

Activity # 13

Name _____

Date _____

Date due _____

Assignment on Physical & Chemical Changes and Balancing Chemical Equations

NOTE: This assignment is based on material given in your notes as well as pages 213 - 219 in the Science Probe textbook.

1. In a **physical change**, is a new substance formed? _____

2. The only things that can change in a physical change are the _____,
the _____ and the _____ appearance. (See page 214)

3. Give six examples of **physical changes**:

4. In a **chemical change**, are new substances formed? _____

5. In a **chemical change**, the substance(s) you start out with is (are) called the
_____, and the substance(s) you end up with is (are) called the
_____.



6. Give three examples of **chemical changes**:

7. Identify each of the following as a **physical change** or **chemical change**:

- a) rusting of steel

- b) burning of steel

- c) melting butter

- d) blowing up a balloon

- e) hydrogen exploding

- f) calcium in water

- g) salt dissolving

- h) colours fading in the sunshine

- i) nerve transmissions

- j) tanning of skin

8. In an experiment, calcium chloride is mixed with potassium carbonate and a reaction occurs producing calcium carbonate and potassium chloride.

- a) The two **reactants** are:

- &

- b) The two **products** are:

- &

9. The subscript (g) means a

The subscript (l) means a

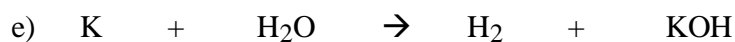
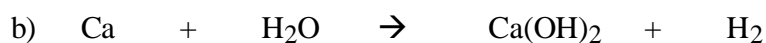
The subscript (aq) means an _____ solution.

10. In a chemical equation, the **reactants** go on the (*left/right*) _____ side of the arrow. The products go on the (*left/right*) _____ side of the arrow.

11. State the **Law of Conservation of Mass**. _____

12. In the balanced chemical equation: $2\text{SO}_2 (\text{g}) + \text{O}_2 (\text{g}) \rightarrow 2\text{SO}_3 (\text{g})$
the "2" in front of the SO_2 is called a _____
and it means the number of _____ of SO_2 which react with a molecule of O_2 .

13. Balance the following equations by putting the proper coefficients wherever they are needed.



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