

Classifying Matter

Matter can be classified on the basis of its properties.

All matter has what we call physical and chemical properties.

Physical Properties: include states of matter (solid, liquid, gas)
hardness, melting and boiling points
texture, odor, solubility, color etc.

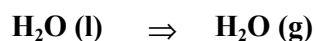
something that the senses can detect

ex: NaCl - goes by the common name salt

it is described as a white, crystalline solid at room temperature.

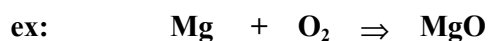
Likewise - any change that you make to a substance that doesn't alter its chemical makeup (its chemical formula) ---- is called a physical change.

ex: boiling water really is.....



Chemical Properties:

involve behaviors that occur when a substance changes (transforms) to a new substance.



these two react and
change to something completely different, having a new identity

Likewise - any change you make to a substance that alters its chemical properties ----
is called a chemical change.

<http://www.youtube.com/watch?v=B5EMY1GPts>



So how do we know that a chemical reaction is occurring????

Evidence for Chemical Reactions

There are some easy to observe clues for recognizing a chemical reaction:

1. Formation of a Gas

- a new substance is formed giving off a gas, noticed by bubbles or fizzing

2. Color Change

- a new substance is created having a different color than the original

3. Formation of a Precipitate

- a new substance is formed, having a lower solubility (thus forming a solid that settles on the bottom) than the original

4. Energy Change

- a new substance is formed releasing or absorbing more energy than was there before.

 <http://www.youtube.com/watch?v=gCbqjs-pqJo>

