Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
NDHS Per: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Cell Transport**

**Role of Cell Membrane**: Regulate what goes in and out of cell

**Cell Membrane Composition**:

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

**Phospholipids**:
 Phospholipids are  – two natures

“Hydro” =
“Phyllic” =
“Phobic” =

 Draw:

 Causes them to form a  – two layers

Heads of both layers on the  of the cells and the

Tails face .

 Draw:

Things that move across the cell membrane easily:
 1.
 2.
 3.

 Things that move with difficulty:
 1.  2.

**Proteins**:
 Act as  to move things across the membrane that don’t move through the phospholipids

**Types of Transport:**

1. \_\_\_\_\_\_\_\_\_\_\_\_ –

– substances move from a  (where there is more of it) to  (where there is less of it) until the levels of the substance are

1. \_\_\_\_\_\_\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

– substances move from areas of \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 – this builds a larger difference across the membrane and makes the concentrations more uneven (Chemical gradient)

**Types of Passive Transport:**

1. \_\_\_\_\_\_\_\_\_\_\_\_: movement of any material from an area of **\_\_\_\_\_\_** concentration to **\_\_\_\_\_\_** concentration

Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Movement of a substance with the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – protein creates a **\_\_\_\_\_\_\_\_\_\_** for the substance to move through

Ex: Movement of **\_\_\_\_\_\_\_\_\_** from the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

1. \_\_\_\_\_\_\_\_\_\_\_\_: movement of \_\_\_\_\_\_\_\_\_\_\_\_
Based on the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 \_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_ levels of solute

 \_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_ amounts of solute

 \_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_ levels of solution

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

**Effect of Various Solutions on Cells**

**Cells Without Walls** (leave space to draw examples)

|  |  |  |
| --- | --- | --- |
| **Hypotonic** | **Isotonic** | **Hypertonic** |
| Cell  |   | Cell  |
| Cell May  | Cell is  | Cell  |

**Cells With Walls** (leave space to draw examples)

|  |  |  |
| --- | --- | --- |
| **Hypotonic** | **Isotonic** | **Hypertonic** |
| Cell Vacuole  |   | Cell  |
| Cell Becomes Supports  | Cell is Plants  | Cell Membrane Pulls Away from the Cell Wall   |

**Active Transport**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Types**:

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* Like climbing the sliding board to slide down

\_\_\_\_\_\_\_\_\_\_\_\_: difference in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

– making one side of the membrane more hypertonic and the other more hypotonic

Ex: Cellular Respiration: Making ATP
 Transmitting a nerve signal

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Using energy to \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ to move large amounts of substances -
	1. \_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_

– White blood cells eating bacteria

* Amoeba eating paramecium
	1. \_\_\_\_\_\_\_\_\_\_\_\_: Cell taking in \_\_\_\_\_\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_: Shipping out proteins from the cell

Vesicles fuse with the cell membrane and dump the contents of the vesicle outside of the cell (end products of the endomembrane system)