Properties of Matter

Directions: *Below are two sets of words. Complete the second set by choosing a word from those listed below the blank. The two words must be related in the same way as the first set of words.*

Pick the word that make the make the comparison true.

EXAMPLE

letter:envelope::pillow: case, sheet, soft, bed

1. steam:water::water: heat, molecules, ice, matter
2. physical:chemical::size: burning, taste, solubility, acid
3. chemical:rust::physical: compound, condensation, solid, change
4. physical:density::chemical: size, melting, combustible, ice
5. solid:steel::gaseous: coal, air, water, gasoline
6. burning:candle::rust: vaporization, physical property, iron, mixture
7. smell:rotten eggs::heat and light: burning logs, mountains, river deltas, ice water
8. gold:gold leaf::copper: ice, wire, mass, rust

Directions: *Answer the following questions on the lines provided.*

9. What is the difference between a physical change and a chemical change?

A **physical chemical** change can be detected with the five senses or by measuring and **does does not** change the identity of the matter itself. A **physical chemical** change always produces a new substance, because a new substance is produced the identity of the matter **does does not** change.

10. Name some physical properties. (pick all that apply)

reacts with acid	will decay	will rust	color	texture
is combustible	sour tasting	will corrode	size	shape
fragile	melting point	boiling point	is a solid	

11. Explain how a pile of ashes has the same mass as the original log before it was burned. What is the law that defines this (assuming a completely dry log and no combustable products escaped in the air) called?

The Law of Conservation of Mass says that during a chemical reaction, like burning, matter **is is not** created or destroyed, lost of gained. This means the mass of what is present before the reactions **is is not** equal to the mass afterwards. In this case the mass of the log will be **greater than less than equal to** the mass of the ashes.

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