

**Chapter**  
**6**
**The Chemistry of Life, *continued***
**Reinforcement and Study Guide**
**Section 6.2 Water and Diffusion**

*In your textbook, read about water and its importance.*

For each statement below, write **true** or **false**.

- \_\_\_\_\_ 1. In a water molecule, electrons are shared equally between the hydrogen atoms and oxygen atom.
- \_\_\_\_\_ 2. The attraction of opposite charges between hydrogen and oxygen forms a weak oxygen bond.
- \_\_\_\_\_ 3. Because of its polarity, water can move from the roots of a plant up to its leaves.
- \_\_\_\_\_ 4. Water changes temperature easily.
- \_\_\_\_\_ 5. Unlike most substances, water expands when it freezes.

Circle the letter of the choice that best completes the statement.

6. All objects in motion have  
**a.** potential energy.      **b.** heat energy.      **c.** kinetic energy.      **d.** random energy.
7. The first scientist to observe evidence of the random motion of molecules was  
**a.** Brown.      **b.** Darwin.      **c.** Mendel.      **d.** Hooke.
8. The net movement of particles from an area of higher concentration to an area of lower concentration is called  
**a.** dynamic equilibrium.      **b.** nonrandom movement.  
**c.** concentration gradient.      **d.** diffusion.
9. Diffusion occurs because of  
**a.** nonrandom movement of particles.      **b.** random movement of particles.  
**c.** a chemical reaction between particles.      **d.** chemical energy.
10. When a few drops of colored corn syrup are added to a beaker of pure corn syrup, the color will  
**a.** move from low concentration to high concentration.  
**b.** form a polar bond.  
**c.** start to diffuse.  
**d.** remain on the bottom of the beaker.
11. Diffusion can be accelerated by  
**a.** decreasing the pressure.      **b.** increasing the temperature.  
**c.** decreasing the movement of particles.      **d.** increasing the dynamic equilibrium.
12. When materials pass into and out of a cell at equal rates, there is no net change in concentration inside the cell. The cell is in a state of  
**a.** dynamic equilibrium.      **b.** metabolism.      **c.** imbalance.      **d.** inertia.
13. The difference in concentration of a substance across space is called  
**a.** dynamic equilibrium.      **b.** concentration gradient.  
**c.** diffusion.      **d.** Brownian movement.