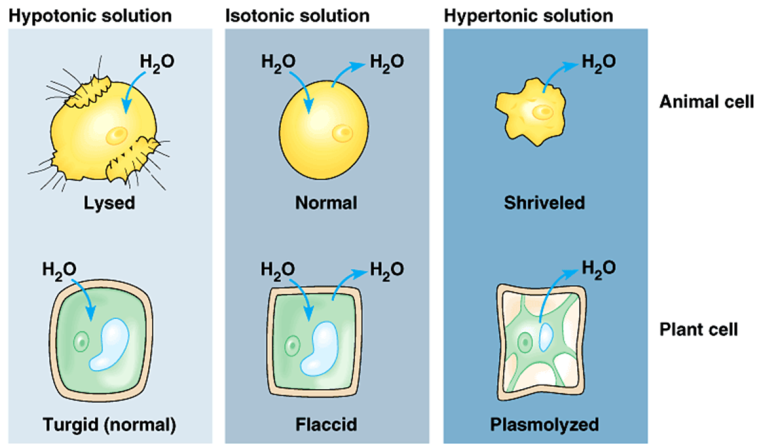
* **\_\_\_\_\_\_\_\_\_\_\_ diffusion (with help)**
* **\_\_\_\_\_ energy needed**

**\_\_\_\_\_\_\_\_\_\_\_\_  
Movement of Water Across   
Cell Membrane**

**Water is very important, so we talk about water separately**

* **Osmosis**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of water from HIGH concentration of water to LOW concentration of water**
* **across a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ membrane**

**Cell survival depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ water uptake & water loss**

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**Keeping right amount of water in cell**

**Hypotonic**

* **\_\_\_\_\_\_\_\_ concentration of water around cell**
* **cell \_\_\_\_\_\_\_\_\_\_ water**
* **Cell swells**

**Example**

**a cell in fresh water**

**Hypertonic Solution**

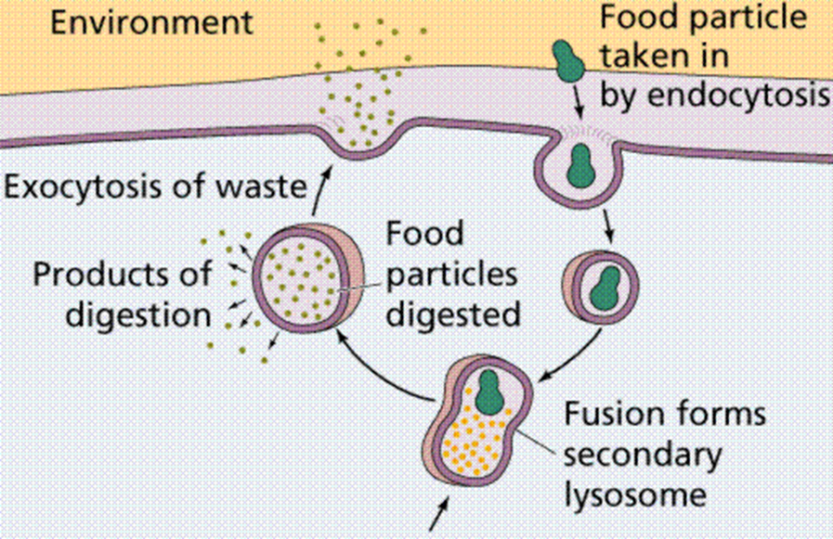
* **\_\_\_\_\_\_\_ concentration of water around cell**
* **cell loses water**
* **Cell \_\_\_\_\_\_\_\_\_\_\_\_**

**Example**

**Cells in salt water**

**Active transport**

* **Cells may need molecules to move \_\_\_\_\_\_\_\_\_\_\_ concentration “hill”**
* **need to pump “uphill”**
* **from LOW to \_\_\_\_\_\_\_\_\_\_ using energy**
* **requires \_\_\_\_\_\_\_\_\_\_\_\_ (ATP)**

****

**Endocytosis and \_\_\_\_\_\_\_\_\_\_\_\_\_ is the mechanism by which very large molecules (such as food and wastes) get into and out of the \_\_\_\_\_\_\_\_\_**

* **Food is moved \_\_\_\_\_\_\_\_ the cell by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Wastes are moved \_\_\_\_\_\_\_\_ of the cell by Exocytosis**