

AP BIOLOGY  
CELL UNIT  
ACTIVITY #4

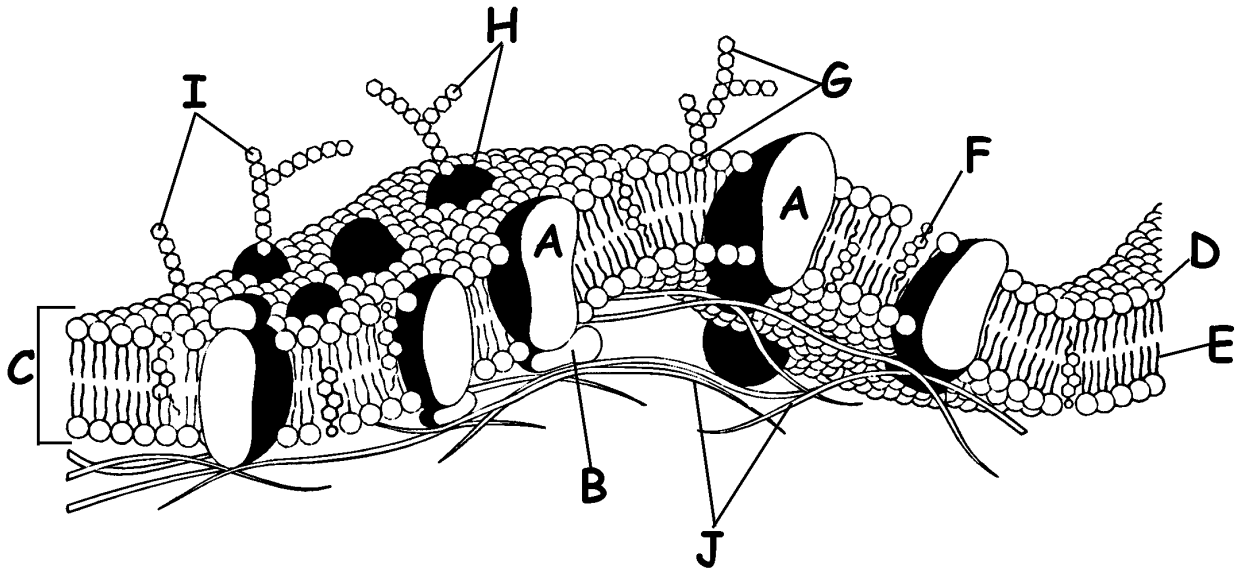
NAME \_\_\_\_\_

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?

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

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

<b>Temperature</b>	<b>Role of Cholesterol</b>	<b>Effect on Membrane Fluidity</b>
Warm		
Cold		

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

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

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7. How are integral proteins different from peripheral proteins?

<b>Integral Proteins</b>	<b>Peripheral Proteins</b>

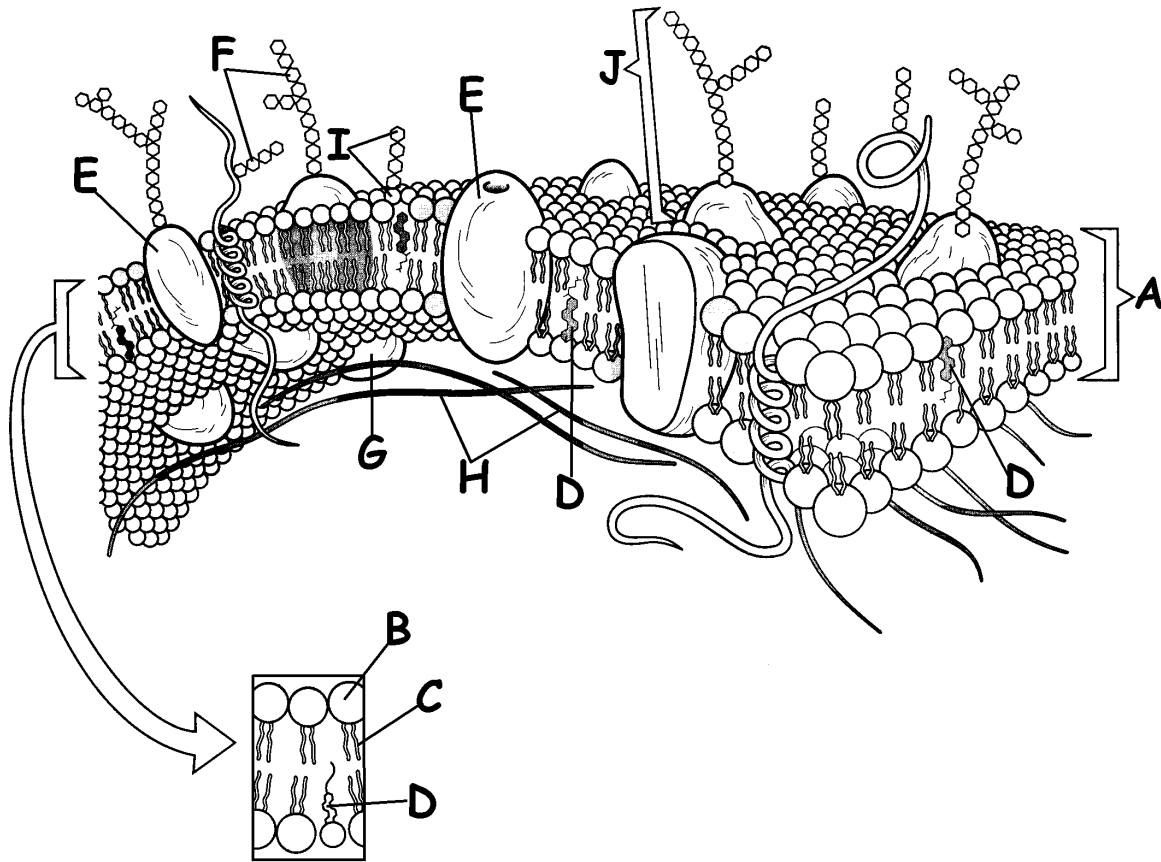
8. List possible functions of membrane proteins. (Give at least 3 possible functions.)

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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".

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

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

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13. What is an oligosaccharides?

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14. Define each of the following terms.

<b>Term</b>	<b>Definition</b>
Glycoprotein	
Glycolipid	