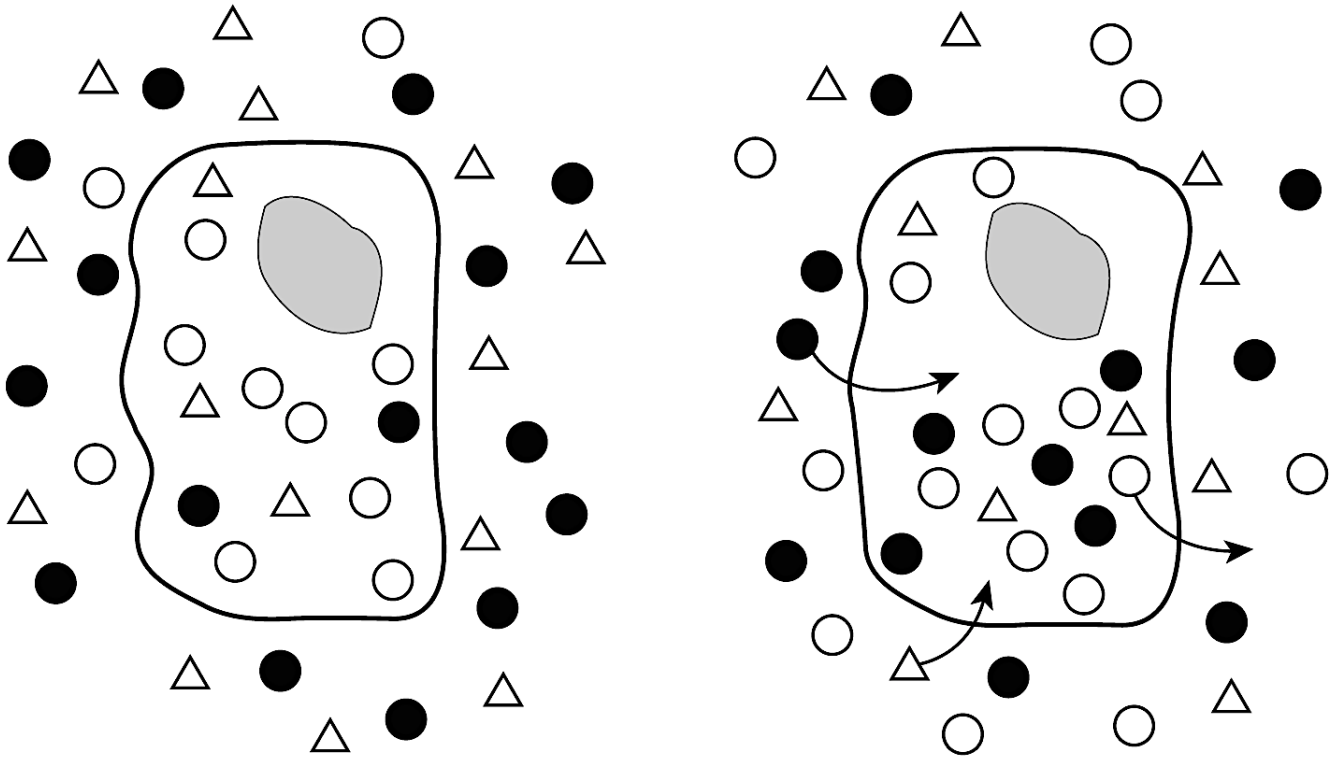


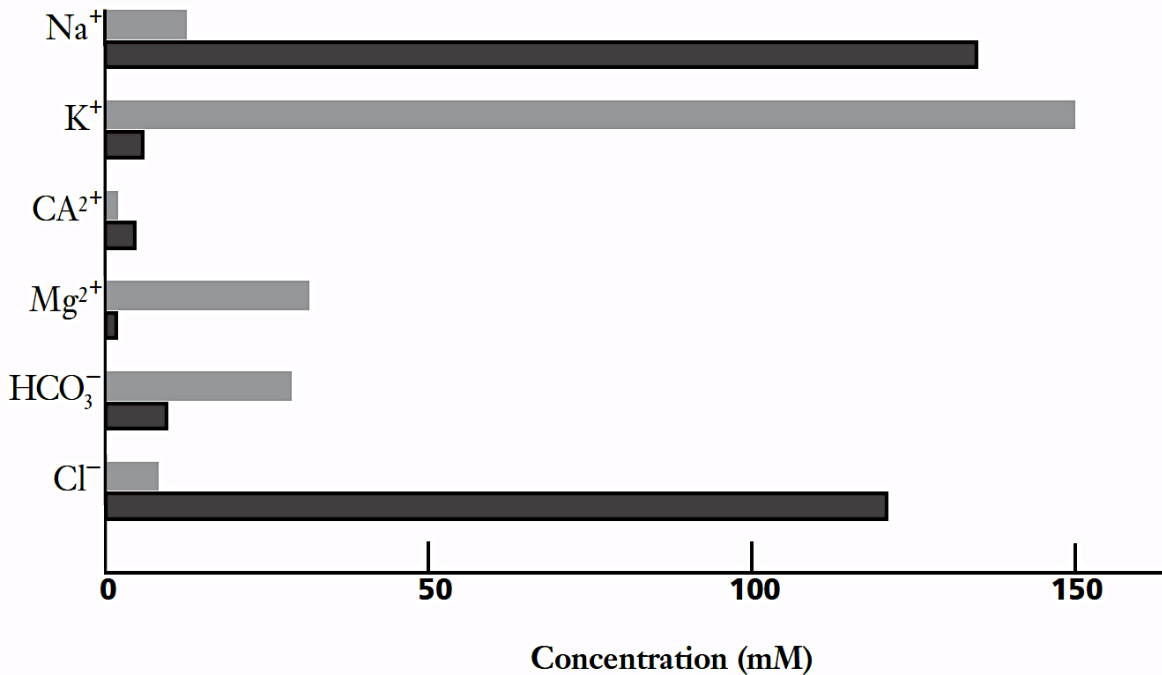
**Master  
19****Diffusion and  
Cell Size****Section Focus***Use with Chapter 8, Section 8.2*

- △ Glucose molecule  
● Oxygen molecule  
○ Carbon dioxide molecule

- 1 What materials move through this cell by diffusion?
- 2 How might increasing the size of the cell affect the cell?

### Thinking Critically

The graph shows typical concentrations of several ions inside and outside an animal cell. Concentrations of ions inside the cell are shown in gray, outside in black. Use the graph to answer questions 1–5.



1. Compared to its surroundings, does an animal cell contain a higher or lower concentration of potassium (K<sup>+</sup>) ions? \_\_\_\_\_
2. Which ions are in the greatest concentration outside the animal cell? \_\_\_\_\_
3. Which ions are in the lowest concentration inside the animal cell? \_\_\_\_\_
4. What is the approximate concentration, in mM, of Mg<sup>2+</sup> ions inside the cell? \_\_\_\_\_
5. If all available Na<sup>+</sup> and Cl<sup>-</sup> ions combine to form NaCl, do any excess Na<sup>+</sup> or Cl<sup>-</sup> ions remain?  
If so, which? \_\_\_\_\_

Answer the following question.

6. Describe the process by which a cell maintains differences in concentrations of certain ions on either side of the plasma membrane.

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