

Science 10

Chemistry Unit (Part II) review package

Textbook pg.252 “checking concepts” # 4-6, 9a,b,d,e,g, 10, 14a, 16, 17, 19-21

Textbook pg. 282 “checking concepts” #1-3, 5.

Answers will be posted to MOODLE

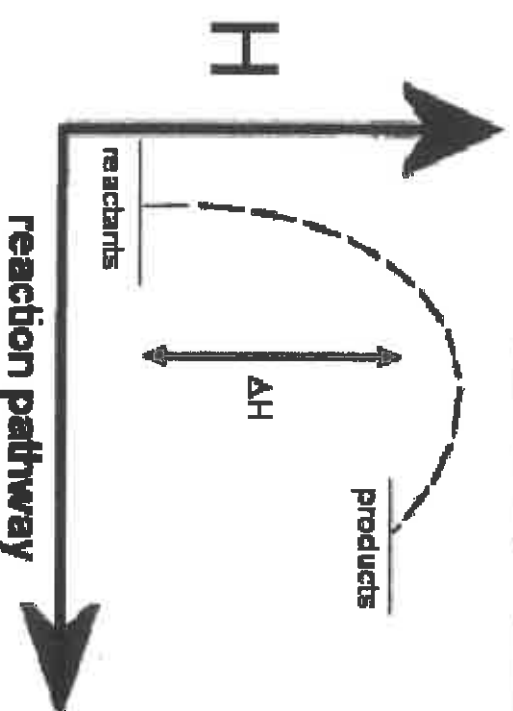
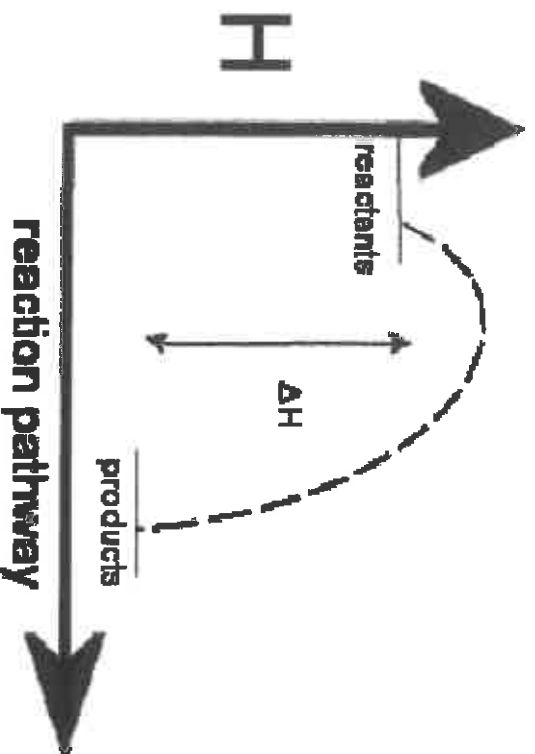
Name _____
Date _____ Per _____

Endothermic Reactions vs. Exothermic Reactions Worksheet

Process	System	Exo	Endo	Explanation
1. An ice cube melts after being left out on the table.				
2. Cooking an egg in a frying pan.				
3. Burning a match.				
4. The human body uses the energy provided from food digestion.				
5. Morning dew forming on grass and plants.				
6. Dynamite explodes in the destruction of a building.				
7. Making ice cubes.				
8. A puddle of water evaporates.				
9. Plants making sugar through photosynthesis				
10. Nuclear fission				
11. Converting frost to water vapor.				
12.				

Your own idea

Name _____
Date _____ Per _____



1. Endothermic or exothermic?
2. Is energy released or absorbed? Explain how you know in terms of the graph.
3. Which numbers on page 1 could this graph represent?
4. Endothermic or exothermic?
5. Is energy released or absorbed? Explain how you know in terms of the graph.
6. Which numbers on page 1 could this graph represent?

Use with textbook pages 206–211.

Balancing equations

Starting with the skeleton equations, balance the following equations by adding coefficients where appropriate.

1. $\text{H}_2 + \text{F}_2 \rightarrow \text{HF}$ _____
2. $\text{Sn} + \text{O}_2 \rightarrow \text{SnO}$ _____
3. $\text{MgCl}_2 \rightarrow \text{Mg} + \text{Cl}_2$ _____
4. $\text{KNO}_3 \rightarrow \text{KNO}_2 + \text{O}_2$ _____
5. $\text{BN} + \text{F}_2 \rightarrow \text{BF}_3 + \text{N}_2$ _____
6. $\text{CuI}_2 + \text{Fe} \rightarrow \text{FeI}_2 + \text{Cu}$ _____
7. $\text{Li} + \text{H}_2\text{O} \rightarrow \text{LiOH} + \text{H}_2$ _____
8. $\text{NH}_3 + \text{O}_2 \rightarrow \text{N}_2 + \text{H}_2\text{O}$ _____
9. $\text{V}_2\text{O}_5 + \text{Ca} \rightarrow \text{CaO} + \text{V}$ _____
10. $\text{C}_9\text{H}_6\text{O}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ _____
11. $\text{H}_2\text{S} + \text{PbCl}_2 \rightarrow \text{PbS} + \text{HCl}$ _____
12. $\text{C}_3\text{H}_7\text{OH} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ _____
13. $\text{Zn} + \text{CuSO}_4 \rightarrow \text{Cu} + \text{ZnSO}_4$ _____
14. $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ _____
15. $\text{C}_2\text{H}_5\text{OH} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ _____
16. $\text{Al} + \text{H}_2\text{SO}_4 \rightarrow \text{H}_2 + \text{Al}_2(\text{SO}_4)_3$ _____
17. $\text{FeCl}_3 + \text{Ca}(\text{OH})_2 \rightarrow \text{Fe}(\text{OH})_3 + \text{CaCl}_2$ _____
18. $\text{Pb}(\text{NO}_3)_2 + \text{K}_2\text{CrO}_4 \rightarrow \text{PbCrO}_4 + \text{KNO}_3$ _____
19. $\text{Cd}(\text{NO}_3)_2 + (\text{NH}_4)_2\text{S} \rightarrow \text{CdS} + \text{NH}_4\text{NO}_3$ _____
20. $\text{Ca}(\text{OH})_2 + \text{NH}_4\text{Cl} \rightarrow \text{NH}_3 + \text{CaCl}_2 + \text{H}_2\text{O}$ _____

Use with textbook pages 202–211.

Word equations

Write the skeleton equation for each of the following reactions. Then balance each of the following chemical equations.

1. hydrogen + oxygen → water

2. iron(III) oxide + hydrogen → water + iron

3. sodium + water → sodium hydroxide + hydrogen

4. calcium carbide + oxygen → calcium + carbon dioxide

5. potassium iodide + chlorine → potassium chloride + iodine

6. chromium + tin(IV) chloride → chromium(III) chloride + tin

7. magnesium + copper(II) sulphate → magnesium sulphate + copper

8. zinc sulphate + strontium chloride → zinc chloride + strontium sulphate

9. ammonium chloride + lead(III) nitrate → ammonium nitrate + lead(III) chloride

10. iron(III) nitrate + magnesium sulphide → iron(III) sulphide + magnesium nitrate

11. aluminum chloride + sodium carbonate → aluminum carbonate + sodium chloride

12. sodium phosphate + calcium hydroxide → sodium hydroxide + calcium phosphate



WORKSHEET ON CHEMICAL VS PHYSICAL PROPERTIES AND CHANGES

Keep this in your binder as a study guide! You will have a quiz on this next class!

Background: Keeping the difference between physical and chemical properties as well as changes can be a challenge! This worksheet will help you do this. First, use the book to define the following terms.

VOCABULARY WORD	DEFINITION
Physical Property	
Physical Change	Change in which the identity of the substance does NOT change
Chemical Property	
Chemical Change	

Part One: Physical or Chemical Property? Fill in the chart using the vocabulary words or phrases provided.

Vocabulary words

Boiling point	Ability to rust	Melting point	Brittleness	Reactivity with vinegar
elasticity	Flammability	Density	Transparency	ductility

Each word is used once. Define the word when done!

Chemical Property!	Definition
	• The ability to burn
	• Reacts with oxygen to produce rust

Physical Property!	Definition
	• The property of letting light pass through something

Part Two: Physical or Chemical Change? Indicate with a 'P' or a 'C' which type of change is taking place.

1. _____ glass breaking	10. _____ mixing salt and water
2. _____ hammering wood together	11. _____ mixing oil and water
3. _____ a rusting bicycle	12. _____ water evaporating
4. _____ melting butter	13. _____ cutting grass
5. _____ separate sand from gravel	14. _____ burning leaves
6. _____ bleaching your hair	15. _____ fireworks exploding
7. _____ frying an egg	16. _____ cutting your hair
8. _____ squeeze oranges for juice	17. _____ crushing a can
9. _____ melting ice	18. _____ boiling water

Types of Reactions Worksheet

Balance the following equations and indicate the type of reaction taking place:



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____



Type of reaction: _____

Fun With Predicting Reaction Products

Predict the products of each of the following chemical reactions. If a reaction will not occur, explain why not:

