Section 2–4 Chemical Reactions and Enzymes (pages 49–53)

This section describes what happens to chemical bonds during chemical reactions. It also explains how energy changes affect chemical reactions and describes the importance of enzymes.

Chemical Reactions (page 49)

1. What is a chemical reaction?

2. Complete the table about chemicals in a chemical reaction.

CHEMICALS IN A CHEMICAL REACTION

Chemicals	Definition
Reactants	
Products	

3. Chemical reactions always involve changes in chemical ______.

Energy in Reactions (page 50)

- 4. What is released or absorbed whenever chemical bonds form or are broken?
- 5. What do chemical reactions that absorb energy need to occur?
- 6. Chemists call the energy needed to get a reaction started the _____
- 7. Complete the graph of an energy-releasing reaction by adding labels to show the energy of the reactants, the energy of the products, and the activation energy.



Na	me Class Date					
En	zymes (pages 51–52)					
8.	What is a catalyst?					
9.	9. Proteins that act as biological catalysts are called					
10. What do enzymes do?						
11.	From what is part of an enzyme's name usually derived?					
Enzyme Action (pages 52–53)						
12.	. The reactants of enzyme-catalyzed reactions are known as					
13.	Why are the active site and the substrates in an enzyme-catalyzed					
	reaction often compared to a lock and key?					
14.	I. The binding together of an enzyme and a substrate forms a(an)					
15.	5. How do most cells regulate the activity of enzymes?					

Name	Class Date	
WordWise		
Answer the questions by writing the correct Use the circled letter(s) in each term to find Then, write a definition for the hidden word.	t vocabulary term in the blanks. the hidden vocabulary word. !.	
Clues	Vocabulary Terms	
What is a negatively charged subatomic		
What is the basic unit of matter?		
What is a large compound formed from combinations of many monomers?	O	
What is an organic compound called tha to store energy and forms important par biological membranes?	at is used rts of	
What is an element or compound called produced by a chemical reaction?		
What is the type of mixture whose comp evenly distributed throughout?	ponents are	
What is an atom called that has a positiv charge as a result of gaining or losing ele	ve or negative	
What is a monomer of nucleic acids calle	ed?	_O_
Hidden Word:		