

Notes: Classifying Matter (pgs 10-18)

1. Defn of chemistry: chemistry is the study of matter and the changes it undergoes.
 - a. What's matter? Anything that has mass and takes up space.
 - b. There are three types of change that matter can undergo:
 1. Physical change: a change that doesn't involve a change in the identity of the substance. (Nothing new is formed, it's easily reversible.)
Ex: ripping paper, mixing oil and water, dissolving salt, boiling water
 2. Chemical change: a change that makes one or more substances convert into something new. (Not easily reversible.)
Ex: Burning methane gas, Na in water
Evidence: Color change, temperature change (ΔT), or formation of a new solid(s), liquid(l), or gas (bubbles)(g)
 3. Nuclear change: the transmutation of one element into another. (More later)
2. Classifying Matter: There are 4 kinds:
 1. elements- made up of only one kind of atom, like carbon, O_2 gas, silicon
 2. compounds - made up of two or more kinds of atoms, like H_2O , $MgSO_4$
 3. homogeneous mixtures - mixtures that are evenly mixed, or uniform, like air
 4. heterogeneous mixtures - mixtures that are not evenly mixed (in clumps) like dirt

Here's the flow chart:

