Section 8.3 Properties of Acids and Bases

(pages 240–245)

This section describes the general properties of acids and bases.

Reading Strategy (page 240)

Using Prior Knowledge Before you read, write your definition of each vocabulary term in the table below. After you read, write the scientific definition of each term and compare it with your original definition. For more information on this reading strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Term	Your Definition	Scientific Definition
Acid		
Base		
Salt		

Identifying Acids (pages 240–241)

1. Define an acid. _____

_____

Match these common acids to their uses.

Acids	Uses
_____ **2.** acetic acid	a. Fertilizer production
_____ **3.** sulfuric acid	b. Carbonated beverages
_____ **4.** hydrochloric acid	c. Vinegar
_____ **5.** carbonic acid	d. Car batteries
_____ **6.** nitric acid	e. Digestive juices in stomach

7. Describe some general properties of acids. _____

_____

8. Place the following substances in the correct column in the table: lemons, vinegar, grapefruit, sour milk, tomatoes.

Foods Containing Acetic Acid	Foods Containing Citric Acid	Foods Containing Butyric Acid

9. The reaction between an acid and a metal can be classified as a(n) _____.

10. Explain why an indicator is useful. _____

_____

Identifying Bases (pages 242–243)

11. Define a base. _____

_____

12. Use the following compounds to complete the chart: aluminum hydroxide, calcium hydroxide, magnesium hydroxide, and sodium hydroxide.

Common Bases		
Name	**Formula**	**Uses**
	$NaOH$	Drain cleaner, soap production
	$Mg(OH)_2$	Antacid, laxative
	$Ca(OH)_2$	Concrete, plaster
	$Al(OH)_3$	Deodorant, antacid

13. What can a gardener add to the soil to change the flowers of a hydrangea from pink to blue? _____

14. Circle the letter that describes how basic solutions generally taste.

a. sweet b. sour

c. bitter d. salty

15. Is the following sentence true or false? Bases turn red litmus paper blue. _____

Neutralization and Salts (page 244)

16. The reaction between an acid and a base is called _____.

17. Describe how a salt can be produced by a chemical reaction. _____

_____

18. Write a chemical equation describing the neutralization reaction between calcium hydroxide and hydrochloric acid.

_____

Proton Donors and Acceptors (page 245)

19. Acids can be described as proton _____; bases can be described as proton _____.

20. When hydrogen chloride ionizes in water, which reactant is the proton donor? Which reactant is the proton acceptor? _____

_____