

Bio I

Activity: Modeling the Plasma Membrane

Materials

pasta wheels	neon pink paper
pipe cleaners	straw
plastic “toys”	

Procedure

1. Remove all of the materials from the envelope. Be very careful not to lose anything.
2. Using these items, construct a model of the plasma membrane on the lab table. Be sure to include the following components in the model: phospholipid bilayer, cholesterol, proteins, and carbohydrates.
3. Fill in the chart with the appropriate information:

	Represent:	Function
<i>Pasta wheels</i>		
<i>Pipe cleaners</i>		
<i>Plastic “toys”</i>		
<i>Neon pink paper</i>		
<i>Straw</i>		

4. Once you are done building and filling in the table above, raise your hand and I will check and quiz you for a daily quiz grade on your model. The quiz will be on a particular component of the membrane and its function. Study the table above before the quiz, notes are not allowed.

TEACHER APPROVAL: _____

Analysis

1. What is meant by selective permeability?
2. Explain the role that the polarity of the phospholipids play in the membrane’s ability to be selective.
3. Two types of proteins can be found within the plasma membrane. List the two and differentiate between them.
4. If you were given two diagrams, one representing a plasma membrane and the other a cell wall, how would you distinguish between the two through examining their structure? Be sure to explain specifically.

