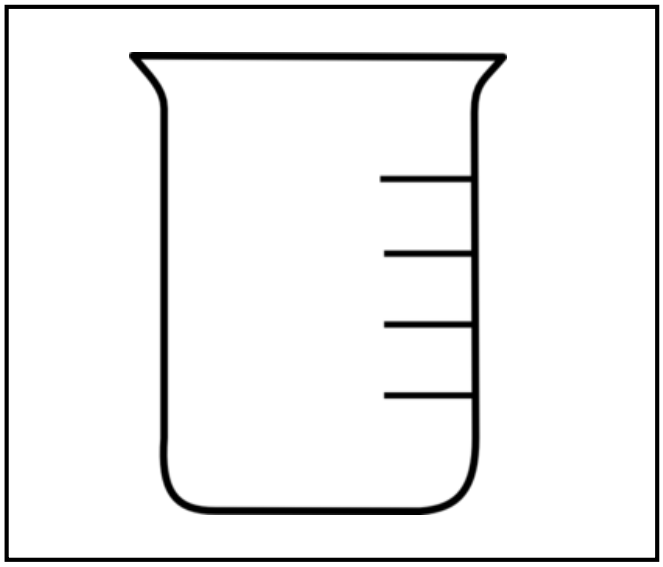
AP Biology
Membrane Activity #2
Answer Sheet

Name _____
Period ___ Date _____

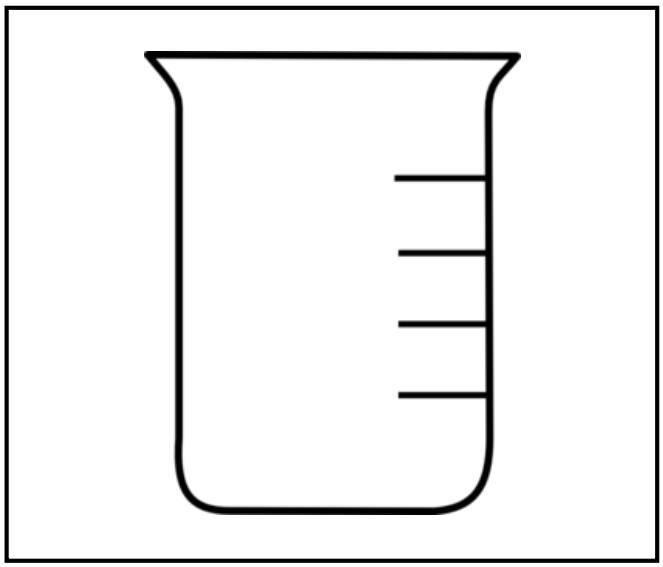
#1



Describe why you arranged your phospholipids this way.

What is the name of this model?

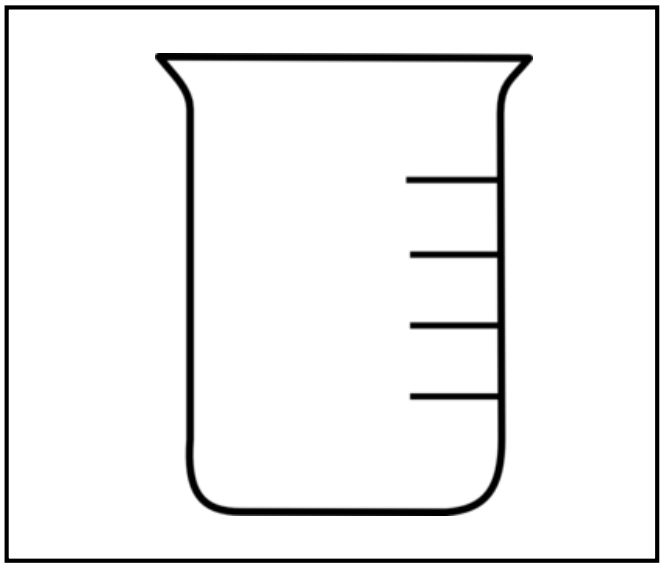
#2



You had to change your model from #1 – why did that model not work for the new conditions?

What is the name of this model? Describe it.

#3



What about your previous model was inadequate for this scenario?

What is the name of this model? Describe it.

Summary Questions

Upon closer examination of the hydrophobic tails of the models, you may notice that in one of the tails all of the carbons are connected with single bonds. These hydrocarbon tails are **saturated**. In the second tail, a double bond connects two adjacent carbons. The presence of a double bond creates a kink in the structure of this hydrocarbon chain. The hydrocarbon tails containing a double bond between adjacent carbons are **unsaturated**.

1. Develop an explanation for the necessity of having kinks in the hydrophobic tail of the phospholipids that make up cell membranes.

2. In the last activity, you learned about the ***cis*** and ***trans*** configurations. Which of these, ***cis*** or ***trans***, contributes to the fluidity of the plasma membrane? Why?

3. Develop an explanation for why fluidity in the cell membrane is important.

4. Take a look at your final structure, the **liposome**. Compare the number of phospholipids in the inside leaflet to the number in the outside leaflet.

5. What happens to the structure if inside phospholipids flop to the outside layer?

6. How do you think phospholipids move from the outer to the inner leaflets in the bilayer?