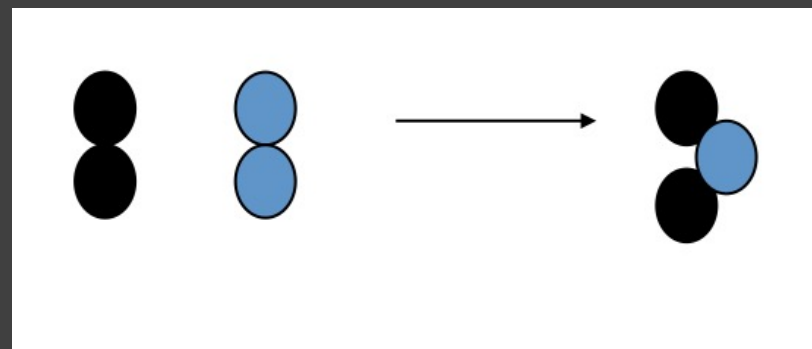


Chemical Reactions

- Chemical Reactions
- Reactants and Products
- Describing Chemical Reactions
- Symbols in Equations
- Energy in Chemical Reactions
- Practice



Preview File

Please enjoy this preview of your Student Version of the presentation. Please note within this sample file:

- Some slides appear blank because they have been removed
- Student versions have portions of the text removed which is given in the teacher version and appear as _____ which the students are to fill in
- Other slides may have on them, this represents writing that has been removed on this sample

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Describing Chemical Reactions

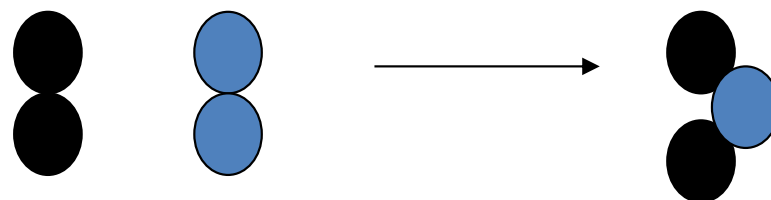
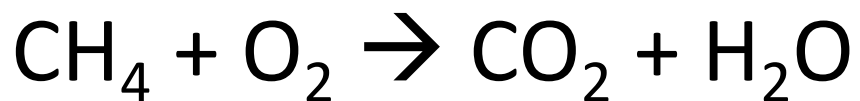
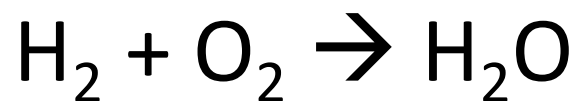
Objectives:

1. Describe how to write a word equation.
2. Describe how to write a chemical equation.



Chemical Reactions

Examples –



All Chemical Reactions...

have two parts:

1. Reactants = _____

2. Products = _____

The reactants will turn into the products

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Describing Chemical Reactions

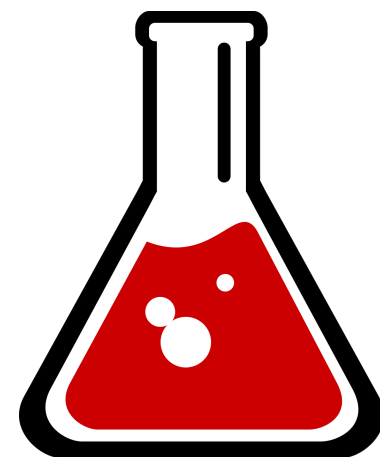
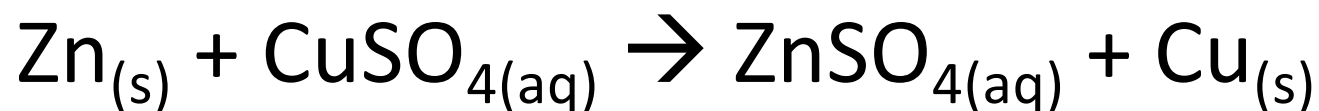
A reaction can be described several ways:

- 1) A word equation is a way of describing a chemical reaction using the names of the reactants and products e.g.

2) _____

Symbols in Equations

- The arrow ($\rightarrow$) separates the reactants from the products (arrow points to products)



- The plus sign (+) = “and” meaning that they are reacting with each other

Symbols Con't

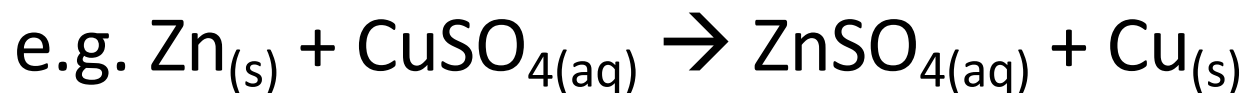
- _____
- _____

(s) after the formula = solid: $\text{Fe}_{(s)}$

(g) after the formula = gas: $\text{CO}_{2(g)}$

(l) after the formula = liquid: $\text{H}_2\text{O}_{(l)}$

(aq) after the formula = dissolved in water, an aqueous solution: $\text{NaCl}_{(aq)}$ is a salt water solution



Energy

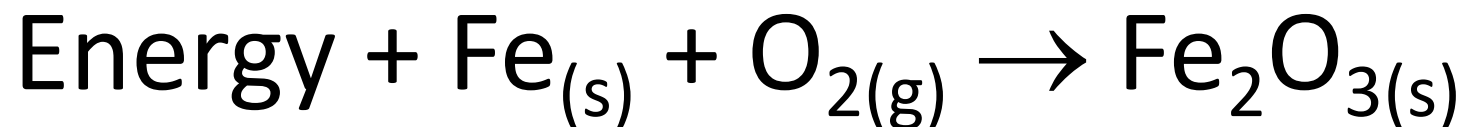
- A net (resulting) amount of energy can either be absorbed (used) or released (created)
- _____
- i.e. $\text{Energy} + \text{Zn}_{(s)} + \text{CuSO}_{4(aq)} \rightarrow \text{ZnSO}_{4(aq)} + \text{Cu}_{(s)}$
- _____
- i.e. $\text{CuCO}_{3(s)} \rightarrow \text{CO}_{2(g)} + \text{CuO}_{(s)} + \text{Energy}$

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Write a Chemical Equation For:

1. Solid iron (III) sulfide reacts with gaseous hydrogen monochloride to form iron (III) chloride gas, dihydrogen monosulfide gas and energy.
2. Using energy, aqueous sodium chloride forms aqueous sodium and chloride ions.

Write a Word Equation



****states are not included in word equations****

Catalysts

- A catalyst is a substance that speeds up a reaction, without being changed or used up by the reaction
- ---
- Without enzymes, our bodies couldn't do the chemical reactions required to keep us alive