

## Ch.11 Continued

Define the following terms:

\_\_\_\_\_ : the resistance of a liquid to flow. This \_\_\_\_\_ with stronger intermolecular forces, and \_\_\_\_\_ with higher temperature.

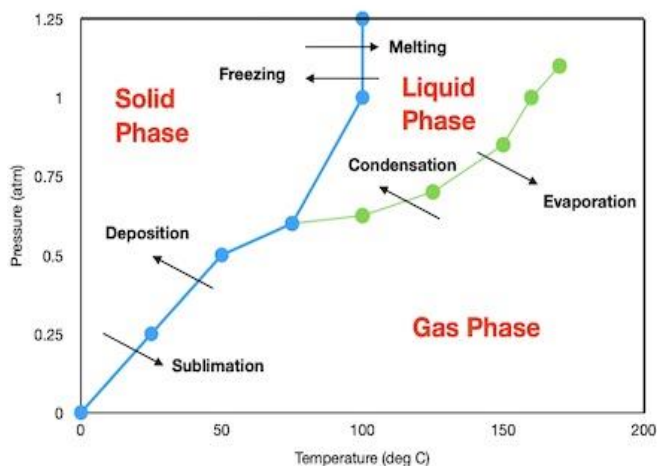
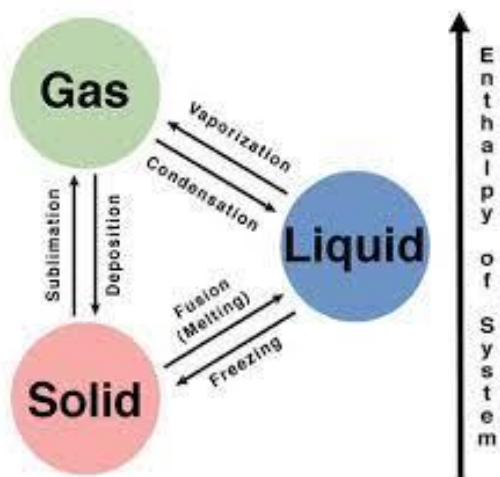
\_\_\_\_\_ : The energy or work required to increase the surface of a liquid due to intermolecular forces.

\_\_\_\_\_ : The rise of liquids up narrow tubes.

\_\_\_\_\_ : Intermolecular forces that bind similar molecules to one another.

\_\_\_\_\_ : Intermolecular forces that bind a substance to a surface.

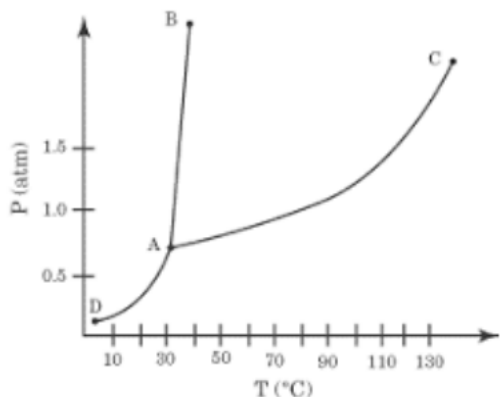
Phase Change Diagrams:



Determine the type of intermolecular forces for each compound: **NH<sub>3</sub>** (Ammonia), **CH<sub>4</sub>** (**Methane**), and **CH<sub>3</sub>OH** (Methanol). List the compounds in order of increasing boiling point.

Which of the following compounds exhibit hydrogen bonding? **HF**, **NH<sub>3</sub>**, **C<sub>2</sub>H<sub>6</sub>**, and **HCl**

Label what spots A and C represent. Label solid, liquid, and gas in the diagram.



Calculate the enthalpy change (in kJ) associated with the conversion of 25.0 grams of ice at -4.00 °C to water vapor at 109.0 °C. The specific heats of ice, water, and steam are 2.09 J/g·K, 4.18 J/g·K, and 1.84 J/g·K, respectively. For H<sub>2</sub>O,  $\Delta H_{\text{fusion}} = 6.01$  kJ/mol and  $\Delta H_{\text{vaporization}} = 40.67$  kJ/mol