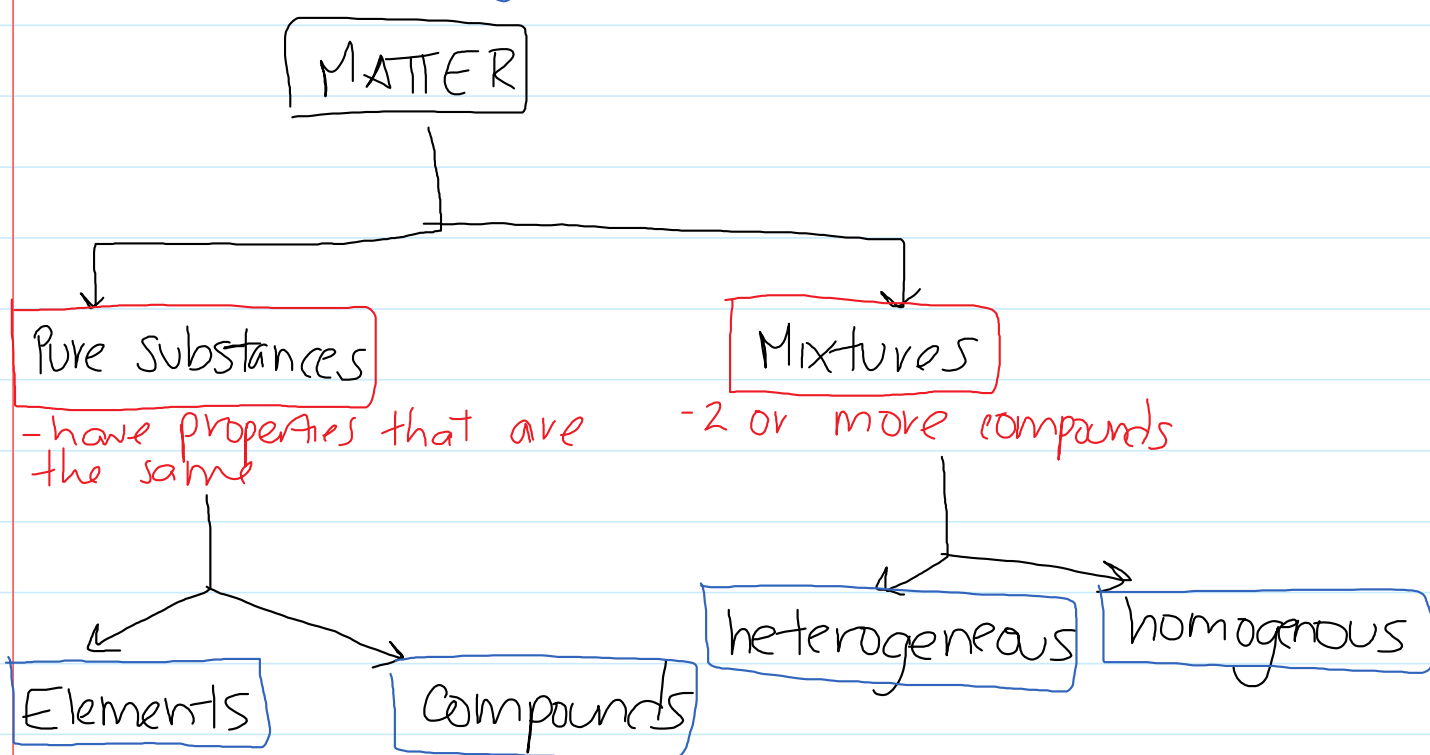# 5.1 The Classification of Matter

Matter is anything that has mass and volume and includes all solids, liquids and gases
     ↳ classified based on properties

are ways of describing things so we can identify them

```
                    MATTER
                       |
        ┌──────────────┴──────────────┐
        ↓                             ↓
  Pure Substances                 Mixtures
```

Pure Substances
-have properties that are the same

Mixtures
-2 or more compounds

```
  Pure Substances                    Mixtures
   ┌────┴────┐                      ┌────┴────┐
   ↓         ↓                      ↓         ↓
Elements  Compounds          heterogeneous  homogenous
```

Elements
- contain only 1 type of atom
  ex gold

Compounds
  - 2 or more types of atoms joined together
    ex H$_2$O , salt NaCl

Heterogenous
- not uniform
- particles are large, visible, clumps
  ex Oil mixed with water

Homogeneous
- evenly mixed together
  ex soda - mixture of sugar,
       corn syrup and CO_2 in
       water