**Chemistry Paper 2: FOUNDATION 20th June**

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| **Unit** | **Section** | **Content** | |
| **The rate and extent of chemical change** | **5.6.1** Rate of Reaction | -Calculating the rate of a reaction  -Describe collision theory  -Define activation energy  -Describe and explain the factors that increase the rate of reaction  -Describe and explain the effect of catalysts on rate of reaction | |
| **Required Practical 11:** investigate how concentration affects the rates of reaction by a method involving measuring the volume of a gas produced/change in colour | -identify independent, dependent and control variables  -describe how to measure the dependent variable  -analyse results and draw conclusions from graphed data  -calculate rate of reaction from data | |
| **5.6.2** Reversible reactions and dynamic equilibrium | -identify and give examples of reversible reactions  -apply the conservation of energy to reversible reactions  -define dynamic equilibrium | |
| **Organic chemistry** | **5.7.1 C**arbon compounds as fuels and feedstock | -describe crude oil as a mixture of different length hydrocarbons  -define the term hydrocarbon  -identify the first 4 alkanes from their chemical formula and name them  -Describe the trend in properties as hydrocarbon chain length increases  -Describe and explain the process of fractional distillation  -describe the process of cracking  -describe the use of alkenes | |
| **Chemical Analysis** | **5.8.1** Purity, formulations and chromatography | -Define the term pure substance in chemistry  -Use melting and boiling point data to identify pure and impure substances  -Define the term formulation and give examples | |
| **Required Practical 12:** investigate how paper chromatography can be used to separate and tell the difference between coloured substances. | -Describe the properties of the mixtures that chromatography can be used to separate  -Describe and explain the experimental process of chromatography  -Explain how substances are separated using chromatography  -Interpret chromatograms +  -Calculate Rf values | |
| **Chemistry of the atmosphere** | **5.9.1** The composition and evolution of the Earth’s Atmosphere | -describe the composition of the current atmosphere  -describe the composition of the early atmosphere and explain theories of how the early atmosphere formed  -explain how the early atmosphere changed to that of the present atmosphere |
| **5.9.3** Common atmospheric pollutants and their sources | -State the atmospheric pollutants released into the atmosphere from the complete and incomplete combustion of fossil fuels  -Describe the negative impacts of these pollutants on health and the environment |
| **Using resources** | **5.10.1** Using the Earth’s resources and obtaining potable water | -Describe the renewable and non-renewable resources that we get form the Earth and its atmosphere  -Define the term potable water  -Describe how potable water can be produced.  -Describe the differences in the treatment of waste water, salt water and ground water |