

➤ We want to find out how volume and \_\_\_\_\_ are \_\_\_\_\_

**But First...**

➤ Kelvin – a unit used to measure \_\_\_\_\_

**EQUATION TO CONVERT FROM °C to K**

	Fahrenheit	Celsius	Kelvin
Freezing point of water			
Boiling point of water			

Example #1

Convert 64 °C into Kelvin

Example #2

Convert 115 °C into Kelvin

**Back to the relationship between temperature and volume...**

➤ T      V

➤ Therefore, as temperature INCREASES, volume \_\_\_\_\_,  
and as temperature DECREASES, volume \_\_\_\_\_

**Charles' Law**

Example #1

You have a 1.75 Liter balloon filled with a sample of gas, at room temperature (25 °C) What will be the new volume if you put the balloon in a beaker of cold water at 10 °C ?

$$V_1 = \underline{\hspace{2cm}} \quad T_1 = \underline{\hspace{2cm}}$$

$$V_2 = \underline{\hspace{2cm}} \quad T_2 = \underline{\hspace{2cm}}$$

Example #2

You have a 2 Liter balloon filled with a sample of gas, at room temperature (25 °C) What will be the new volume if you put the balloon in a beaker of boiling water at 100 °C ?

$$V_1 = \underline{\hspace{2cm}} \quad T_1 = \underline{\hspace{2cm}}$$

$$V_2 = \underline{\hspace{2cm}} \quad T_2 = \underline{\hspace{2cm}}$$