CHEMISTRY

THE STUDY OF…

- Anything with mass and volume
- Can undergo physical or chemical change
- 3 states (phases) of matter:
  - Solid, liquid, gas

CANNOT be separated by PHYSICAL means

- Only way to separate into smaller units is by BREAKING CHEMICAL BONDS (I.E. UNDERGO A CHEMICAL CHANGE)
- Has a specific chemical identity (formula)

- Contains only ONE type of atom
- Examples:
  - Sodium (Na)
  - Neon (Ne)

ATOM

NUCLEUS

- Contains TWO or MORE DIFFERENT types of atoms CHEMICALLY BONDED
- Examples:
  - Sodium chloride (NaCl)
  - Water (H_2O)

IONIC

- Made of IONIC bonds
- METAL bonds with NONMETAL through transfer of electrons
- Example: NaCl

MOLECULAR

- Made of COVALENT bonds
- NONMETAL bonds with NONMETAL through sharing of electrons
- Example: H_2O

CAN be separated by PHYSICAL means

- Can be PHYSICALLY separated into distinct components (i.e. the pure substances of which it is made)
- Each substance (component) retains its chemical identity and properties

HOMOGENEOUS

- Uniform throughout
- Also known as SOLUTION
- Examples:
  - Salt water
  - Atmospheric air

HETEROGENEOUS

- Non-uniform distribution
- Examples:
  - Trail mix
  - Italian dressing
  - Soil

REMEMBER…

YOU HAVE MASS

YOU HAVE VOLUME…

YOU MATTER!