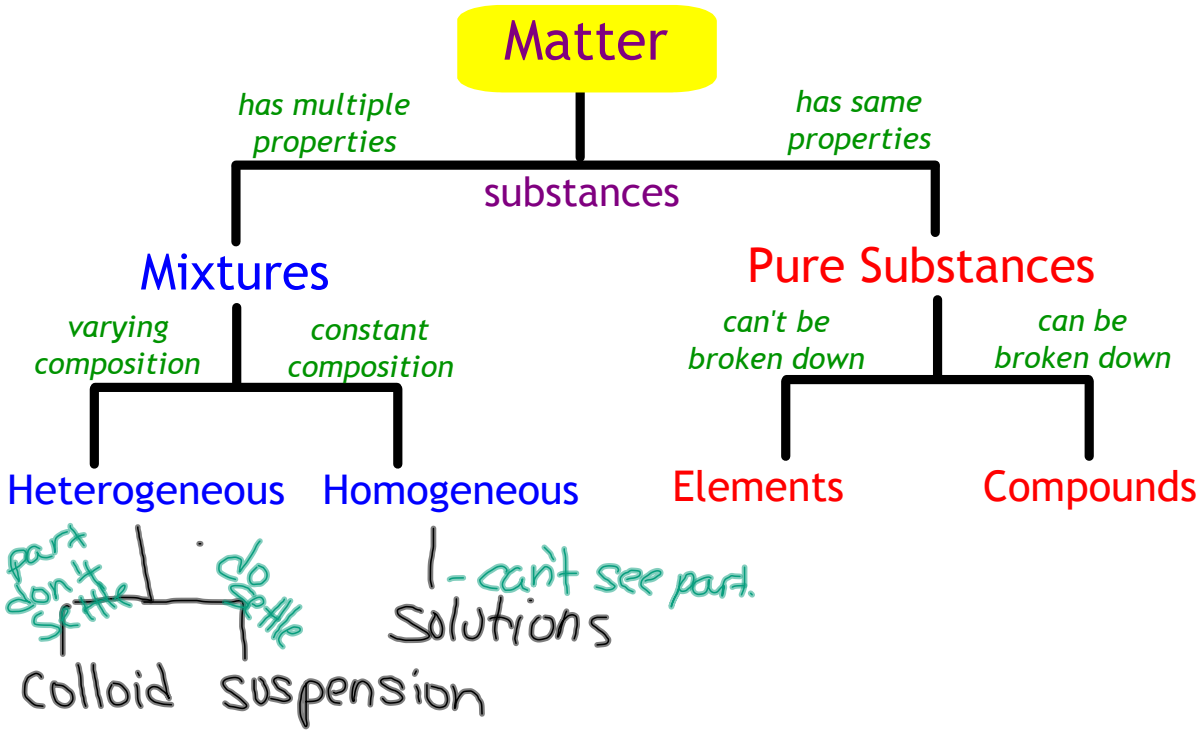
MATTER

Matter is ANYTHING that takes up space and has mass
*even the air




Feb 5-12:35 PM

Classifying Matter



Sep 28-9:52 AM

Pure Substance

Any element or compound that has FIXED composition

Examples: 24kt gold-Au

H_2O

Ag-Silver

Sugar $C_xH_xO_x$

NaCl

He

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Element

Any substance that consists of only one type of atom

Listed on the periodic table.

Diamond (carbon-C)

copper-Cu

24kt Gold-Au

Silver-Ag

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Compound

☆Two or more elements that are ***chemically*** combined as a result of a chemical reaction

☆ can only be separated by a chemical reaction

NaCl

H_2O

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Mixture

two or more substances that are ***not*** chemically combined

can be mechanically ***separated***

heterogeneous

composition will vary

-soup mix

mixed nuts

blood

stainless steel

homogeneous

composition will not vary

Soda

Salt-water

gasoline

>24 kt Au

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Heterogeneous

Suspension-a mixture that has large particles that will settle to the bottom. (shake to mix)

- yoo hoo
- Italian dressing
- OJ. with pulp
- Swamp water

Mar 7-8:20 AM

Colloid-contains particles that are large enough to see but do not settle out.

-fog
-milk
-Smoke
-Steam

Tyndall Effect- scattering of light by colloidal particles.

(why you don't use high beams in fog)

Mar 7-10:49 AM

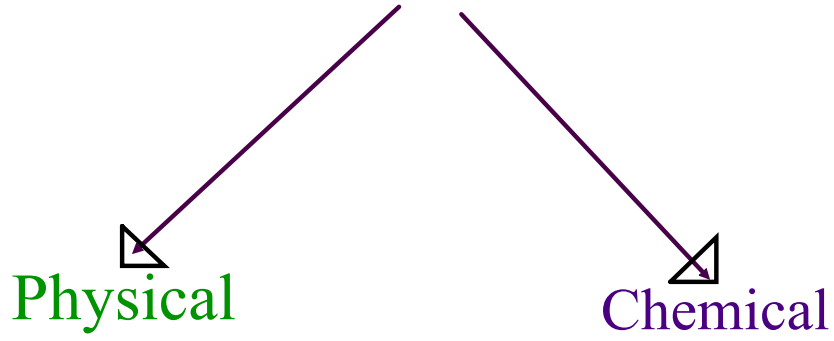
Homogeneous-

Solutions -contains a solute dissolved in a solvent
-particles too small to see

- Solute- substance that will be dissolved (iced-tea mix)
- Solvent-Substance doing the dissolving. (water)
  -Propel
  -salt water
  -air

Mar 7-8:35 AM

All matter has identifiable properties



Sep 28-9:55 AM

Physical Properties	Chemical Properties
(use senses) -Used to describe an object visually -describes how matter feels, smells, tastes.... -used to compare one thing to another. Ex: color, texture, smell, size, shape, state, freezing pt. boiling pt. density, conductivity *Viscosity: the resistance to flow*	-describes how a substance reacts chemically. (How easy it changes into something else) Ex: Flammability -how easy it burns how easy it: • rusts • reacts with acid To observe a chemical property, you must destroy the substance

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Physical Changes:

- ☆ Do not alter the composition
- ☆ Only alter form or appearance
- ☆ still the same "stuff"
- ☆ Changes in State
  solid- liquid- gas

examples:

Breaking, cutting, crumpling, drying (wet-2-dry), changing size or shape, dissolving (salt-water)

Sep 17-10:51 AM

Chemical Changes

- ☆ changes that produces new substances
- ☆ happen as a result of a chemical reaction

examples: burning, rusting } Change in color
smoking, bubbling, giving off heat
getting hot or cold on its own
giving off light (light stick)

Sep 17-11:03 AM

phys chem prop change

http://www.teacherbridge.org/public/bhs/teachers/Dana/chemphys.html

http://vital.cs.ohiou.edu/steamwebsite/downloads/ChangeLab.swf

Oct 6-2:46 PM

LAW OF CONSERVATION OF MASS

☆ Matter (mass) is neither created nor destroyed

any process OR REACTION will not change the total "matter content" of the system.

Example:

If you burn a piece of wood and weigh it before you burn it & then capture all of the gases & ash from burning it, it will have the same weight.

Feb 10-1:56 PM