Teach a parent: Today's concept : Teach your parents about the 4 different types of chemical reactions. Help your parent become an expert ! Be sure they write what they have learned from your teaching Parent Response

____ I'm not sure my child really understands, therefore, I don't either. Please work with him/her and let's try again.

2. _____ The concept was explained thoroughly with effective examples he/she created. "By golly, I think they've got it!"

3. WOW! My child did an exceptional job! It was logically explained, therefore I caught on immediately and feel confident about teaching it to others. The self-created examples were a perfect fit. My child even asked me a question at the end to make sure I understood. I believe my child could effectively teach this concept to others.

Parent Signature:_____ Date: _____

Mom or Dad Comments: Please explain how your student taught you this concept and * what you learned in 3-5 sentences! * This is critical for them to receive full points

Virtual Lab Videos: Endothermic & Exothermic Reactions

http://www.classzone.com/books/ml science share/vis sim/cim05 pg90 endotherm/ci m05 pa90 endotherm.html

What chemicals were used in the Endothermic reaction. Describe what happened: _____

What chemicals were used in the Exothermic reaction. Describe what happened:

Chp 15 Little Book



Draw examples of the 4 types of reactions in section 2

Name: _____ pd: ____ pd: _____ pd: ____ pd: _____ pd: _____ pd: _____ pd: ____ pd: _____ pd: _____ pd: ____ pd: ____ pd: ____ pd: ____ pd: ____ pd:

Science Number

pd:

Definitions:

All mixed up! Write the correct lo	etter to define the word. What page do you find the word on?
	Forming New Substances Pg 374-382 a. An efficient way to represent what happens in a chemical reaction
Chemical formula Correct letter: pg:	b. a process in which one or more substances are changed into new substances
Subscript Correct letter: pg:	c. The full sized numbers written in front of symbols and formulas that tells how many atoms, molecules or formula units take part in a chemical reaction
Chemical equation Correct letter: pg:	d. Lavoisier's supported this through experiments that the total mass before a chemical reaction is the same as the total mass after the reaction
Reactants Correct letter: pg:	e. The starting materials in a chemical reaction
Products Correct letter: pg:	f. The new substances that are formed during a chemical reaction
Coefficient Correct letter: pg:	g. An ingredient list for a compound that uses atomic symbols and subscripts
Law of conservation of mass Correct letter: pg:	h. The small number written to the right of the chemical symbol that tells how many atoms of an element are contained in one molecule of a substance
Sect 2: For	ming New Substances Pg 382-384
Synthesis reaction Correct letter: pg:	a. A reaction in which ions in 2 compounds switch places
Decomposition reaction Correct letter: pg:	b. A reaction in which an element takes the place of another element that is part of a compound. The products are a new compound and a different element.
Single-replacement reaction Correct letter: pg:	c. A reaction in which two or more substances combine to form a single compound
double-replacement reaction Correct letter: pg:	d. A reaction in which a single compound breaks down to form two or more simpler substances

Using Vocabulary

To complete the following sentences, choose the correct term from each pair of terms listed, and write the term in the blank.

- 1. A ______ is a shorthand notation that represents a compound or diatomic element. (coefficient or chemical formula)
- _____ in a reaction is the minimum amount of energy 2. The _____ needed for substances to react. (catalyst or activation energy)
- In a ______ reaction, ions in different compounds switch places. (single-replacement or double-replacement) 3. In a ____
- 4. In a chemical formula, if no ______ is written after an elemen then only one atom of that element is present. (subscript or coefficient)
- 5. A(n) _____ _____ slows down or stops a chemical reaction. (catalyst or inhibitor)

UNDERSTANDING CONCEPTS

Multiple Choice

Circle the correct answer.

6. Which of the following is an example of a diatomic element?

a. NaCl	c. Mg
b. O ₂	d. CaCl ₂
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7. Which of the following is an example of a single-replacement reaction?

a. Fe + 2HCl \rightarrow FeCl ₂ + H ₂	c. $2H_2O_2 \rightarrow 2H_2O + O_2$
b. 2Mg + $O_2 \rightarrow 2Mg\tilde{O}$	d. NaÕH̃ + HCĨ → NaČl + H ₂ O

8. Which of the following is NOT an example of a chemical reaction?

a. milk turning sour	c. a match burning
b. food being digested	d. ice melting

9. How many atoms are represented in the formula CaCO₂?

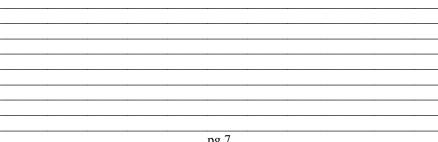
a. three	c. five
b. four	d. six

10. Which of the following usually increases the rate of a reaction?

a. decreasing the concentration of the reactants

- b. grinding a solid reactant into a powder
- c. lowering the temperature of the reactants
- d. raising the temperature of the products

Additional notes:



11.	A chemical reaction in v	which energy	is released	or removed is	called
	an	d a chemical	reaction in	which energy	is

absorbed is called

- 12. The law of conservation of energy states that
- 13. What is activation energy?
- 14. Copy the diagrams from figure 22 on page 387. Be sure to label.

Exothermic Reaction	Endothermic Reaction

15. Some things affect the rate of reactions. Fill in the table below to describe these factors.

Factor	Explanation

Definitions:

Sect 3: Energy & R	ates of Chemical Reactions Pg 385-386
Exothermic Correct letter: pg:	a. A substance that speeds up a reaction withou permanently being changed
Endothermic Correct letter: pg:	b. The minimum amount of energy needed for a substance to react
Law of conservation of energy Correct letter: pg:	c. A substance that slows down or stops a chem reaction
Activation energy Correct letter: pg:	d. A chemical reaction that releases or removes energy
Catalyst Correct letter: pg:	e. A chemical reaction that absorbs energy
Inhibitor Correct letter: pg:	f. Energy can neither be created nor destroyed i chemical reactions
Additional notes:	

- 1. Look at the figures on p 374. What are three examples of chemical changes?
- 2. Fill in the grid below about the 4 clues of chemical reactions:

Clue	Explanation

3. What happens when you combine hydrogen and chlorine?

- 4. A ______ is a number written below & to the right of a chemical symbol in a formula.
- 5. In $C_6H_{12}O_6$, we have _____ carbon atoms,
 - ____ hydrogen atoms and _____ oxygen atoms.
- 6. What are the parts of a chemical reaction?

7. The law of conservation of mass states that :_____

Reaction Reaction Reaction Reaction

9. What is the heading on page 385?

10. Look at figure 20. What are the 3 types of energy that can be released in reactions?

pg 5

Pg 4

8. Skim pages 382-384 & title the type of reactions below.