**11 CHEMISTRY – Term 3**

| **TOPIC and TIMING (Weeks)** | **QCAA OBJECTIVES and ASSESSMENT** | **LEARNING GOALS and SUCCESS CRITERIA** | **Page reference** |
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| **Exothermic and Endothermic Reactions****Week 1 (3 lessons)** | **Unit 1 Topic 3****Objectives 1,2,3,4,5,6** | **SC75:** I can explain how endothermic and exothermic reactions relate to the law of conservation of energy and the breaking and reforming of bonds; understand that heat energy is released or absorbed by the system to or from the surrounds **SC76:** I can understand that heat is a form of energy and that temperature is a measure of the average kinetic energy of the particles**SC77:** I can apply the relationship between temperature and enthalpy changes to identify thermochemical reactions as exothermic or endothermic; deduce from enthalpy level diagrams and thermochemical equations the relative stabilities of reactants and products, and the sign of the enthalpy change (ΔH) for a reaction**SC78:** I can explain, in terms of average bond enthalpies, why reactions are exothermic or endothermic**SC79:** I can construct and use appropriate representations (including chemical symbols and formulas, and chemical and thermochemical equations) to communicate conceptual understanding, solve problems and make predictions**SC80:** I can calculate the heat change for a substance given the mass, specific heat capacity and temperature change**SC81:** I can use data to calculate the enthalpy change (ΔH) for a reaction**Mandatory Practical**: Conduct a calorimetry experiment to measure the enthalpy of a reaction. |  |
|  **LG 1**: **Students understand that thermochemical equations are identified as exothermic or endothermic and are able to explain and/or calculate enthalpy changes from a variety of methods used. (using average bond enthalpies ,using specific heat capacities and using data from thermochemical equations)** |  |