Assignment: 3

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour:\_\_\_\_

**Cell Membrane Parts**

Go to my website to click on the link for this activity (under KH Biology 🡪 tab unit 3 🡪 assignment # 3) or type in the link seen here: <http://www.ibiblio.org/virtualcell/textbook/chapter3/cm.htm>

Read through the information on the page and answer the following questions, when you reach the bottom of the webpage move on to the next part by clicking “next page” found at the bottom right hand corner.

1. What are the two main parts of the cell membrane? Based on the picture you see, which are the mostly composed of?
2. Draw a phospholipid below and label the hydrophilic and hydrophobic parts of it.
3. Define the following:
   1. Hydrophilic –
   2. Hydrophobic –
4. What happens when you mix phospholipids in water?
5. What is the general role of the following proteins:
   1. Transport Proteins (Carrier Proteins and Channel Proteins):
   2. Marker Proteins:
   3. Receptor Proteins:
6. What is the role of cholesterol in a cell membrane?
7. What is the difference between carrier proteins and channel proteins?
8. Do channel proteins require energy for molecules to move through them? What do we call this process?
9. Some proteins move molecules from low to high areas of concentration, what is needed in order for this to occur?
10. What do marker proteins do?
11. How do marker proteins play a role in organ transplants?
12. What are receptor proteins used for? Describe an example.
13. What is endocytosis? When might a cell use this?
14. What is exocytosis? When might a cell use this?

**Review Sheet Part 1**

1. Compare and contrast prokaryotic and eukaryotic cells:
2. Compare and contrast plant and animal cells:
3. Fill in the chart below:

|  |  |
| --- | --- |
| **Cell Organelle:** | **Function:** |
| Mitochondria |  |
| Golgi Body |  |
| Nucleus |  |
| Lysome |  |
| Ribosome |  |
| Chloroplast |  |
| Cell Wall |  |
| Cell Membrane |  |
| Cytoplasm |  |
| Vacuole |  |

1. Fill in the chart below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Movement** | **Define** | **Does it require ATP?** | **Passive or Active?** |
| Diffusion |  |  |  |
| Osmosis |  |  |  |
| Active Transport |  |  |  |

1. What are the main functions of the cell membrane?
2. Describe the functions of the following parts of the cell membrane:
   1. Channel Protein –
   2. Marker Protein –
   3. Receptor Protein -