Notes: Diffusion and Osmosis

**Cellular Respiration Review**

### Photosynthesis vs Cellular Respiration

Photosynthesis

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Cellular Respiration

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# Rubber Eggs!

**Observations of first egg**

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**What do you think happened to the egg?**

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**Observations about eggs A and B**

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| **Egg A** | **Egg B** |
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**What happened to these eggs? Explain using a drawing, words, etc**

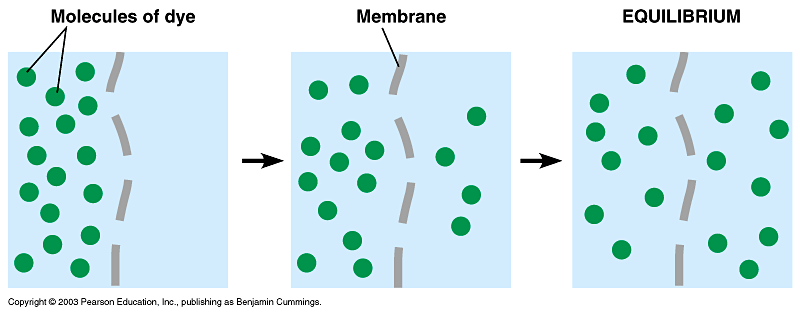
|  |  |
| --- | --- |
| **Egg A** | **Egg B** |
|  |  |

**Diffusion:**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** from an area of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** concentration to an area of**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** concentration

Think back to the egg we saw in class…the same thing will happen with a cell

* Substances will move **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**from **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**



**Osmosis**

* When the substance undergoing diffusion is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, we call the process **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + The water will move across the membrane to establish equilibrium
  + For both diffusion and osmosis **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**the membrane continues until the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Types of Solutions**

* **Hypertonic solution:**
  + \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ (substance) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the cell than inside the cell (hyper means “a lot”)
* **Hypotonic solution:**
  + \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ (substance) \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_ the cell than outside the cell (hypo means “low”)
* **Isotonic solution:**
  + The concentration is the \_\_\_\_\_\_\_\_\_\_\_\_\_ inside and outside of the cell (iso means same)

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| High sugar concentration | Low sugar concentration |

# Closing Thoughts

Based on your newfound understanding of osmosis and diffusion, why can you not place a saltwater fish into a freshwater aquarium? Or a freshwater fish into a saltwater aquarium?

* + E.g. why can’t you put a goldfish in the ocean??

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