




# Trilogy Chemistry Paper 2 Higher Revision Checklist

Paper 2 Content			
<b>C8 Rates and Equilibria</b>	<b>Analysis</b>	<b>Revised</b>	
Can calculate the mean rate of a reaction using this remembering time always goes on the bottom of the division.			
Can draw and interpret graphs showing product formed or reactant used against time.			
Can draw tangents to curves and use the slope to measure the rate of reaction.			
<b>Can calculate the gradient of a tangent to a curve to measure rate of reaction.</b>			
Can name 5 factors that would affect the rate of a reaction.			
<i>Can give detail on RP11: Investigate how changes in concentration affect the rates of reactions by a method involving measuring the volume of a gas produced and a method involving a change in colour.</i>			
Can describe collision theory in terms of particles and energy.			
Can predict and explain the effect of changing conditions on the rate of a reaction.			
Explain how each factor would affect the rate of reaction using collision theory			
State what a catalyst is and its role in a chemical reaction.			
Can explain catalysts by referring to reaction profiles and reaction pathways.			
Can identify catalysts from an equation.			
Can recognise and define reversible reactions.			
Can link reversible reactions to endothermic and exothermic in terms of energy transfer.			
Can describe equilibria in a reversible reaction.			
<b>Can state Le Chatelier's Principle.</b>			
<b>Can predict the effect of changes on systems at equilibrium from information given</b>			
<b>Can describe and explain the effect of changing concentration of a reactant or product on the position of equilibrium.</b>			
<b>Can describe and explain the effect of changing the temperature of a system on the position of equilibrium.</b>			
<b>Can describe and explain the effect of changing the pressure of a system on the position of equilibrium.</b>			
<b>C9 Crude Oils and Fuels</b>	<b>Analysis</b>	<b>Revised</b>	
Can describe how crude oil was formed.			
Can describe crude oil as a mixture of hydrocarbons.			
Can define an endothermic reaction in terms of energy and give examples.			
Can give the general formula for an alkane and name and draw the first 4.			
Can describe the process of fractional distillation including evaporation and condensation.			
Can give uses for the fractions obtained from fractional distillation.			
Can link size of hydrocarbon molecule to the properties of boiling point, viscosity and flammability.			
Can describe the combustion of fuels to produced energy.			
Can write balanced equations for the complete combustion of hydrocarbons.			

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Can describe and interpret trends in properties of hydrocarbons.			
Can describe steam and catalytic cracking including the conditions.			
Can state the products of cracking.			
Can balance equations showing cracking.			
Can recall the test for alkenes and explain why it happens.			
Can explain the reason cracking is used and some uses of alkenes.			
<b>C12 Chemical Analysis</b>	<b>Analysis</b>	<b>Revised</b>	☺
Can state what is meant by pure substance.			
Can use melting and boiling point data to distinguish pure from impure substances.			
Can state what a formulation is.			
Can identify formulations from information.			
Can define the stationary and mobile phase of chromatography.			
Can explain how paper chromatography separated mixtures.			
Can say how chromatography can distinguish a pure substance from an impure substance.			
Can interpret chromatograms and calculate $R_f$ values from chromatograms.			
<i>Can give details on RP12: Investigate how paper chromatography can be used to separate and tell the difference between coloured substances and calculate <math>R_f</math> values.</i>			
Can describe the test for hydrogen gas.			
Can describe the test for oxygen.			
Can describe the test for carbon dioxide.			
Can describe the test for chlorine gas.			
<b>C13 The Atmosphere</b>	<b>Analysis</b>	<b>Revised</b>	☺
Can give the composition of the atmosphere.			
Can describe how the atmosphere changed over time.			
Can explain where the carbon dioxide went and how oxygen increased.			
Can evaluate different theories about the Earth's early atmosphere.			
Can describe the greenhouse effect in terms of how greenhouse molecules interact with short and long wave radiation.			
Can recall two human activities that increase the amounts of greenhouse gases carbon dioxide and methane.			
Can evaluate the quality of evidence in a report about global climate change when given information.			
Can describe why data is uncertain.			
Can explain why peer review is important.			
Can describe four possible effects of climate change.			
Can discuss the environmental implications of global climate change.			
Can explain what a carbon footprint is.			
Can describe what actions are taken to reduce carbon dioxide and methane emissions.			
Can describe how carbon monoxide, carbon particles (also called soot and particulates), sulfur dioxide and oxides of nitrogen are produced by burning fuels.			
Can predict the products of combustion of a fuel based on its composition.			

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Can describe and explain the problems caused by the pollutants carbon monoxide, carbon particles, sulfur dioxide and oxides of nitrogen.			
<b>C14 Using Resources</b>	<b>Analysis</b>	<b>Revised</b>	
Can give the difference between finite and renewable resources.			
Can define sustainable development.			
Can state examples of natural products that have been replaced by synthetic products.			
Can interpret information about resources from charts, graphs and tables.			
Can distinguish between potable and pure water.			
Can describe the differences between salty water and ground water.			
Can give the steps taken to produce potable water in the UK.			
Can describe how water is sterilised.			
Can describe ways that salty water can be made potable and say what the problems with this are.			
<i>Give details on RP13: Analysis and purification of water samples from different sources, including pH, dissolved solids and distillation.</i>			
Can describe how waste water is treated to make it potable.			
<b>Can describe the processes of extracting copper by bioleaching and phytomining.</b>			
<b>Can explain how scrap iron can extract copper from solutions.</b>			
<b>Can explain how copper can be extracted from solutions by electrolysis.</b>			
Can give the stages in a life cycle assessment.			
Can give a life cycle assessment for shopping bags made from plastic and paper and compare the two.			
Can explain why recycling and reusing materials is important.			
Can briefly describe how glass bottles and metals can be recycled.			
Can evaluate ways of reducing the use of limited resources from information.			