



# STRUCTURE AND BONDING

CHEMISTRY

LEVEL 2

## Study Checklist

If you've picked up this checklist, congrats! You've begun the first step in a system of resources designed to help you through the Structure and Bonding external. To make the most of this, we suggest you sit down, grab a pen, and mark any points that you're feeling a little unsure of. Then, create a subject audit using our template, or refer to the page numbers to find the section in our walkthrough guide to help you out!

### ATOMIC STRUCTURE

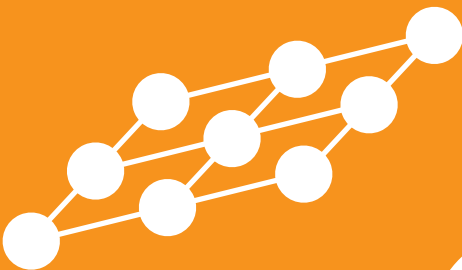
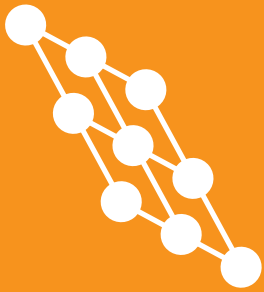
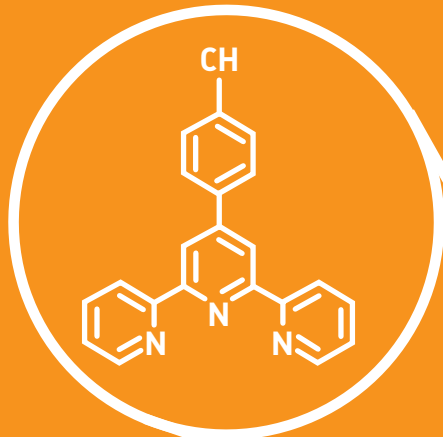
- I can describe and explain why atoms form covalent bonds [4]
- I can describe and explain whether a bond will be polar or non-polar [17]
- I can draw Lewis structures for atoms with up to 4 areas of electron density around the central atom [8]
- I can describe and explain whether a molecule will be polar or non-polar [22]
- I can predict the shape of molecules with up to 4 areas of electron density around the central atom [11]

### TYPES OF SOLID

- I can identify what makes up the 4 different types of solid [26]
- I can describe and explain the structure, bonding and properties of ionic solids [32]
- I can describe and explain how intermolecular forces influence melting/boiling point of solids [26]
- I can describe and explain the structure, bonding and properties of metallic solids [36]
- I can describe and explain what makes a solid soluble in water [26]
- I can name the three types of covalent network solids that are assessed [38]
- I can describe and explain what makes a substance conductive [27]
- I can describe and explain the structure, bonding and properties of covalent network solid solids [38]
- I can describe and explain the structure, bonding and properties of molecular solids [28]

### THERMOCHEMISTRY

- I can define the term enthalpy [42]
- I can calculate the enthalpy change of a reaction given a mass of compound and a molar mass [47]
- I can define and describe the terms endothermic and exothermic [43]
- I can calculate the enthalpy of a reaction given bond enthalpies of both products and reactants [50]
- I can define the term activation energy [47]



1 <b>H</b> Hydrogen 1.00794	2 1	3 <b>Li</b> Lithium 6.941	4 2 1 <b>Be</b> Beryllium 9.0122
11 <b>Na</b> Sodium 22.98976928	12 2 8 1 <b>Mg</b> Magnesium 24.305	19 <b>K</b> Potassium 39.0983	20 2 8 8 1 <b>Ca</b> Calcium 40.078
37 <b>Rb</b> Rubidium 85.4678	38 2 8 18 8 1 <b>Sr</b> Strontium 87.62	55 <b>Cs</b> Caesium 132.9054519	56 2 8 18 8 2 <b>Ba</b> Barium 137.327
87 <b>Fr</b> Francium (223)	88 2 8 18 8 3 <b>Ra</b> Radium (226)		

