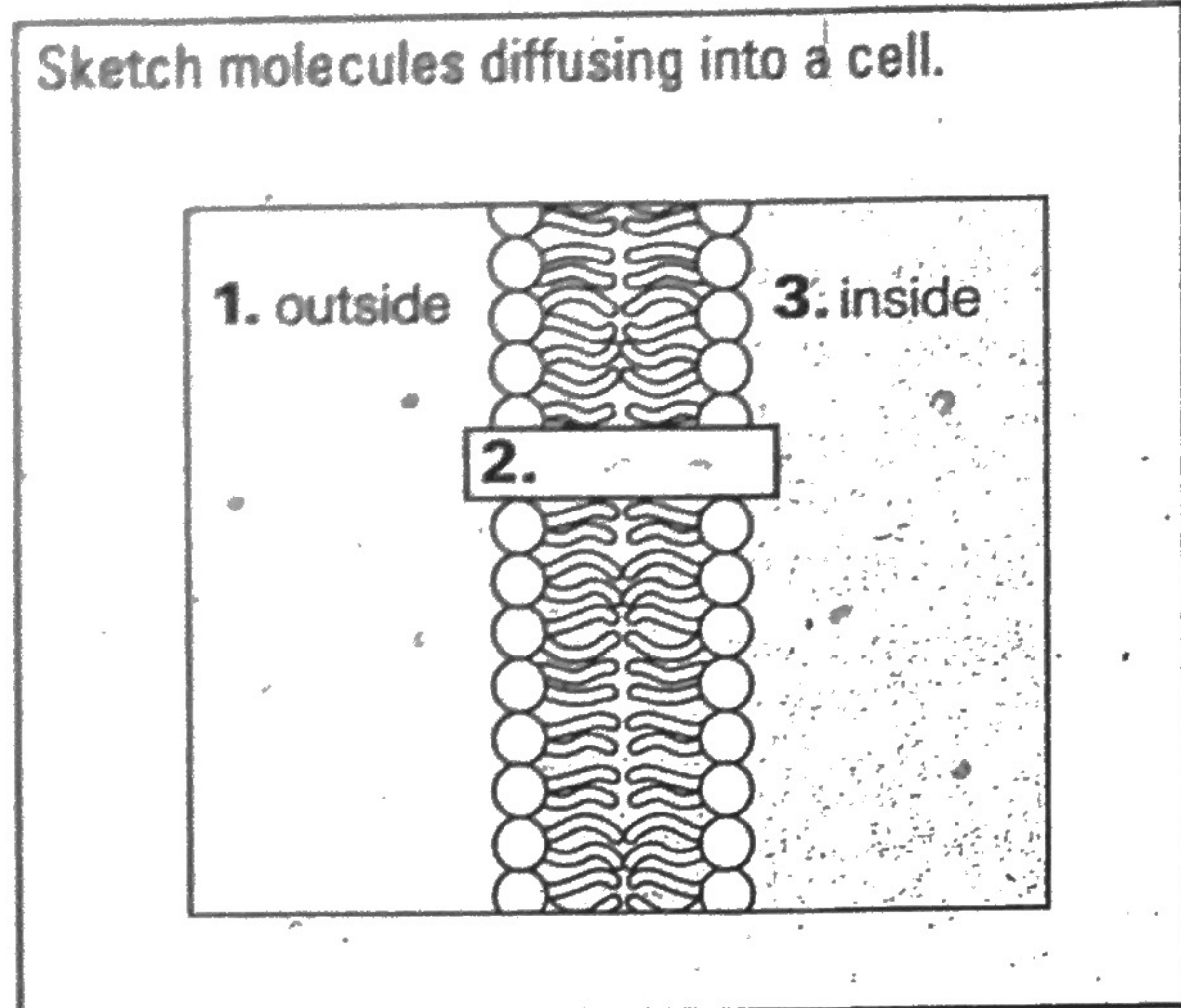


SECTION

3.4

DIFFUSION AND OSMOSIS

Power Notes



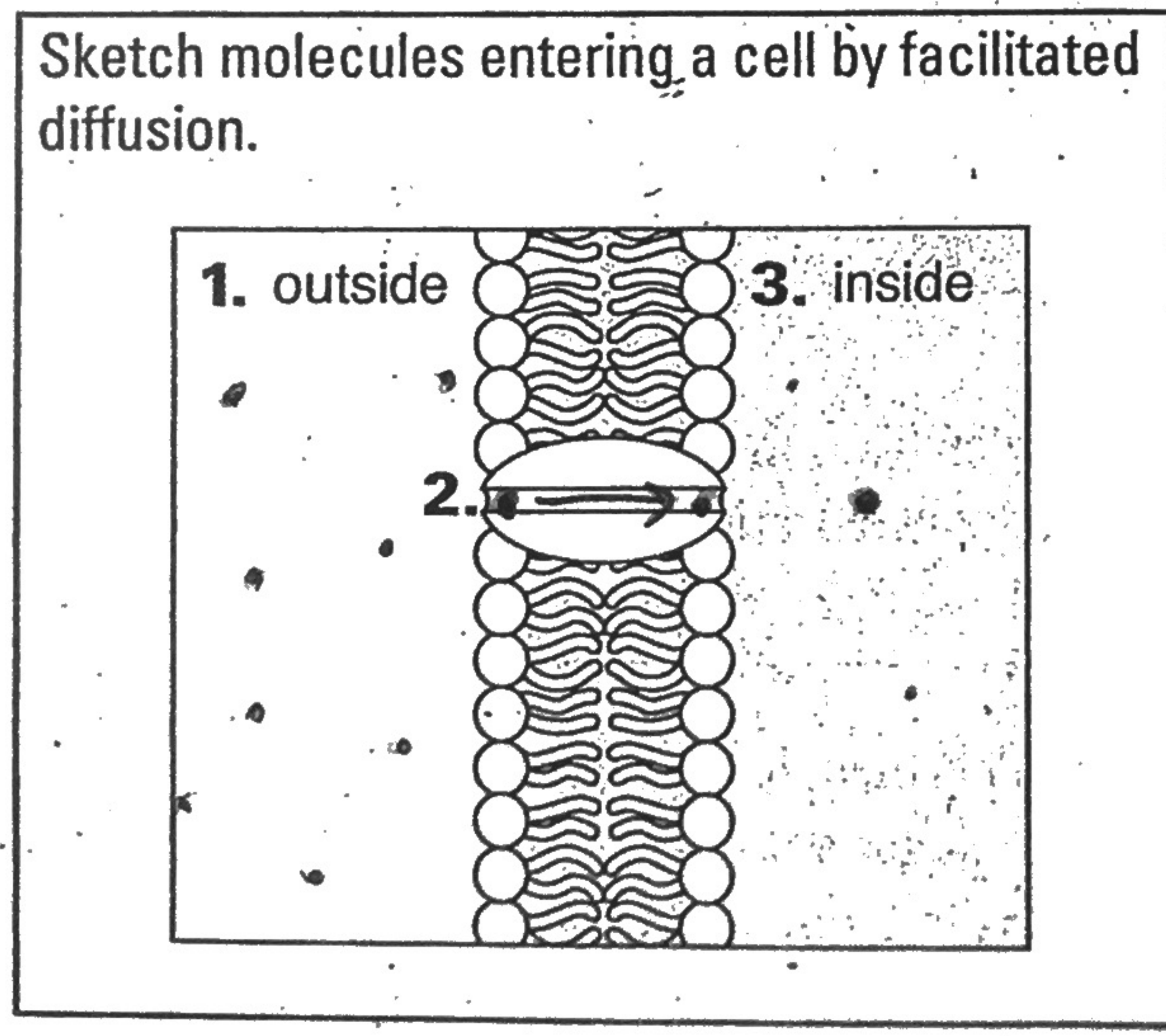
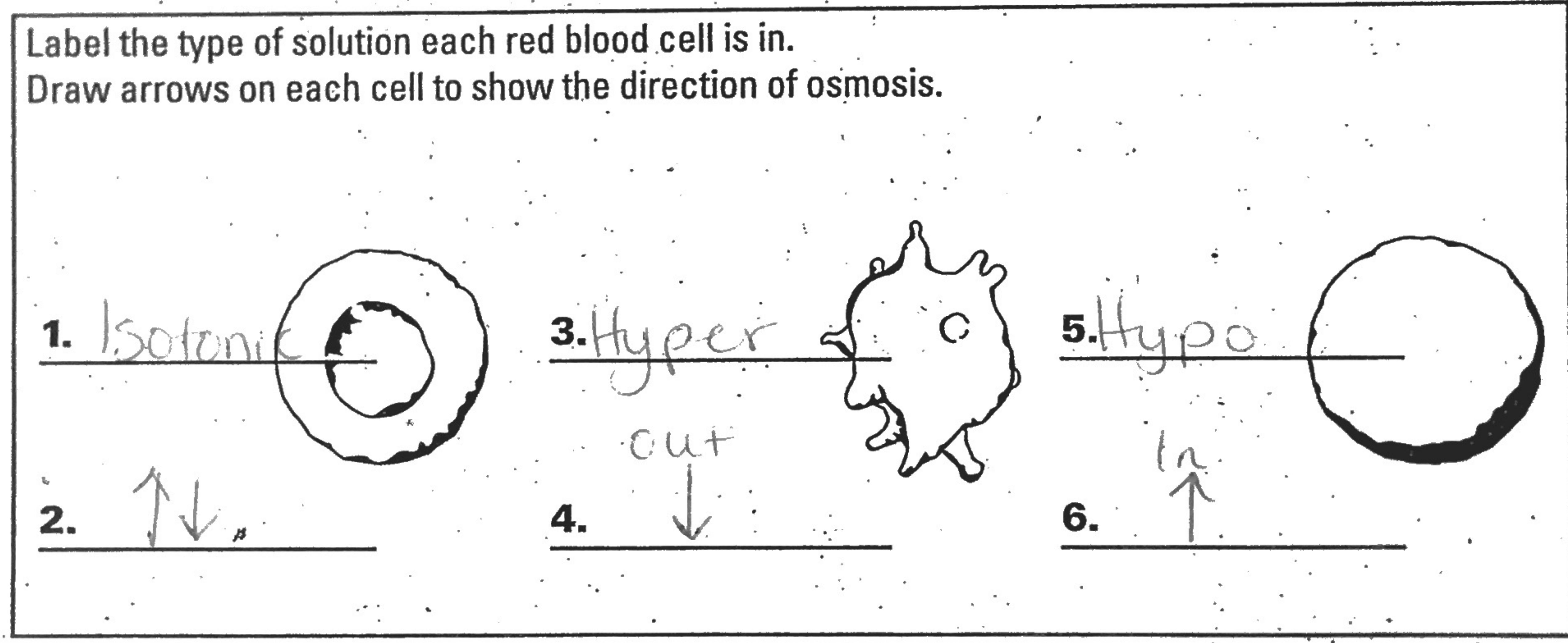
Passive transport:

- NO ATP required
- passes through the membrane

Diffusion:  
Fluid or Gas  
from High →  
Low

Osmosis:  
Water from  
High →  
Low

How do different solutions affect cells?



Facilitated diffusion:

- No ATP required
- Type of passive
- \* Requires transport protein
- (facilitate: make easier)



**KEY CONCEPT**

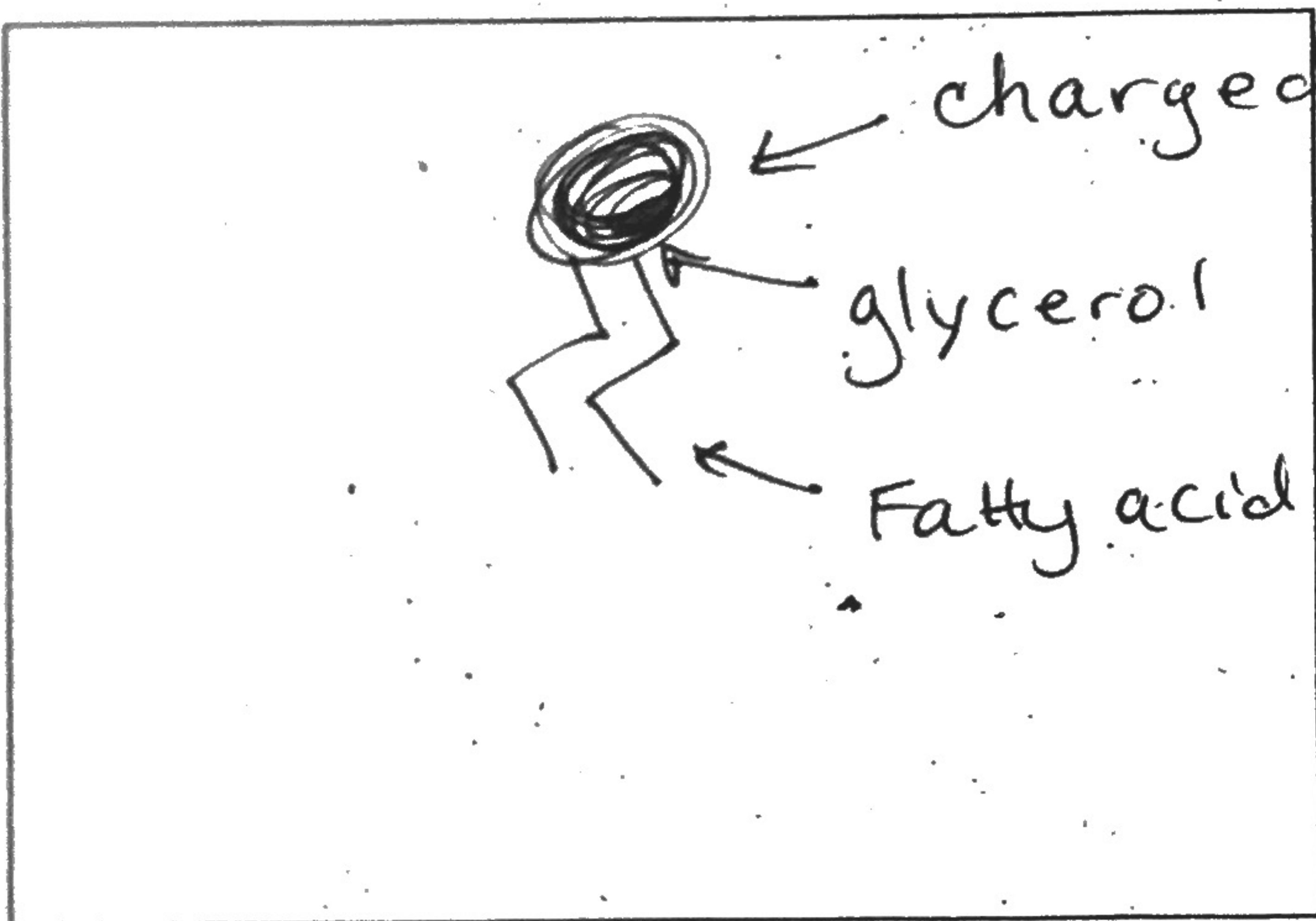
The cell membrane is a barrier that separates a cell from the external environment.

**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? phosphate head
3. Which part of a phospholipid is nonpolar? fatty acid tails (+glycerol)
4. What type of molecules interact with water, polar or nonpolar? POLAR!
5. Where does a cell membrane come into contact with water? phosphate head
6. Why do the phospholipids surrounding the cell form a bilayer? Support + protection of the cell to be selectively permeable

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	Strength + support
8. Proteins	transport / support
9. Carbohydrates	signaling