

Solid

- *Shape* - constant
- *Volume* - constant
- *Particle movement* - vibrate in place

Liquid

- *Shape* - bottom of the container
- *Volume* - constant
- *Particle movement* - random w/i fixed volume

Gas

- *Shape* - variable
- *Volume* - fills the container
- *Particle movement* - random

MATTER

Pure

- *Substance(s)* - ONE only
- *Composition* - definite
- *Properties* - definite

Mixture - Impure

- *Substance(s)* - TWO or more
- *Composition* - variable
- *Properties* - depend on composition

Element (Atoms)

- 1 kind of atom
- CANNOT be chemically separated into simpler substances
- Homoatomic:

Monoatomic:

Na Ag
Ba Sn

Diatomic: (7 total)

H₂ O₂
N₂ Cl₂

Polyatomic:

S₈

Compound (Molecules)

- > 1 kind of atom
- CAN be chemically separated into simpler substances (elements)
- Heteroatomic:

NaCl
H₂O
C₆H₁₂O₆
KOH

Homogeneous (Solutions)

- 1 phase
- Composition - uniform throughout
- Properties - uniform throughout
- Examples:
Salt water
Kool aid

Heterogeneous (Mixtures)

- > 1 phase
- Composition - variable in different parts of the sample
- Properties - variable in different parts of the sample
- Examples:
Salad dressing
(vinegar and oil)
CheX Mix