

Structure and Bonding

Checklist



Use this alongside our Walkthrough Guides to tick off the concepts you're confident with to plan your study and find areas of improvement!

Atomic Structure

- I can describe and explain why atoms form covalent bonds
- I can describe and explain whether a bond will be polar or nonpolar
- I can describe and explain whether a molecule will be polar or nonpolar
- I can draw **Lewis structures** for atoms with up to 4 areas of electron density around the central atom
- I can predict the shape of molecules with up to 4 areas of electron density around the central atom

Types of Solid

- I can identify what makes up the 4 different types of solid
- I can describe and explain how intermolecular forces influence the melting/boiling point of solids
- I can describe and explain what makes a solid soluble in water
- I can describe and explain what makes a substance conductive
- I can describe and explain the structure, bonding and properties of molecular solids
- I can describe and explain the structure, bonding and properties of ionic solids
- I can describe and explain the structure, bonding and properties of metallic solids
- I can name the three types of covalent network solids that are assessed
- I can describe and explain the structure, bonding and properties of covalent network solid solids

Thermochemistry

- I can define the term **enthalpy**
- I can define and describe the terms **endothermic** and **exothermic**
- I can define the term **activation energy**
- I can describe and explain the structure, bonding and properties of ionic solids
- I can calculate the enthalpy change of a reaction given the mass of the compound and a molar mass
- I can calculate the enthalpy of a reaction given bond enthalpies of both products and reactants