

Scheme of Work
for the
Academic Year 2017/2018

SUBJECT : Chemistry
CLASS : 11
EXAMINATION : IGCSE
TEACHER IN CHARGE : Gateway College, Colombo

MONTH	UNIT No.	TOPICS	No. of PERIODS	OBJECTIVES
June	3.a	Organic chemistry	5	<ul style="list-style-type: none"> • Explain the terms homologous series, hydrocarbon, saturated, unsaturated, general formula and isomerism ✓ • Recall that alkanes have the general formula C_nH_{2n+2} ✓ • Draw the displayed formulae ✓ • Recall the products of the complete and incomplete combustion ✓ • Recall the reaction of alkanes (3.4,3.5) ✓
	3.b	Alkanes		
June	3.c	Alkenes	5	<ul style="list-style-type: none"> • Recall that alkenes have the general formula C_nH_{2n} ✓ • Draw the displayed formulae ✓ • Describe the reaction of alkenes ✓
July	3.d	Ethanol	5	<ul style="list-style-type: none"> • Describe the manufacture of ethanol (3.9,3.10) • Evaluate the factors relevant to the choice of method • Describe the dehydration of ethanol
July	5.b	Crude oil <i>Web search by students to identify crude oil and present the information using the white board (student driven)</i>	5	<ul style="list-style-type: none"> • Recall that crude oil is a mixture of hydrocarbons • Describe how the industrial process of fractional distillation separates crude oil • Recall the names and uses of the main fractions obtained from crude oil • Describe the trend in boiling point and viscosity • Recall that incomplete combustion of fuels • Describe how catalytic cracking happens (5.12,5.13)
July	5.c	Synthetic polymers	5	<ul style="list-style-type: none"> • Recall the formation of addition and condensation polymers (5.14-5.16) • Recall the production of polythene and nylon (5.17-5.20)

September	4.b	Energetics 3 um	15	<ul style="list-style-type: none"> Recall exothermic and endothermic reactions(4.10,4.11) Calculate molar enthalpy change from heat energy change(4.12,4.13) Represent reactions on a simple energy level diagram Use average bond energies to calculate the enthalpy change(4.15,4.16)
October	4.c	Rates of reaction um 3	15	<ul style="list-style-type: none"> Describe experiments to investigate the effects of changes in surface area of a solid, concentration of solutions, temperature and the use of a catalyst on the rate of a reaction (4.17-4.20) Understand that a catalyst speeds up a reaction by providing an alternative pathway with lower activation energy. <p>→ understand that cataly don</p>
January	4.d	Equilibria 3	15	<ul style="list-style-type: none"> Understand the concept of dynamic equilibrium (4.22-4.24) Predict the effects of changing the pressure and temperature on the equilibrium position in reversible reactions.
February	5.d	The industrial manufacture of chemicals	10	<ul style="list-style-type: none"> Recall the manufacture of ammonia (5.21-5.23) and recall the use of ammonia Describe the manufacture of sulfuric acid (5.25-5.27) Describe the manufacture of sodium hydroxide and chlorine (5.28-5.30)