**Chapter 3 – The Periodic Table**

**Key Knowledge**

* Historical development of the periodic table from Mendeleev to Seaborg
* Trends and patterns of properties within the periodic table: atomic number, types of compounds formed, metallic/non-metallic character, chemical reactivity of elements.

**Chapter Outcomes**

* Relate the development of the periodic table to the experimental work and hypotheses of chemists from Mendeleev to Seaborg
* Explain periodic variation of properties of the elements in terms of electronic configuration.
* Map the s-, p-, d- and f-blocks on a blank table.
* Given its electronic configuration, place an element in the periodic table.
* Locate metals and non-metals in the periodic table.
* Give an indication of the trend in the chemical react ivies of the elements.
* Explain why elements and compounds are both classified as pure substances.
* Explain trends and patterns in the following atomic properties of the main group elements: atomic number and radius, ionisation energy, electronegativity and types of compounds formed.
* Use electronic configuration and atomic properties to predict the reactivity of the main group elements.