

Chemistry Chapter 9
Thermodynamics

Unit	Date	Objectives	Assessment
1		Distinguish between heat and temperature. Explain calorimeter operation. Calculate heat in chemical reactions. Give examples of heats of reaction. Use heats of reactions in stoichiometry	1-6, 7,9,11,13,14,17
2		Relate heat of reaction, enthalpy and stability. Interpret energy diagrams for reactions. Relate activation energies and reactions. Explain E_a with kinetic theory models. Use Hess's Law.	19-22, 23, 25
3		Define entropy. Describe high and low entropy examples. Relate entropy changes to stability. Use entropy tables in calculations.	26-30, 31, 34,35
4		Describe the conditions favoring spontaneous reactions. Define free energy Calculate changes in free energy. Describe how to control chemical reactions.	36-41, 42,44
5		Describe daily energy requirements. Estimate daily energy expenditure. Interpret food labels. Evaluate your diet.	46-48, 50
Lab		Heat in a peanut	Lab
Lab		Heats of solution	Lab