# Cell Processes

**Intro**

\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - maintains homeostasis

Also known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = only certain things go in/out

The membrane is made of \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Draw and label the membrane.

**Transport**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ transport – does not require energy.

* Examples: diffusion (movement of \_\_\_\_\_\_\_\_\_\_) and osmosis (movement of \_\_\_\_\_\_\_\_\_\_\_)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ transport – requires energy.

**Tonicity**

Hypotonic – more \_\_\_\_\_\_\_\_\_\_\_\_\_ inside, water moves \_\_\_\_\_\_\_\_\_.

Hypertonic – more \_\_\_\_\_\_\_\_\_\_\_\_ outside, water moves \_\_\_\_\_\_\_\_.

Isotonic – equal amounts, water moves \_\_\_\_\_\_\_\_\_ and .\_\_\_\_\_\_\_\_\_\_\_

Plants like to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Animals like to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Practice – Draw the cell to show the movement and your work.**

A 10% saline cell is placed in a 20% solution. Draw the cell to identify the tonicity.

A cell with a concentration of 50% sugar is placed in a solution of 30% sugar. Where is the water moving? Tonicity?

A cell in a 33% saline solution has an internal concentration of 56%. Where would the saline move in diffusion? The water in osmosis?

**Photosynthesis and Respiration**

Photosynthesis – Make \_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_ from \_\_\_\_\_\_\_\_\_, **\_\_\_\_\_\_\_\_\_\_,** and \_\_\_\_\_\_\_\_\_\_.

Respiration – Make \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_ from \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Location** | **Reactants** | **Products** | **ATP Produced** |
| **Aerobic**  **Respiration** |  |  |  |  |
| **Anaerobic Respiration** |  |  |  |  |
| **\*Alcoholic Fermentation** |  |  |  |  |
| **\*Lactic Acid Fermentation** |  |  |  |  |
| **Photosynthesis** |  |  |  | N/A |

\*Is a type of anaerobic respiration.

Write out the formulas for each of the processes in the table.

Aerobic respiration = energy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ oxygen.

Anaerobic respiration = energy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ oxygen.

What reactant is always involved in respiration?

What 2 products are always involved in respiration?