Biology Internet Assignment: Active Transport

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Sodium-Potassium Pump

Go to my website at [www.mcquadesbioconnect.weebly.com](http://www.mcquadesbioconnect.weebly.com) and click on the Homework tab under Biology. Scroll down to the website titled Diffusion and open the animation to watch. OR type the following address into your browser:

<http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter2/animation__how_the_sodium_potassium_pump_works.html>

1. The sodium Potassium pump is a type of ACTIVE / PASSIVE TRANSPORT
2. In this animation, what is used to represent
   1. Sodium ions?
   2. Potassium ions?
3. What charge do sodium and potassium carry?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. How many sodium ions bind the sodium-potassium pump?
5. What molecule provides the energy to change the shape of the sodium-potassium pump?
6. What part of this molecules remains bound to the channel?
7. Are sodium ions pumped into or out of the cell
8. What does the sodium-potassium pump have to do to increase it’s affinity for potassium?
9. How does the change in shape affect the phosphate group?
10. Are potassium ions released to the inside or the outside of the cell?
11. Both sodium and potassium ions are moving from areas of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentration to areas of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentration

# Phagocytosis

Now go to my website an click on the Phagocytosis Animation under the homework page OR type in

<http://highered.mcgraw-hill.com/olcweb/cgi/pluginpop.cgi?it=swf::535::535::/sites/dl/free/0072437316/120068/bio02.swf::Endocytosis%20and%20Exocytosis>

1. Substances taken in by single-celled organisms are often too

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to cross the hydrophobic plasma membrane.

1. Review question: What part of the plasma membrane is hydrophobic, heads or fatty acid tails?
2. What process do single celled eukaryotes use to ingest food particles?
3. What basically happens in this process
4. What are 3 major types of endocytosis
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What is the main difference between phagocytosis and pinocytosis
6. What is the 1st step of receptor mediated endocytosis?
7. What protein coats the interior of the membrane in the area of the pit?
8. What is exocytosis