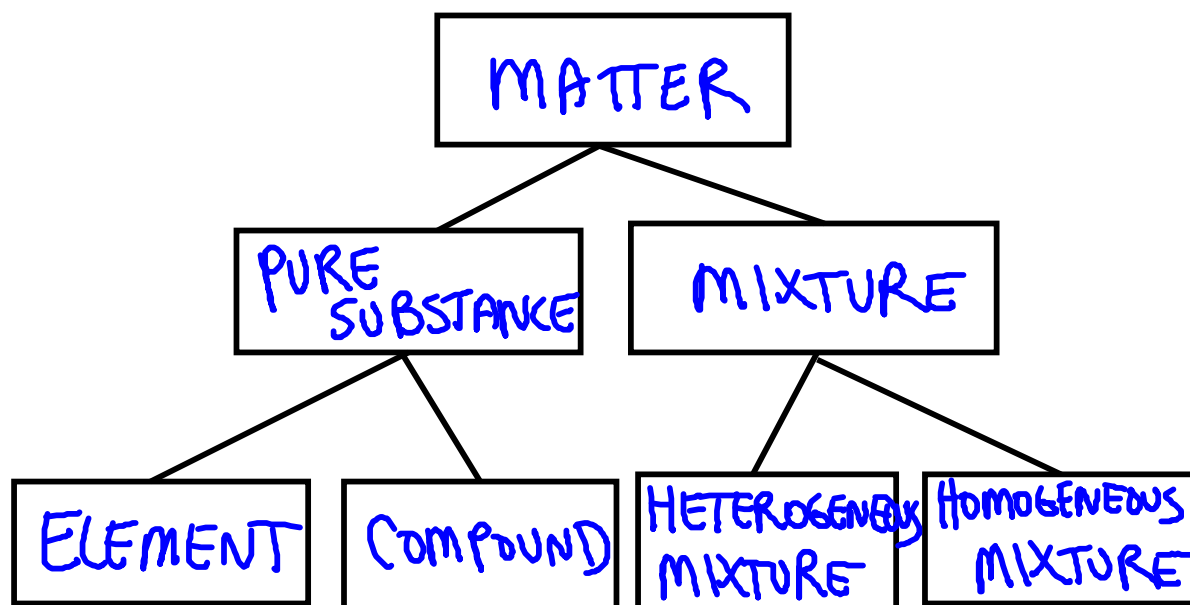


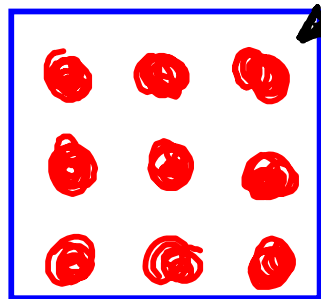
CLASSIFICATION OF MATTER



PURE SUBSTANCE - A MATERIAL

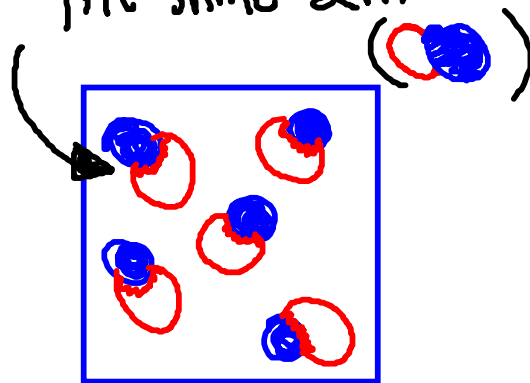
MADE OF ONLY ONE TYPE OF PARTICLE.

EX



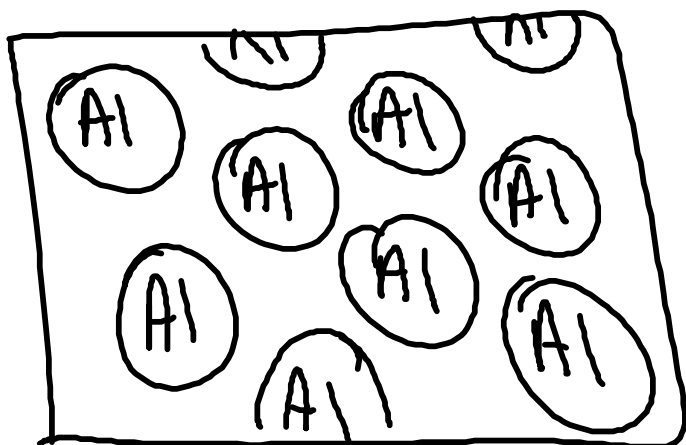
MADE OF ONLY 1 KIND OF ATOM (●)

MADE OF THE SAME PARTICLE CONTAINING THE SAME 2 ATOMS



ELEMENT - MADE OF ONLY ONE
KIND OF ATOM.

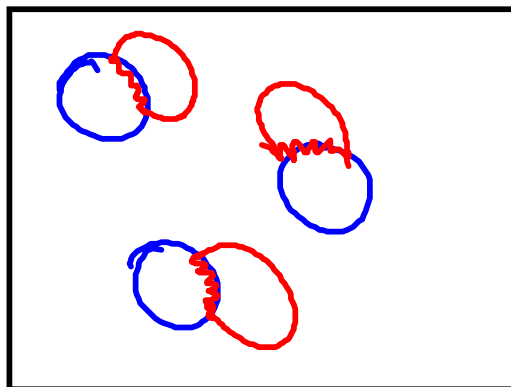
EX. ALUMINUM FOIL



HELIUM
ALUMINUM
COPPER WIRE

COMPOUND - 2 OR MORE
ELEMENTS COMBINED.

EX. SALT (SODIUM CHLORIDE)



WATER (H₂O)



ELEMENTS

HELIUM (BALLOONS) (He)

ALUMINUM (Al)

GOLD (Au)

COPPER (WIRE) (Cu)

OXYGEN (O)

NITROGEN (N)

IRON (Fe)

COMPOUNDS

WATER (H₂O)

CARBONDIOXIDE (CO₂)

SALT (NaCl)

SUGAR (C₆H₁₂O₆)

RUST (Fe₂O₃)

MIXTURES COMBINATIONS OF
ELEMENTS AND/OR COMPOUNDS.
(THEY CAN BE SEPARATED)

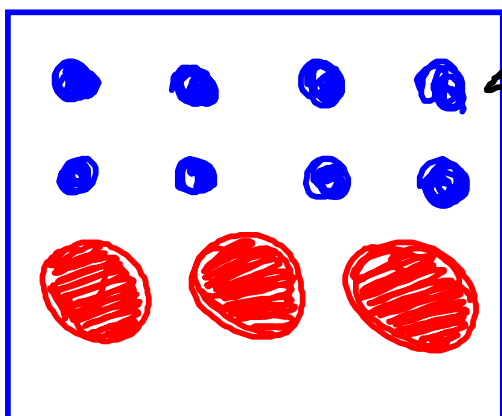




Mixtures can be separated by physical properties



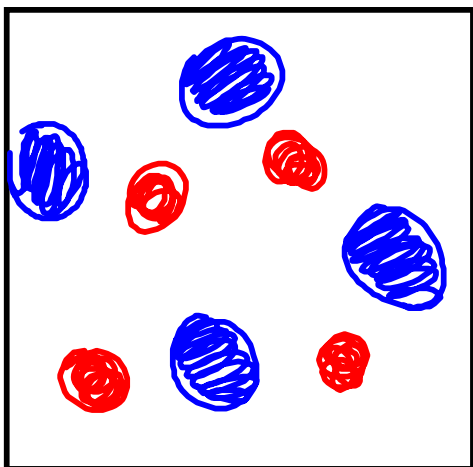
MIXTURE - MADE OF 2 OR MORE
SUBSTANCES.



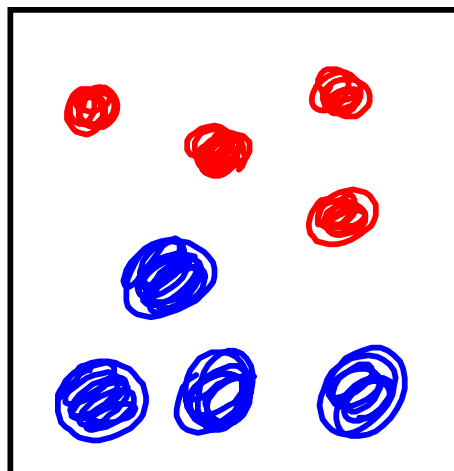
← MIXTURE OF
2 DIFFERENT
ATOMS.

 AND 

MIXTURES ARE EITHER WELL MIXED OR POORLY MIXED.



OR



HOMOGENEOUS MIXTURES

SOLUTIONS - ONE SUBSTANCE

IS DISSOLVED IN ANOTHER

EX.

- ICED TEA
- FRUIT PUNCH
- LEMONADE
- CHERRY COKE

ALL
SOFT DRINKS

VINEGAR
AIR

SYRUP, COFFEE, TEA,



Homogeneous Mixtures

- DON'T UNMIX
- SAME THROUGHOUT
- WELL MIXED





ANY
SOFT
DRINK



Solutions









HETEROGENEOUS MIXTURES

POORLY MIXED

SUSPENSIONS

SETTLE ON ITS OWN
MUDDY WATER
SALAD DRESSING
"SHAKE WELL"

COLLOID

LOOK WELL MIXED,
BUT CONTAIN
BIG PARTICLES.
THEY SCATTER LIGHT
FOG, SMOKE,
SMOG, MILK PRODUCTS

Suspensions

PARTICLES ARE
LARGE ENOUGH TO
SETTLE.

"SHAKE WELL"





MUDDY
WATER

- DIFFERENT THROUGHOUT
- CAN UNMIX

Heterogeneous Mixtures



Colloids

- HETEROGENEOUS MIXTURES
- DON'T UNMIX
- MADE OF BIGGER PARTICLES





TYNDALL EFFECT

- SMOKE
- DUST
- FOG
- SMOG



PHYSICAL PROPERTIES

PROPERTIES ARE CHARACTERISTICS

SIZE

SHAPE

COLOR

MASS

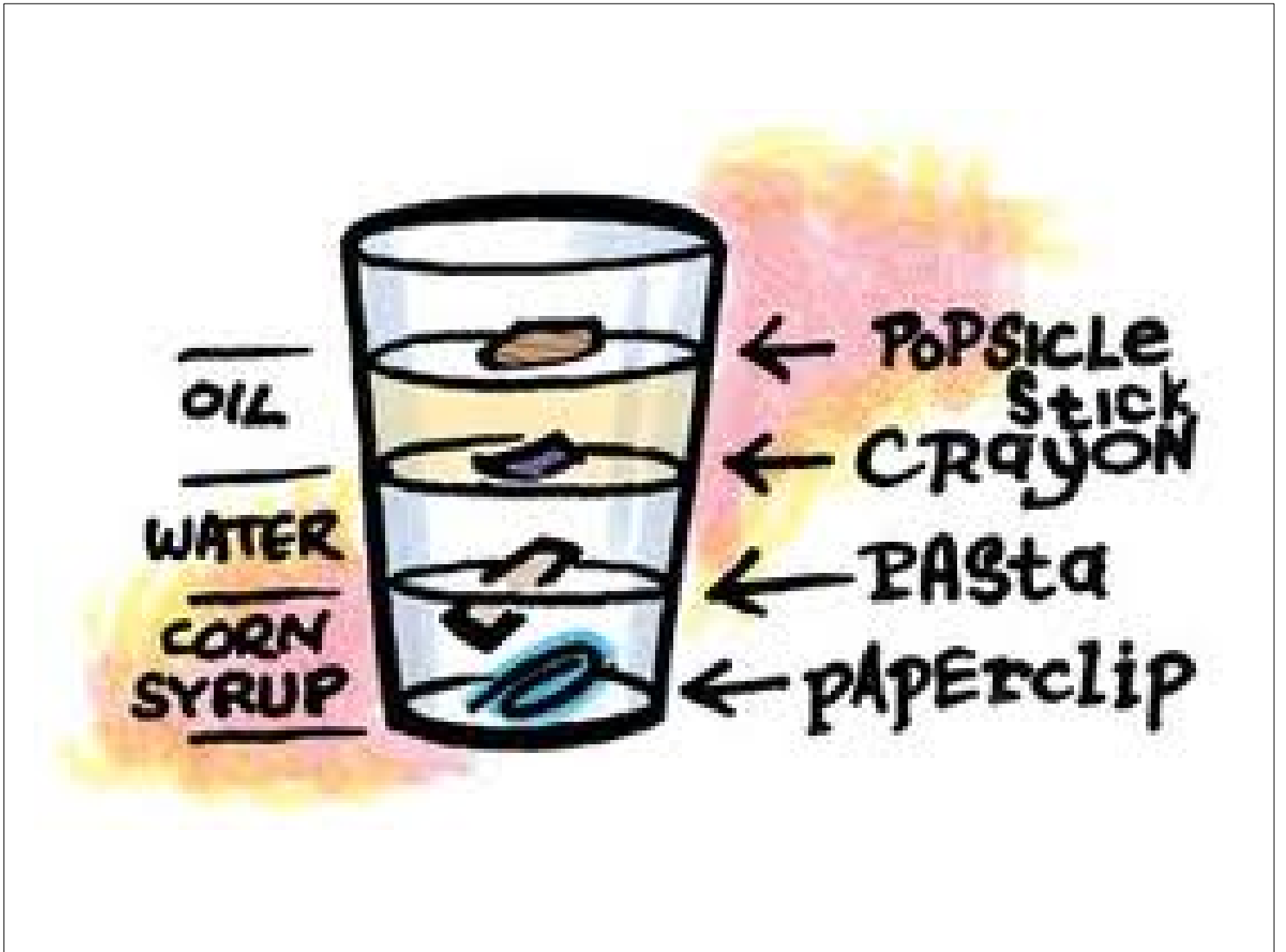
DENSITY

TEXTURE

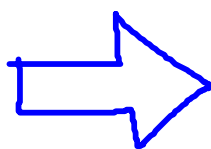
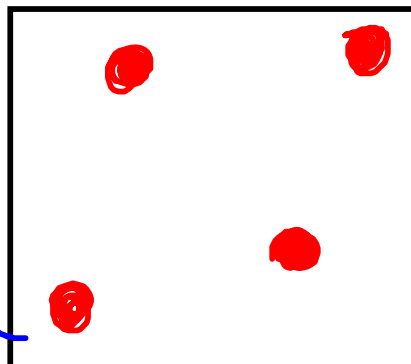
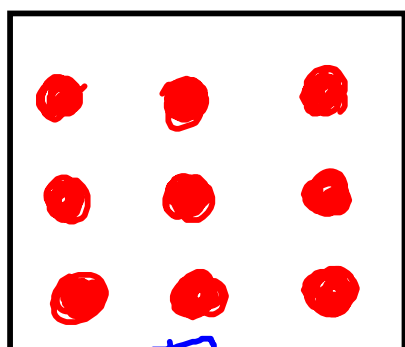
STATE (SOLID, LIQUID, GAS)

BOILING PT. TEMP.

MELTING PT. TEMP.

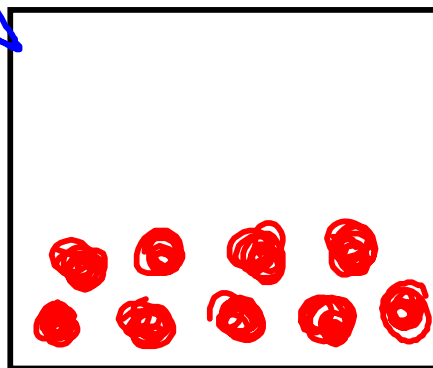
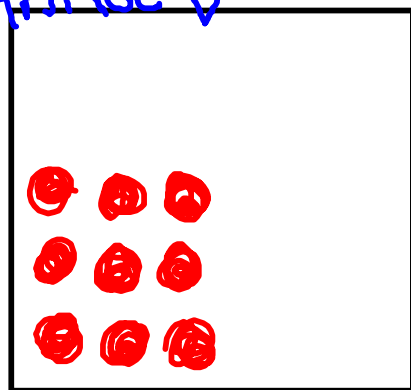


PHYSICAL CHANGES



PHYSICAL CHANGE

PHYSICAL CHANGE







CORROSIVE



EXPLOSIVE



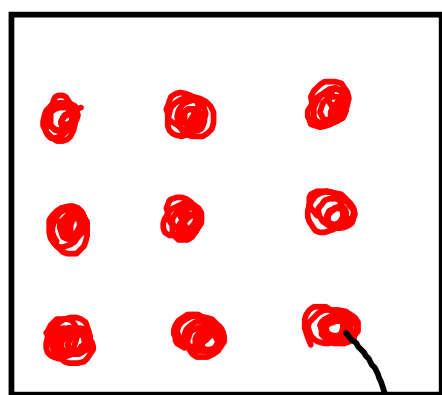
FLAMMABLE



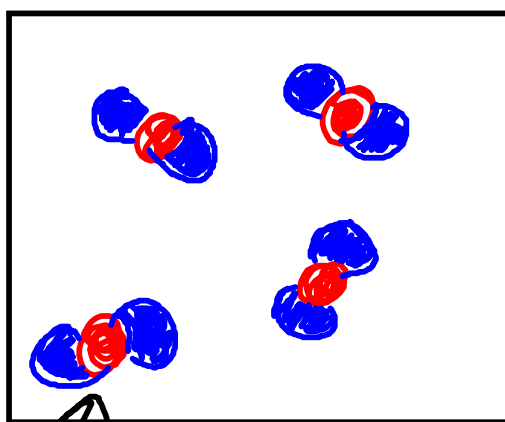
OXIDIZER

CHEMICAL
PROPERTIES

CHEMICAL CHANGE



ELEMENT



COMPOUND

COMBINED WITH
OTHER ATOMS



SOME CHEMICAL CHANGES

BURNING OF FUELS

RUSTING OF METALS

