

Name:
Period:

CELL MEMBRANE
JUST PASSING THROUGH!!!

Your task today is to access a web site that contains an animation, that you can manipulate, to learn about how materials move in and out of a cell. Follow the directions carefully and answer all questions. This is a graded lab assignment worth 35 points.

Go to www.teachersdomain.com

Sign in name: jrobbins

Password: Stoughton

On the top left of the page, is a search bar. Type in **Cell Membrane: "Just passing Through"**

Click on: **View**

You should now be looking at a cell that has a list of substances on the right and parts of the cell labeled. Clicking on a substance will show you how that molecule moves into or out of the cell. Clicking on a label gives you information about that topic. Use the information below the cell and your observations to answer the following questions.

- 1) What does the cell need to take in, in order to maintain homeostasis (a certain balance) in order to survive?

- 2) What does the cell need to expel in order to maintain homeostasis?

- 3) Click on **Interstitial Fluid**. What does the interstitial fluid do?

- 4) What does the interstitial fluid consist of?

- 5) Click on **Plasma Membrane**. What is the plasma membrane?

- 6) What is the plasma membrane made of?
- 7) What is the function of the plasma membrane?
- 8) How do materials pass through the plasma membrane?
- 9) Click on **Lipid Bilayer**. What is the lipid bilayer?
- 10) What is the lipid bilayer made of?
- 11) What does the liquid nature of the bilayer allow for?
- 12) What can pass through the lipid bilayer easily?
- 13) What is the role of the proteins embedded in the bilayer?
- 14) Click on the **Ion Channel**. What is an ion channel?
- 15) Give an example of an Ion Channel.
- 16) Click on **Protein Pump**. What does a protein pump need to move substances through the cell membrane?
- 17) Is this active or Passive Transport?
- 18) What is ATP?
- 19) Click on **Aquaporin**. What do aquaporins do?

- 20) Click on GLUT Transporter. What is a transporter?
- 21) Does it require energy?
- 22) Click on oxygen from the menu on the right hand side. What process does it use to pass through the cell membrane?
- 23) Does it require energy?
- 24) Click on carbon dioxide from the menu on the right hand side. What process does it use to pass through the cell membrane?
- 25) Does it require energy?
- 26) Click on glucose from the menu on the right hand side. What process does it use to pass through the cell membrane?
- 27) Does it require energy?
- 28) Click on potassium from the menu on the right hand side. What process does it use to pass through the cell membrane?
- 29) Does it require energy?
- 30) Click on sodium from the menu on the right hand side. What process does it use to pass through the cell membrane?
- 31) Does it require energy?

32) Click on sodium from the menu on the right hand side. What process does it use to pass through the cell membrane?

33) Does it require energy?

34) Click on water from the menu on the right hand side. What process does it use to pass through the cell membrane?

35) Does it require energy?

36) Click on enzyme from the menu on the right hand side. What process does it use to pass through the cell membrane?

37) Does it require energy?