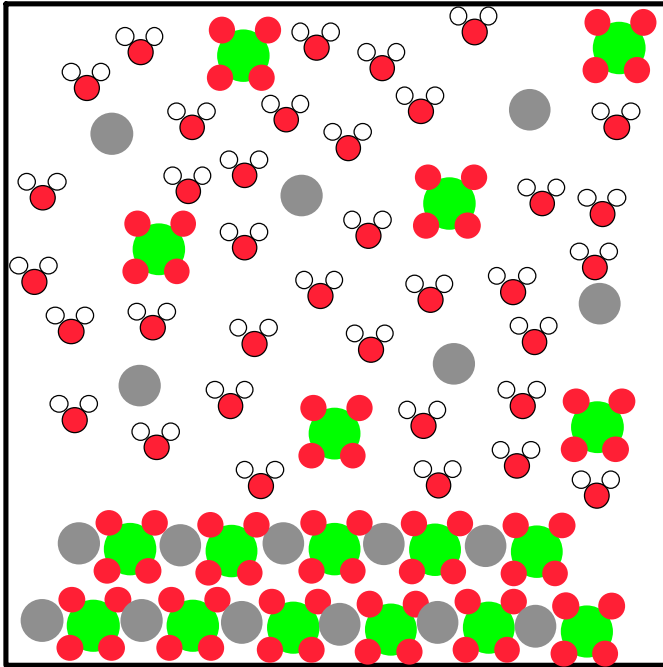


● Magnesium Ion:  $\text{Mg}^{2+}$

○ Water Molecule:  $\text{H}_2\text{O}$

● Sulfate Ion:  $\text{SO}_4^{2-}$

● Magnesium Sulfate:  $\text{MgSO}_4$

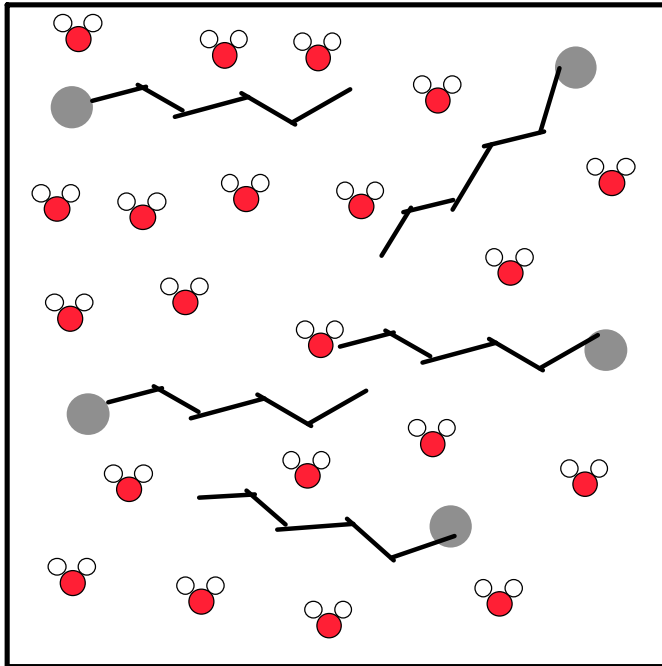


**Magnesium Sulfate ( $\text{MgSO}_4$ ) dissolved in water  
(with some solid remaining at the bottom)**

● Magnesium Ion:  $Mg^{2+}$

○ Water Molecule:  $H_2O$

Soap Molecule: C H and O



**Magnesium ions react with soap molecules,  
sticking together**

**(now the soap cannot react with dirt or make bubbles)**