Name Period Date

SECTION 3.3

CELL MEMBRANE

Study Guide

KEY CONCEPT

The cell membrane is a barrier that separates a cell from the external environment.

VOCABULARY	
cell membrane	selective permeability
phospholipid	receptor
fluid mosaic model	

MAIN IDEA: Cell membranes are composed of two phospholipid layers.

1. Draw a phospholipid in the box below. Label the three major parts.

2. Which part of a phospholipid is charged, or polar? _____
3. Which part of a phospholipid is nonpolar? _____
4. What type of molecules interact with water, polar or nonpolar? _____
5. Where does a cell membrane come into contact with water? _____
6. Why do the phospholipids surrounding the cell form a bilayer? _____

A cell membrane has other types of molecules embedded in the phospholipid bilayer. List a function of each type of molecule in the table below.

Molecule	Function
7. Cholesterol	
8. Proteins	
9. Carbohydrates	

10. In what way is a membrane fluid?

_____

11. Draw a picture in the box below to represent selective permeability.

outside	inside

MAIN IDEA: Chemical signals are transmitted across the cell membrane.

12. A _____ detects a signal molecule and carries out an action in response.

13. A _____ is a molecule that acts as a signal when it binds to a receptor.

14. A ligand that can cross the cell membrane can bind to an _____ receptor.

15. A ligand that cannot cross the cell membrane can send a message to a cell by binding to a _____ receptor, which then _____ shape.

Vocabulary Check

16. What is the fluid mosaic model?

_____

17. The cell membrane allows some, but not all, molecules to cross. What term describes this property?

_____