Name	Class	_ Date
Skills Worksheet		
<b>Directed Read</b>	ding B	
Billettea nea		
Section: Forming I	New Substances	
C	chlorophyll	
<b>1.</b> The pigment that mak <b>2.</b> Why are leaves orange	tes leaves green is called e and vellow in the fall?	
	ves break down to reveal the other pigments	1
which have red, yellow ar		
HEMICAL REACTIONS		
<b>3.</b> A process in wh <u>ich or</u>	ne or more substances change to for	m new substances
is called a(n)	al reaction	
	s of the new substances compare wi	
the original substance	es after a chemical change takes plac	ce?
	cal properties of the new substance are DIFFE	RENT,
than the original substan	ice.	
A chemical change make	es a new molecule with new properties.	
<b>5.</b> A solid <u>substance</u> that	t is formed in a solution is called	
a(n) <mark>precipitate</mark>		
	e of a chemical reaction with the cor	rect clue. Write the
etter in the space provide		
change c Thormal on ord	wig given off	color change

	i die space providea.	
exothermic - energy change	<b>6.</b> Thermal energy is given off.	a. color change
solid formation	<b>7.</b> Precipitate forms.	<b>b.</b> energy change
gas formation	-	<b>c.</b> solid formation
gas ionnation	<b>8.</b> Nitrogen dioxide forms.	<b>d.</b> gas formation
color change	9. Bleach spots form.	C .
<b>10.</b> Wh	en a gas is given off as a liquid boils, it is an examp	le of
a(n)	)physical change, not a(n)che	emical
rea	ction.	

Class	Date

Directed Reading B continued

Name \_\_\_\_\_

**11.** What is the most important sign that a chemical reaction is occurring?

The most important sign is the formation of a new substance that has	
new properties. This for sure indicates that a chemical reaction is occuring.	

## **BONDS: HOLDING MOLECULES TOGETHER**

**12.** What is a chemical bond?

A chemical bond is a force that holds two atoms together in a molecule.	
ex. covalent bond, ionic bond, metallic bond.	

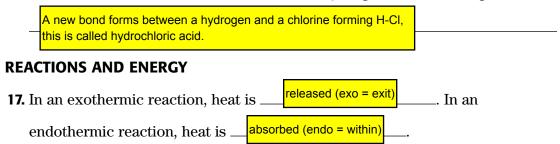
**13.** How do new substances form during a chemical reaction?

First, atoms from the starting molecules (reactants) must break apart their bonds.	
Then these atoms must recombine to form new combinations of	
chemical bonds. Then a new molecule substance forms and is called	
the (product).	

14. What causes chemical bonds to break?

When molecules collide with enough energy to break apart the old covalent bonds.

- 15. How many atoms make up a diatomic molecule?
- **16.** What substance forms from the reaction of hydrogen and chlorine gas?



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Directed Reading B continued		
<b>18.</b> What types of energy are released in	n exothermic reactions	?

<mark>heat energy.</mark>

**19.** What does the law of conservation of energy state?

The law of conservation of energy stated that energy cannot be created or destroyed, only changed from one form to another.
 ex. mechanical energy changes into heat when you rub your hands together.