

**Atoms, ions, and compounds**

Specification reference	Checklist questions	
2.1.1a	Can you describe isotopes as atoms of the same element with different numbers of neutrons and different masses?	<input type="checkbox"/>
2.1.1 b	Can you describe atomic structure in terms of the numbers of protons, neutrons and electrons for atoms and ions, given the atomic number, mass number and any ionic charge?	<input type="checkbox"/>
2.1.1 c	Can you explain the terms <i>relative isotopic mass</i> (mass compared with 1/12th mass of carbon-12) and <i>relative atomic mass</i> (weighted mean mass compared with 1/12th mass of carbon-12), based on the mass of a $^{12}\text{C}$ atom, the standard for atomic masses?	<input type="checkbox"/>
2.1.1 d	Can you use mass spectrometry?	<input type="checkbox"/>
2.1.1 d i	Can you use mass spectrometry to determine relative isotopic masses and relative abundances of the isotope?	<input type="checkbox"/>
2.1.1 d ii	Can you use mass spectrometry to calculate the relative atomic mass of an element from the relative abundances of its isotopes?	<input type="checkbox"/>
2.1.2 a	Can you write formulae of ionic compounds from ionic charges?	<input type="checkbox"/>
2.1.2 a i	Can you predict ionic charge from the position of an element in the periodic table?	<input type="checkbox"/>
2.1.2 a ii	Can you recall the names and formulae for the following ions: $\text{NO}_3^-$ , $\text{CO}_3^{2-}$ , $\text{SO}_4^{2-}$ , $\text{OH}^-$ , $\text{NH}_4^+$ , $\text{Zn}^{2+}$ , and $\text{Ag}^+$ ?	<input type="checkbox"/>
2.1.2 b	Can you construct balanced chemical equations (including ionic equations), including state symbols, for reactions studied and for unfamiliar reactions given appropriate information?	<input type="checkbox"/>