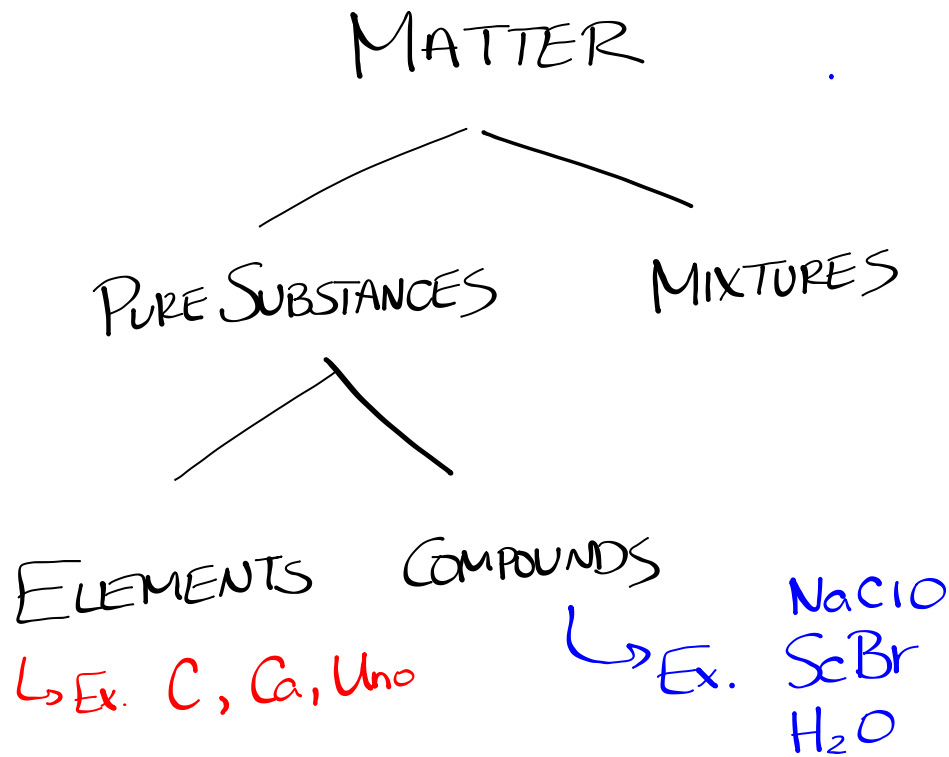


Yesterday's Lesson...



ATOM - smallest particle

ELEMENT - one type of atom

COMPOUND - two or more types of atoms

H₂O, NaCl

H O
H

MOLECULE - two or more atoms

H₂O, NaCl, O₂, S₈

	ELEMENT	COMPOUND	MOLECULE
CH_4		✓	✓
Co	✓		✗
$\text{C}_6\text{H}_{12}\text{O}_6$		✓	✓
P_4	✓		✓

✓
Na × × ×
NA na Na

Pure Substance: all the particles are the same
Two types: **Elements** and **Compounds**

Elements: are pure substances that **cannot be broken down** into simpler substances.

Ex. oxygen, hydrogen, iron, and mercury

Compounds: are pure substances that contain **2 or more different elements** in a fixed proportion.

Ex. H₂O, CO₂, etc.




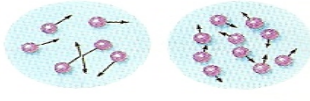

Read p. 172-174

p. 175 #1, 2, 4, 5, 9

Particle Theory

Developed by a philosopher named Democritus who said all substances were made of particles too small to be seen.

- All matter is made of tiny particles.
- All particles of one substance are the same. Different substances are made of different particles.
- The particles are always moving.
- There are attractive forces between the particles.

Table 1 The Particle Theory of Matter	
Principle	Illustration
1. All matter is made up of tiny particles.	
2. All particles of one substance are the same. Different substances are made of different particles.	<p>substance A </p> <p>substance B </p>
3. The particles are always moving. The more energy the particles have, the faster they move.	 <p style="text-align: center;">hot cold</p>
4. There are attractive forces between the particles. These forces are stronger when the particles are closer together.	<p>particles far apart—force weak</p>  <p>particles close together—force strong</p>