

## **Topic 2.1 The nuclear atom**

### **Understandings:**

- Atoms contain a positively charged dense nucleus composed of protons and neutrons (nucleons).
- Negatively charged electrons occupy the space outside the nucleus.
- The mass spectrometer is used to determine the relative atomic mass of an element from its isotopic composition.

### **Applications and skills:**

- Use of the nuclear symbol notation  ${}^A_Z X$  to deduce the number of protons, neutrons and electrons in atoms and ions.
- Calculations involving non-integer relative atomic masses and abundance of isotopes from given data, including mass spectra.