

Section 2-2 Properties of Water (pages 40-43)



Key Concepts

- Why are water molecules polar?
- What are acidic solutions? What are basic solutions?

The Water Molecule (pages 40-41)

1. Is the following sentence true or false? A water molecule is neutral. _____
2. Why is a water molecule polar? _____

3. Circle the letter of each sentence that is true about hydrogen bonds.
 - a. A hydrogen bond is stronger than an ionic bond.
 - b. The attraction between the hydrogen atom on one water molecule and the oxygen atom on another water molecule is an example.
 - c. A hydrogen bond is stronger than a covalent bond.
 - d. They are the strongest bonds that form between molecules.
4. Complete the table about forms of attraction.

FORMS OF ATTRACTION

Form of Attraction	Definition
Cohesion	
Adhesion	

Solutions and Suspensions (pages 41-42)

5. What is a mixture? _____

6. A mixture of two or more substances in which the molecules of the substances are evenly mixed is called a(an) _____.
7. The greatest solvent in the world is _____.
8. What is a suspension? _____

9. Complete the table about substances in solutions.

SUBSTANCES IN SOLUTIONS

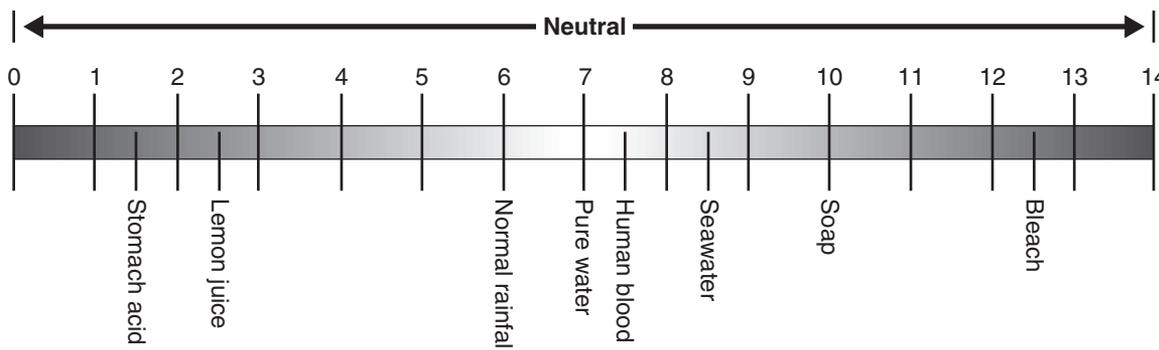
Substance	Definition	Saltwater Solution
Solute		
		Water

Acids, Bases, and pH (pages 42–43)

10. Why is water neutral despite the production of hydrogen ions and hydroxide ions?

11. What does the pH scale indicate? _____

12. On the pH scale below, indicate which direction is increasingly acidic and which is increasingly basic.



13. How many more H⁺ ions does a solution with a pH of 4 have than a solution with a pH of 5? _____

14. What is an acid? _____

15. Is the following sentence true or false? Strong bases have pH values ranging from 11 to 14. _____

16. What are buffers? _____
