

Unit 9 – Thermochemistry and Solutions

C2.1c Compare qualitatively the energy changes associated with melting various types of solids in terms of the types of forces between the particles in the solid.

C2.2d Explain convection and the difference in transfer of thermal energy for solids, liquids, and gases using evidence that molecules are in constant motion.

C3.1c Calculate the ΔH for a chemical reaction using simple coffee cup calorimeter.

C3.1d Calculate the amount of heat produced for a given mass of reactant from a balanced chemical equation.

C3.4g Explain why gases are less soluble in warm water than cold water.

C4.7a Investigate the difference in the boiling point or freezing point of pure water and a salt solution.

C5.4A Compare the energy required to raise the temperature of one gram of aluminum and one gram of water the same number of degrees.

C5.4B Measure, plot, and interpret the graph of the temperature versus time of an ice-water mixture, under slow heating, through melting and boiling.

C5.4B.a I can Measure, plot, and interpret the graph of the temperature versus time of an ice-water mixture, under slow heating, through melting and boiling.

C5.5e Relate the melting point, hardness, and electrical and thermal conductivity of a substance to its structure.

AMAESD Power Standard

C4.7x The physical properties of a solution are determined by the concentration of the solute. 4.7 a, b, 3.4g

I can calculate the molarity of a solution.

I can identify properties (solubility and density) of a solution.

I can measure the boiling point and freezing point of water and a solution.