Students will be able to do:

**Calculate:**
- Mole-mass-molecule conversions (2.02)
- Stoichiometric (2.04)
- Gas laws (1.06)
- Density (1.043)
- pH - strong acids and bases (1.04)
- Molarity (2.024)
- \(q = mC\Delta T\) (3.04)
- \(q = H_m\) (3.04)

**Write and balance equations**
- Predict products using the reference table (2.03)
- Write net ionic equations (2.03)
- Use solubility to predict precipitates (1.045, 2.032?)

**Use reference tables**

**Graphing**
- Read graphs - i.e. solubility (1.045), cool/heating curves (3.04), pH titration (4.041, 4.044)
- Construct graphs - labeling all axis

**Use the Periodic Table:**
- Describe periodicity (2.012, 2.013, 2.014)
- Predict trends (2.015, 2.016, 2.017)
- Recognize and predict from physical and chemical properties (1.04)

**Identify elements and compounds based on**
- Physical and chemical properties (1.04, 1.07, 2.01)
- Density (1.043), conductivity (4.043, 1.04 or 2.01), color (3.011), spectra (3.012), solubility (1.045), melt/boiling point (1.041, 1.042)

**Lab skills**
- Follow safety procedures
- Keep a notebook/journal
- Use good lab techniques - measuring using appropriate instrument and significant figures.
- Conduct a titration (even if it is a drop-wise method) (4.04)
- Write reports including abstract and bibliography
- Use significant figures
- Demonstrate an understand of the scientific method by identifying and controlling variables in an experiment
- Present data in written and oral forms
- Draw conclusions based on data
- Use technology appropriately (see equipment options in equipment list)