

Name: _____

Date: _____ Period: _____

In Da Club – Membranes & Transport

Crash Course Biology #5

1. Cells have to be _____ – some things can easily cross the cell membrane, and some things cannot.
2. What are examples of things that can pass easily into cells?
3. What are examples of things that do not pass easily?
4. Different materials have different ways of crossing the cell membrane. There are basically two categories of ways: _____ transport and _____ transport.
5. Passive transport doesn't require any _____, and molecules (ex. oxygen, water) do this through _____.
6. Diffusion of water is called _____, and is how cells regulate their water content.
7. Osmosis occurs when solutions are of different concentrations:
 - a. If a concentration of a solution is higher inside of a cell than outside of the cell, then that intracellular solution is called _____.
 - b. If the concentration inside of the cell is lower than outside of the cell, it's called _____.
 - c. When the concentration of solution inside and outside the cell is the same, it is called _____.
8. When water moves to become isotonic, it's called moving across its concentration _____.
9. If a red blood cell were in pure water, the blood cell solution would be hypertonic (and the water solution is hypotonic). Water would move _____ the cell.

10. Your _____ are constantly on the job, regulating the concentration of your blood plasma to keep it isotonic.
11. Cell membranes are a _____ bilayer that is hydrophilic, or water-loving, on the outside and hydrophobic, or water-hating, on the inside.
12. _____ proteins allow passage of water and ions without using energy. The proteins that are specifically for channeling water are called _____.
13. Most chemicals require energy to cross the cell membrane, which is called _____ transport.
14. Energy-requiring processes, such as moving something across its concentration gradient requires _____ (ATP).
15. _____-_____ pumps are especially important for cells that need lots of energy, like muscle cells and brain cells.
- Using a molecule of ATP, the protein pump moves ___ sodium ions out of the cell and ___ potassium ions into the cell.
 - When a nerve cell is triggered, sodium ions rush in, and that gives the nerve cell a release of _____ energy.
16. Vesicular transport is another means of active transport which uses _____, tiny sacs of phospholipid membrane.
- Movement of materials outside of a cell is called _____.
 - Movement of materials into a cell is called _____.
17. There are three different types of endocytosis.
- _____ : particles
 - _____ : dissolved materials
 - _____ -mediated endocytosis: specific molecules in small concentrations