

AP BIOLOGY
CELL UNIT
ACTIVITY #4

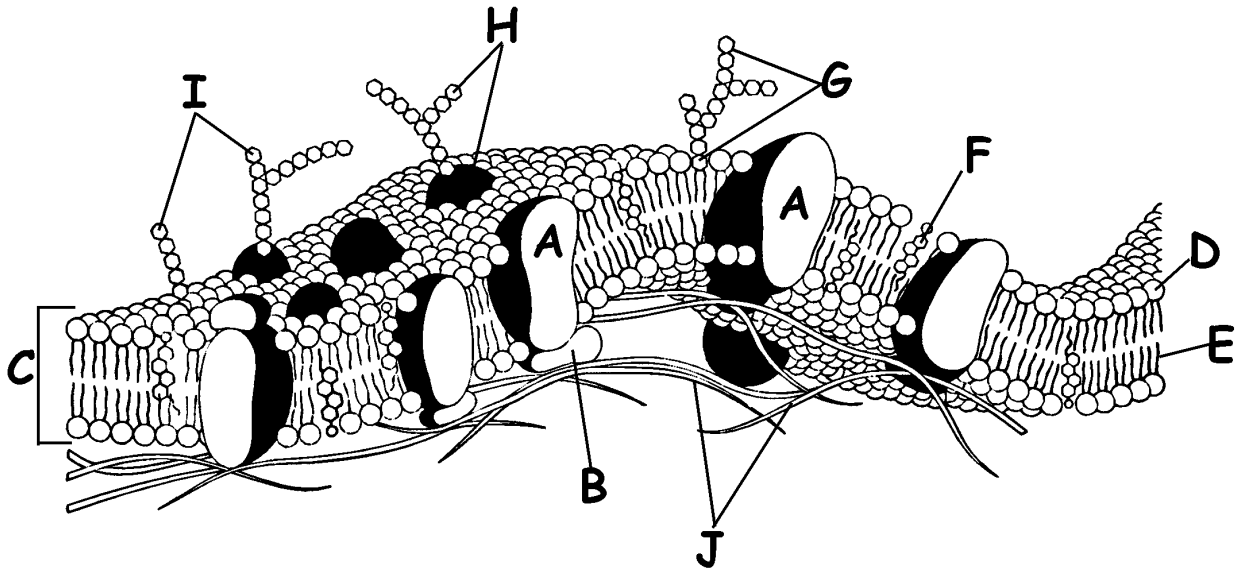
NAME_____

DATE_____HOUR_____

CELL MEMBRANE

QUESTIONS

1. Match the structure with the correct letter from the diagram.



- | | |
|---------------------------------------|---------------------------------------|
| _____ cholesterol | _____ hydrophobic end of phospholipid |
| _____ cytoskeleton | _____ integral protein |
| _____ Glycolipid | _____ lipid bilayer |
| _____ Glycoprotein | _____ oligosaccharides |
| _____ hydrophilic end of phospholipid | _____ peripheral protein |

2. What component(s) of the cell membrane contribute to the fluid quality of the cell membrane?

3. Describe the experiment and the results that provided evidence that proteins drift through the membrane.

4. Complete the following chart describing the role of cholesterol in the cell membrane.

Temperature	Role of Cholesterol	Effect on Membrane Fluidity
Warm		
Cold		

5. How is winter wheat able to survive the cold temperatures of winter without serious cell damage?

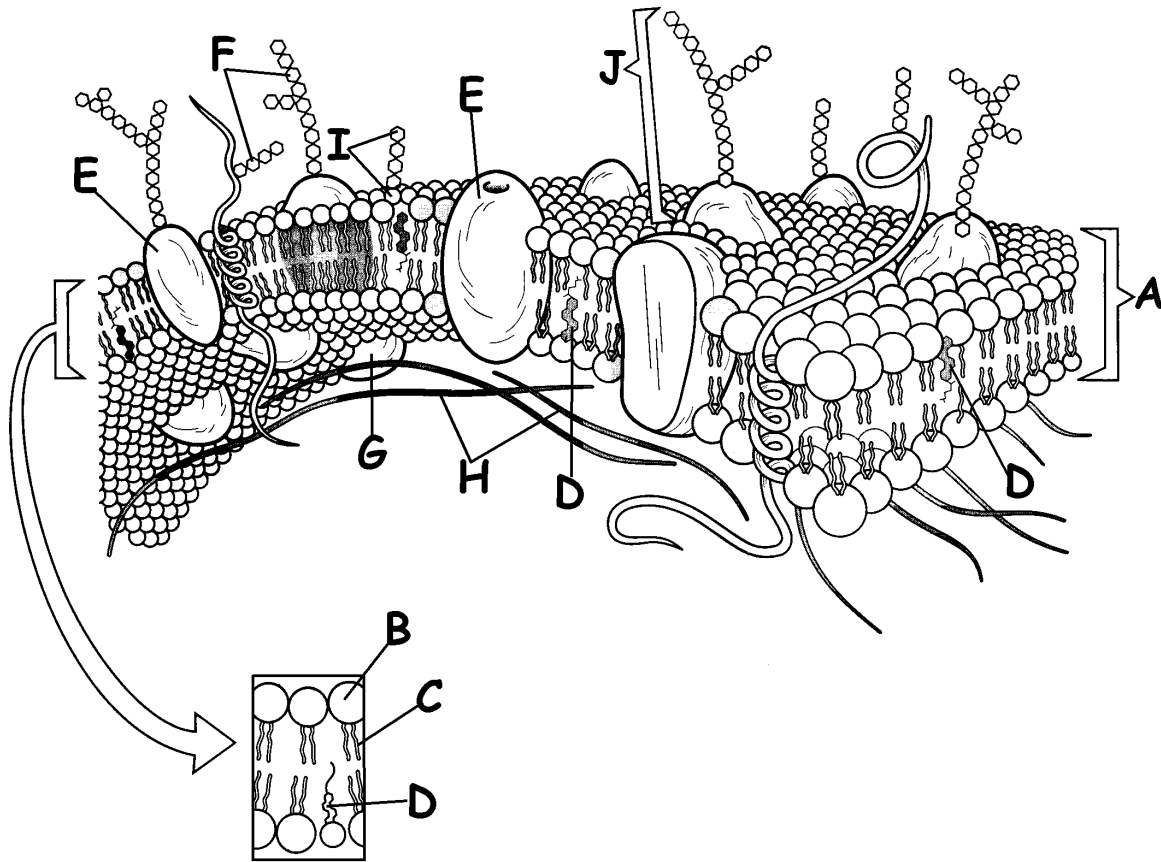
6. What component(s) of the cell membrane contribute to the mosaic quality of the cell membrane?

7. How are integral proteins different from peripheral proteins?

Integral Proteins	Peripheral Proteins

8. List possible functions of membrane proteins. (Give at least 3 possible functions.)

9. Match the structure with the correct letter from the diagram.



- | | |
|---------------------------------------|------------------------------------|
| _____ Cholesterol | _____ Hydrophobic end phospholipid |
| _____ Cytoskeleton | _____ Integral protein |
| _____ Glycolipid | _____ Lipid bilayer |
| _____ Glycoprotein | _____ Oligosaccharides |
| _____ Hydrophilic end of phospholipid | _____ Peripheral protein |

10. Explain what is meant by the phrase "membranes are bifacial".

11. What is the role of carbohydrates on the surface of cell membranes?

12. How is cell-to-cell recognition important?

13. What is an oligosaccharides?

14. Define each of the following terms.

Term	Definition
Glycoprotein	
Glycolipid	