

Science work – Year 12 – A level Chemistry

The tasks to work through each week from your CGP guide and workbook from June 15th until the end of the summer term are given below. You will also have a short Doddle/Seneca/Kerboodle test and additional online resources to help you with your work will be given. The additional resources will be updated frequently and links to these will be available on the school website.

Week	Topic	CGP Guide pages	Workbook pages	Assessment task	Additional resources
15/06/2020 (Organic)	Aldehydes, ketones and carboxylic acids	188-190	111-119	OCR Carbonyl compounds mini quiz (Doddle)	Carbonyl compounds - aldehydes and ketones presentation (Doddle) Carbonyl compounds - Reactions of aldehydes and ketones (Doddle)
	Task Instructions: Read CGP guide, create a mind map on the content. Reduce your mind map to a 1 paragraph summary. Complete questions, mark in red pen and improve in purple pen. Complete workbook questions. Mark and improve as before. Complete Doddle quiz.				
15/06/2020 (Physical)	Rates of reaction and reaction orders	122 - 125	71-82	OCR Rate Graphs and Orders Mini Quiz (Doddle)	Rates of Reaction - Rate Equation, Order, Rate Constant (k), Arrhenius Equation and Rate Determining Step https://bit.ly/2UqvVN6 Kinetics Part 1 - Introduction to Rates of Reaction presentations (Doddle) A2 Textbook/digital book - pg8-12 https://bit.ly/3hjUFjM
	Task Instructions: Define the terms: rate of reaction, order, overall order. Explain how the order can be deduced from a concentration-time graph. Describe the different shapes of rate-concentration and concentration-time graph, relate to orders. Explain how orders are determined experimentally. Complete rates of reaction and reaction order questions workbook questions. Complete Doddle quiz.				
22/06/2020 (Organic)	Acyl chlorides and esters	191-192	111-119	OCR Carboxylic acids and esters mini quiz (Doddle)	Carbonyl compounds - carboxylic acids presentation (Doddle) Carbonyl compounds - Reactions of carboxylic acids (Doddle)
	Task Instructions: Read CGP guide, complete questions. Mark in red pen and improve in purple pen. Highlight strengths and weakness. Re-read CGP guide topics you have highlighted as weaknesses and make flashcards on these topics. Complete the acyl chlorides and esters workbook questions. Complete Doddle quiz.				
22/06/2020 (Physical)	Rate constant and Rate-determining step	126 - 129	71-82	OCR Rate Equations and Constants Mini Quiz (Doddle)	Kinetics Part 2 - Rate Equations, Kinetics Part 3 - Calculations and Experiments (Doddle)
	Task Instructions: Define the terms: rate equation, rate constant, half-life, rate determining step. Explain the rate equation. Create a step by step method to calculate the rate constant. Explain how to predict the rate equation and reaction mechanism, refer to rate-determining step. Complete, mark and improve CGP questions. Complete, mark and improve rate constant and rate determining step workbook questions. Complete Doddle quiz.				
29/06/2020 (Organic)	Aromatic compounds and carbonyls Review	182-192	111-119	26 Carbonyl and carboxylic acids: Exam style questions (Kerboodle)	A2 Chemistry textbook Chapter 26 pg 190-207 A2 Chemistry textbook Practice Questions pg 208-209
	Task Instructions: Complete CGP guide questions. Write 3 questions you still have about "Aromatic compounds and carbonyls." Answer your questions, you may use the internet. Complete and mark remaining workbook questions. Complete Kerboodle exam-style questions and mark.				

29/06/2020 (Physical)	Arrhenius equation and equilibrium constant	130 - 133	71-82	Arrhenius Equation and Kp Quiz (Seneca) https://bit.ly/3cXS5N4 Class code: f5b6ntn30q	Kinetics Part 4 - The Arrhenius equation Presentation (Doddle) Equilibria Part 1 - The Equilibrium Constant Kc (Doddle)
	Task Instructions: Define the Arrhenius equation and its terms. Explain how temperature affects the rate constant. Define the terms dynamic equilibrium, closed system, homogeneous, heterogeneous. Complete, mark and improve CGP guide questions. Complete, mark and improve Arrhenius equation and equilibrium constant workbook questions. Complete Arrhenius Equation quiz.				
06/07/2020 (Organic)	Amines, Amides and Chirality	194-197	111-119	OCR Amines Mini Quiz, OCR Chirality Mini Quiz (Doddle)	Amino acids and chirality Exam Questions https://bit.ly/2MSWVAN Amino acids and chirality exam questions mark scheme (Maths and Physics Tutor) https://bit.ly/3cTLJyu A2 Chemistry Textbook pg 210-218
	Task Instructions: Define the term: amides, amine, amino acid, chirality, optical isomers. Explain how aliphatic and aromatic amines are made, include structural drawings. State the properties of amines. Outline the reactivity of amino acids, include structural drawings. Use annotated structural drawings to explain how to identify chiral centres. Complete, mark and improve CGP Guide questions. Complete, mark and improve amines and amides and chirality workbook questions. List 3 of the most difficult things to remember from this week's work, rank 1-3. State how you will remember the information. Complete both Doddle quizzes.				
06/07/2020 (Physical)	Equilibrium concentrations and gas equilibria	134-137	71-82	OCR Equilibrium Mini Quiz (Doddle)	Equilibria Part 2 - The Equilibrium Constant Kp (Doddle) A2 Chemistry Textbook - pg 30-42
	Task Instructions: Define the term total pressure, partial pressure, mole fraction. Explain how Kc can be used to determine concentration of components in an equilibrium mixture. Explain what Kp is, how it is calculated and why it is useful. Complete, mark and improve CGP questions. Complete, mark and improve Equilibrium concentrations and gas equilibria workbook questions. Complete Doddle quiz.				
13/07/2020 (Organic)	Polymers	198-201	111-119	OCR Amino acids Mini Quiz, OCR Polyesters and polyamides Mini Quiz (Doddle)	A2 Chemistry textbook pg 219-223 A2 Chemistry textbook Practice Questions pg 224-225
	Task Instructions: Define: polymer, monomer, dicarboxylic acid, diamine, repeat unit. Outline condensation and addition polymerisation, include structural drawings. Explain how polyesters and polyamides are made, include structural drawings. Explain how condensation polymers are broken down. Complete, mark and improve CGP Guide questions. Complete, mark and improve the polymer workbook questions. Complete Doddle Quizzes.				
13/07/2020 (Physical)	Equilibrium constants pt. 2 and acids and bases	138-141	71-82	OCR Acids and Bases Mini Quiz (Doddle)	Equilibria Part 3 - Factors Affecting Equilibria (Doddle) Acids and Bases Part 1 - Acid-Base Theory Presentation (Doddle)
	Task Instructions: Define the terms: Le Chatelier's principle, endothermic, exothermic, conjugate pairs, conjugate base, conjugate acid. Explain what changes the position of equilibrium and how it alters the Equilibrium constant. Outline the development of the Acid-base theory. Complete, mark and improve CGP questions. Complete, mark and improve more on equilibrium constants and acids and bases workbook questions. Complete Doddle quiz.				