**Ideas for Individual Investigation topics**

* Transition metal complex ions (effects of metals, ligands, oxidation states on the colour of the ion)
* Natural indicators (sources, stability, Ka values, end point range)
* Extraction of oil from spices (using different sources of spices, different storage conditions)
* Effectiveness of different water purification methods on dissolved ions.
* Effectiveness of different salts for road snow removal (freezing point depression, effect on different materials)
* In-depth kinetics investigation into a specific reaction (involving the determination of the order and rate constant)
* Melting points of group 2 metals and the different types of crystal lattice
* Thermodynamic data for ionic compounds. The enthalpy of solution can be found out in the lab. Ksp can be calculated by gravimetric determination. The energy value can be calculated using K = RTlnK and then the change in entropy value.
* The amount of nitrogen in fertilizers (reacting with excess NaOH and titrating with standard HCl solution)
* Vitamin C content in vegetables
* Hand - Rub Sanitizers: Kinetic study using evaporation of different types of sanitizers
* Iodine numbers of palm oil as compared to other cooking oils (such as coconut oil, corn oil, sunflower oil) and compare them to secondary sources
* An expansion of the determination of manganese in a paper clip (one of the possible labs mentioned in A.2 Metals and inductively coupled plasma (ICP) spectroscopy)