

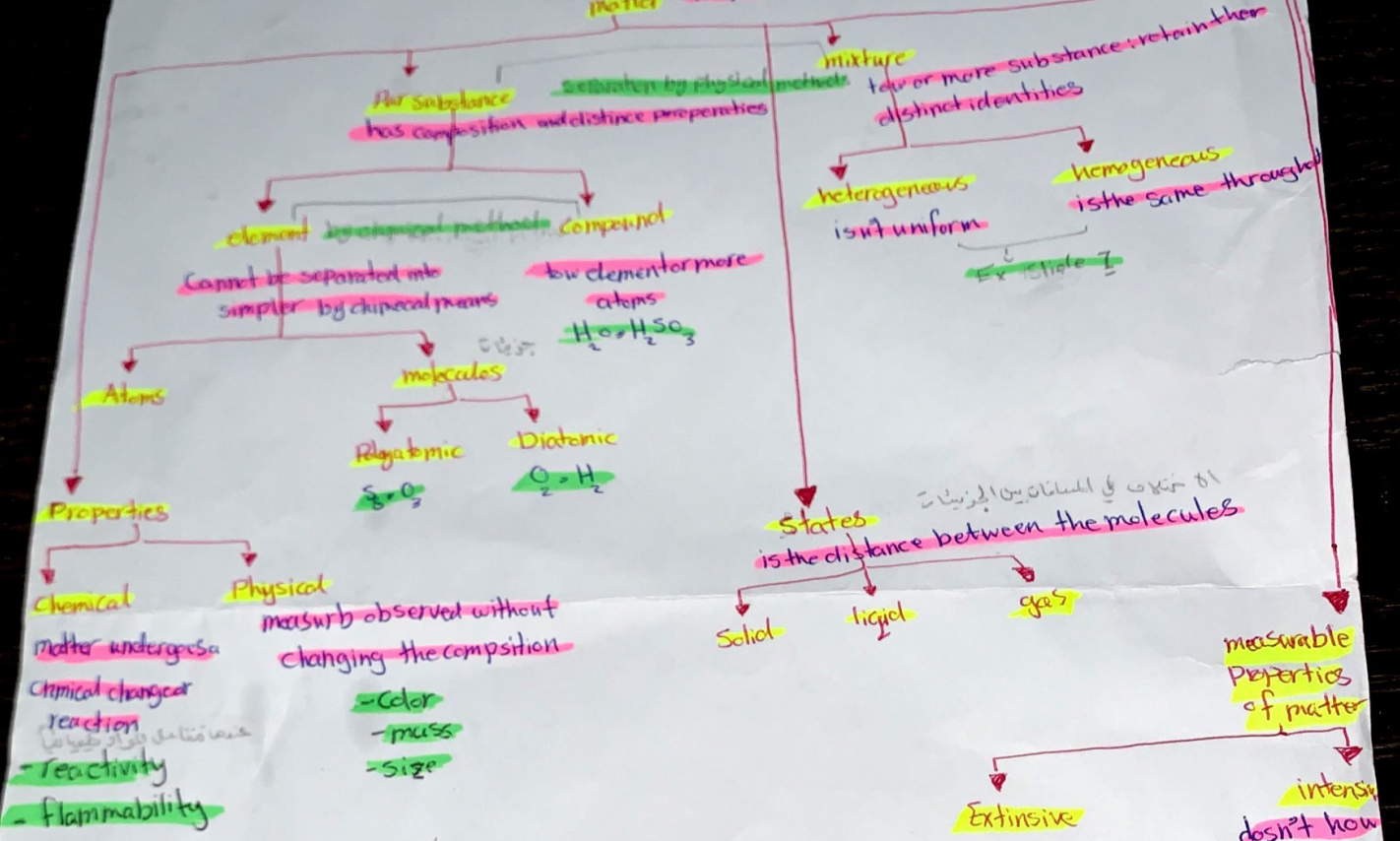
# Chemistry unit 1

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Chemistry: study of matter and changes

any thing

**Matter**: that occupies space and has mass.



- SI unit
- giga → 10<sup>9</sup>
  - mega → 10<sup>6</sup>
  - Kilo → 10<sup>3</sup>
  - deci → 10<sup>-1</sup>
  - Centi → 10<sup>-2</sup>
  - milli → 10<sup>-3</sup>
  - micro → 10<sup>-6</sup>
  - nano → 10<sup>-9</sup>
  - Pico → 10<sup>-12</sup>
  - Femto → 10<sup>-15</sup>

- SI Unit
- length → m
  - mass → Kg
  - time → s
  - electric → A
  - temperature → K
  - Amount of substance → mol
  - luminous intensity → cd

**Weight**: force that gravity exerts

**Mass**: amount of matter

**Volume**: SI (m<sup>3</sup>), 1cm<sup>3</sup> = 1ml, 1L = 1000ml = 1000cm<sup>3</sup> = 1dm<sup>3</sup>

**Density** = m/v

$d = \frac{m}{v}$

SI Kg/m<sup>3</sup>

g/cm<sup>3</sup> solids

g/ml liquids

g/L gases

**Temperature**

F°:  $F = (\frac{9}{5} \times C) + 32$

C°: 32F = 0C, 212F = 100C

K°: 273K = 0C, 373 = 100C

**Precision**: measurements are to each other (reproducibility)

**Accuracy**: are to the true value