# Properties of Solids and Liquids Worksheet

Objectives:
- Identify the information given in a heating or cooling curve.
- Calculate heat associated with state and temperature changes
- Predict intermolecular properties from molecular structure
- Predict physical properties of molecules from intermolecular forces

1. Identify the physical states of the compound that exist between the indicated letters in the chart to the right. Is heat absorbed or released between points D and E. How does it relate to the physical state(s) present between those points?
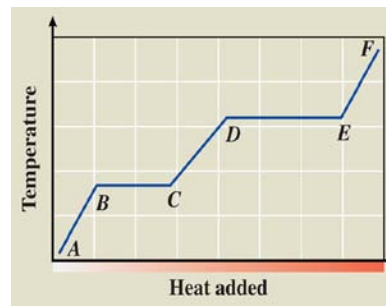
2. Calculate the heat released when 25.0 g of steam becomes liquid water at 100.0°C. The molar heat of vaporization of water is 4.07 x 10^4 J/mol.

3. What is the energy change required for 50.0 g of water at 60.0 °C to be heated to steam at 110.0 oC?

4. Predict properties of the following molecules. For boiling point and vapor pressure, predict if high or low.

Molecule	Polarity	IM Forces	Predicted Boiling Point	Vapor Pressure
CO_2				
HCN				
H_2O				