



Bridging the gap CHEMISTRY

Course Title	Examination Board & Web Address
A-Level Chemistry	OCR ocr.org.uk
Units/Topics Studied:	
Module 1 Development of practical skills Module 2 Foundations in Chemistry Module 3 Periodic table & energy Module 4 Core Organic Chemistry <i>These modules make up AS Chemistry</i>	
Bridging Task	
Part One: Find out the answers to the following questions	
<ol style="list-style-type: none">1. Which element is 'the standard' to which all others are compared?2. Coordinate/dative bonding is a 'special' form of covalent bonding. Explain the difference.3. Define 1st ionisation energy. Write an equation using Na to exemplify this, remember state symbols.4. Explain the difference between heterogeneous and homogeneous catalysts.5. What does CFC stand for? What environmental problems do they cause?6. Hydrogen bonding- bond or force? Explain -use a labelled diagram of water to clarify.7. Define the terms 'oxidation' and 'reduction' in terms of electrons. What is disproportionation?8. List the common shapes of molecules. Draw and label each with the correct bond angle(s).9. Define the key organic terms 'nucleophile' and 'electrophile'.10. Hexane can have branched-chain isomers. Draw and name them.	
Part Two: Choose ONE of the following tasks to complete	
<p style="text-align: center;">Magazine Article 'Graphene -the material of the future'</p> <p>Produce a magazine article to cover the following points- you may want to include diagrams & photographs. What is graphene? What are its unique properties and potential uses? The University of Manchester's plans to build a 'Graphene Institute'. What will be its location and purpose in terms of research and developments?</p>	<p style="text-align: center;">Information Poster 'Atomic Structure Timeline'</p> <p>Produce a poster summarising the key achievements in the understanding of atomic structure. Include dates, the names of scientists and key concepts. Your poster should range from the ancient philosophers to modern scientists</p>
<p style="text-align: center;">Information Leaflet 'Where can Chemistry take you? Careers with Chemistry'</p> <p>Produce an information leaflet outlining the varied career paths that can be followed after studying A-level & degree-level Chemistry. Include any additional qualifications needed for each career.</p>	<p style="text-align: center;">'Medicinal Chemistry'</p> <p>Research the history of the drug 'Thalidomide'. Use the concept of 'Optical Isomerism' to explain how some drug molecules can have different effects on the patient. Use 'Thalidomide' as your real example and comment on the dangers & subsequent regulations regarding drug development, trials and uses.</p>
<p>The two parts will be graded A-E. In part one we will be looking for the correct answers. In part two we will be looking for evidence of research, scientific understanding and the skill of communicating scientific ideas with others.</p> <p style="text-align: center;">Good Luck!</p>	

