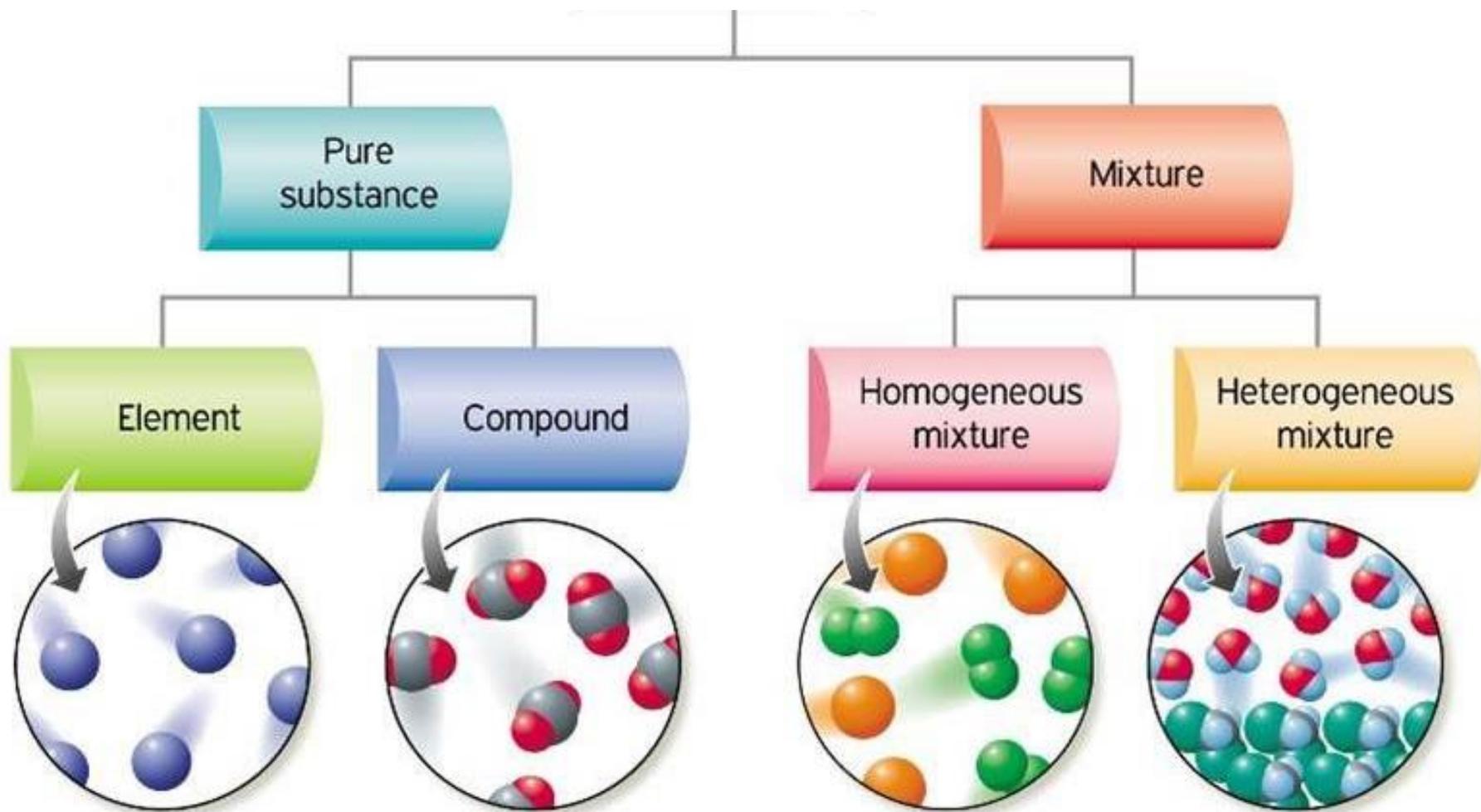


# Chemical Substances



**distinct unique  
properties**

**properties of the  
components are combined**

# Element, Compound, or Mixture?



**Rocks**



**Neon Gas**

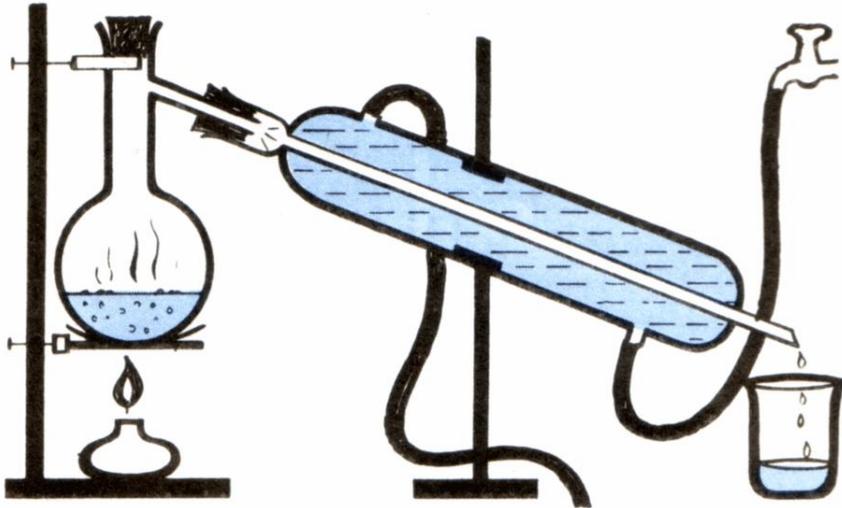


**Table Sugar**



**Sweet Tea**

***Physical change*** can be used to **separate a mixture** into its components by exploiting their ***different physical properties***.



To separate **sweet water** (water with sugar dissolved in it):  
boil the water,  
collect the vapor  
and sugar crystals

To separate **iron particles from sand mixture**: use a magnet.



**What kind of mixtures are these?**

# How many states of matter?

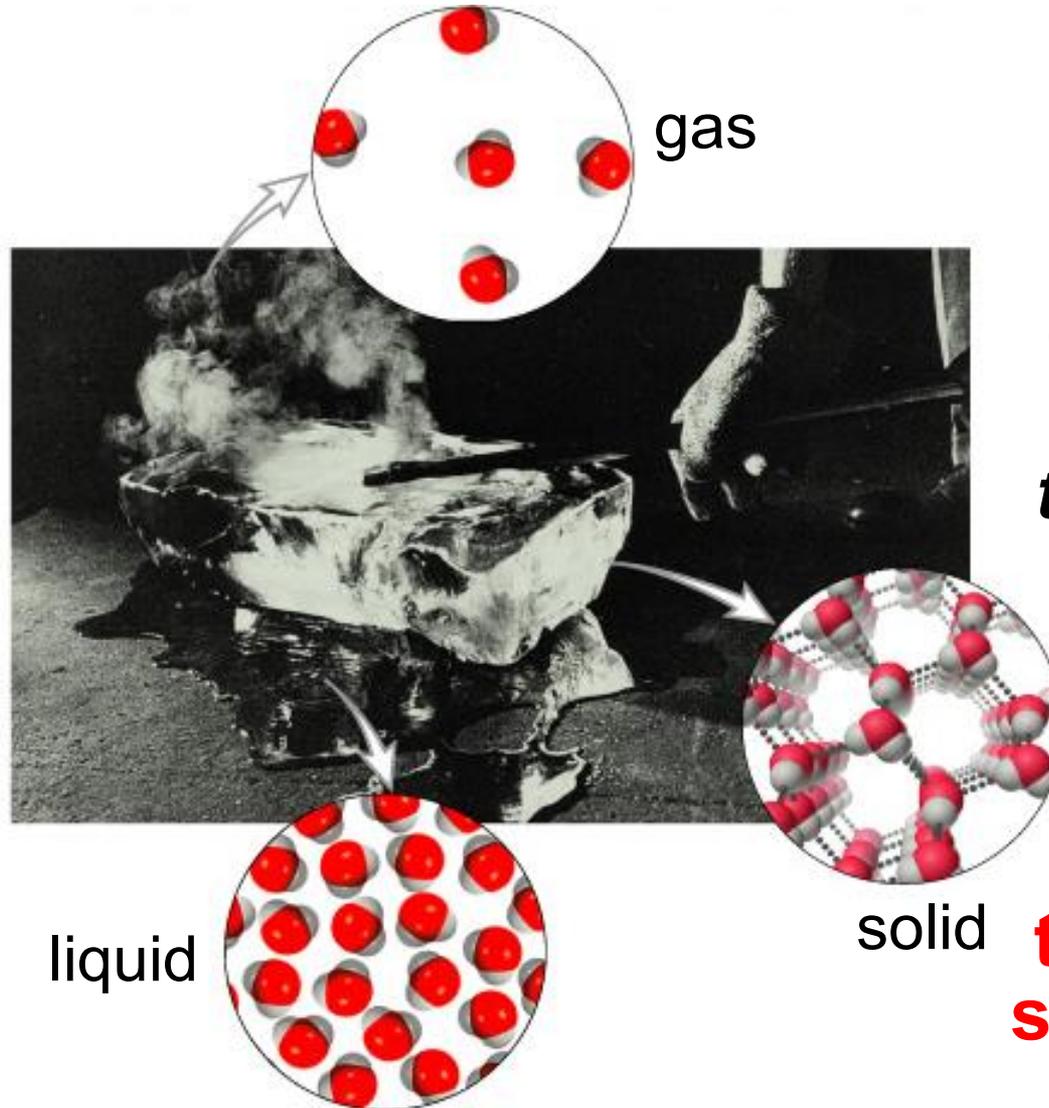


Can you spot a *change*?

# Physical Change

## Effect of a Hot Poker on a Block of Ice

A change from **one state of matter to another...**



...is called a ***phase transition.***

**But it's all the SAME substance!**