Just Passing Through: Cell Membrane Exploration

Part 1:
Instructions: For the first part of this exploration, go to the link below and answer the questions. http://www.pbslearningmedia.org/asset/tdc02_int_membraneweb/

1. What does a cell need to take in?

2. Hover over the “lipid bilayer” on the picture. The lipid bilayer is the main component of what part of the cell?

3. Choose several of the substances on the top right corner and watch how they move across the plasma membrane. How does potassium pass through the plasma membrane?

4. Describe how enzymes are passed through the plasma membrane.

5. What is this process called?

Part 2:
Instructions: Now follow along with the notes given in class. Fill in the blanks below:

Diffusion:
- Molecules move from an area where there are ______ to an area where there are ______.
- Molecules move until they are ________________.
- Even distribution is called: ________________
- Molecules can diffuse in a __________ or __________.

Molecule size:
- Cell membranes let ________ things in and out through diffusion
- Larger molecules can’t diffuse into the cell, and enter through special ________ or ________ (a small sac)

Cell Membranes:
- Membranes are made of lipid bilayers and is _______________
- Semipermeable means that the __________ allows movement of certain ________ across it
- Molecules small enough to fit through the ________ in the balloon will move by
- Both ________ and ________ of the balloon
Smelly Balloons - A Cell Membrane Inquiry

Instructions:
1. Each group will get 1 balloon initially. After 3 minutes you will rotate balloons. This will continue until all five balloons have been rotated.
2. Fill in balloon number, scent description, and strength of scent (weak, medium, strong) in chart for all 5 balloons.
3. Once the chart is filled in, answer the reflection questions below.

Cell Membrane Model - Data Chart

<table>
<thead>
<tr>
<th>Balloon Number (1-5)</th>
<th>Smell Description</th>
<th>Smell Strength (weak to strong)</th>
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Reflection Questions:
1. Describe how the smell molecules get out of the balloon? Include in your explanation how molecules pass through a membrane.

2. This process by which molecules move from a place of higher concentration (inside the balloon) to a place of lower concentration (outside the balloon) is called what?

3. State two ways the latex skin of a balloon is like a cell membrane.
   A. 
   B. 

4. What is diffusion?