



CC6 Covalent bonding

Personal learning checklist | 1 of 1

GCSE Edexcel Combined Science | Chemistry Papers 1 and 2

Name _____ Class _____ Date _____

Tick one box for each statement. Red: need help. Amber: partly confident.
Green: can do independently.

I can	Red	Amber	Green
Covalent bonds and representations			
Explain covalent bonding as shared electrons attracted to both nuclei and compare it with ionic formation.	☐	☐	☐
Distinguish single, double and triple bonds and identify shared and lone electron pairs.	☐	☐	☐
Explain molecular and displayed formulae and dot-and-cross electron conventions.	☐	☐	☐
Drawing molecules			
Draw complete dot-and-cross diagrams for hydrogen, hydrogen chloride, water and methane.	☐	☐	☐
Draw oxygen and carbon dioxide diagrams using double bonds and complete outer shells.	☐	☐	☐
Describe ammonia and chlorine bonding and distinguish element molecules from compound molecules.	☐	☐	☐
Describe the approximate atomic and small-molecule scale using powers of ten in metres.	☐	☐	☐
Molecular properties			
Explain low molecular melting and boiling points using weak intermolecular forces rather than weak covalent bonds.	☐	☐	☐
Explain poor molecular conductivity and why some molecular substances form conducting solutions.	☐	☐	☐
Describe variable molecular solubility and distinguish simple molecules from giant covalent structures.	☐	☐	☐
Polymers and models			
Describe monomers joining into long covalent polymer chains, using poly(ethene) as an example.	☐	☐	☐
Compare dot-and-cross, displayed, ball-and-stick and space-filling models and explain their limitations.	☐	☐	☐

My next revision priority _____