

Periodicity

Specification reference	Checklist questions	
3.1.1 a i	Can you describe the periodic table as the arrangement of elements by increasing atomic (proton) number?	<input type="checkbox"/>
3.1.1 a ii	Can you describe the periodic table as the arrangement of elements in periods showing repeating trends in physical and chemical properties (periodicity)?	<input type="checkbox"/>
3.1.1 a iii	Can you describe the periodic table as the arrangement of elements in groups having similar chemical properties?	<input type="checkbox"/>
3.1.1 b i	Can you explain the periodic trend in electron configurations across Periods 2 and 3?	<input type="checkbox"/>
3.1.1 b ii	Can you classify elements into s-, p- and d-blocks?	<input type="checkbox"/>
3.1.1 c	Can you describe first ionisation energy (removal of 1 mol of electrons from 1 mol of gaseous atoms) and successive ionisation energies?	<input type="checkbox"/>
3.1.1 c i	Can you explain the trend in first ionisation energies across Periods 2 and 3, and down a group, in terms of attraction, nuclear charge and atomic radius?	<input type="checkbox"/>
3.1.1 c ii	Can you predict from successive ionisation energies of the number of electrons in each shell of an atom and the group of an element?	<input type="checkbox"/>
3.1.1 d i	Can you explain metallic bonding as strong electrostatic attraction between cations (positive ions) and delocalised electrons	<input type="checkbox"/>
3.1.1 d ii	Can you explain a giant metallic lattice structure (e.g. all metals)?	<input type="checkbox"/>
3.1.1 e	Can you explain solid giant covalent lattices of carbon (diamond, graphite and graphene) and silicon as networks of atoms bonded by strong covalent bonds?	<input type="checkbox"/>

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3.1.1 f	Can you describe the physical properties of giant metallic and giant covalent lattices, including melting and boiling points, solubility and electrical conductivity in terms of structure and bonding?	<input type="checkbox"/>
3.1.1 g	Can you explain the variation in melting points across Periods 2 and 3 in terms of structure and bonding?	<input type="checkbox"/>