ST. MARY'S COLLEGE

FORM 5 CHEMISTRY Course Outline (Teacher's Version)

Term 1

Proposed Week	Section	Specific Objective	Explanatory Notes	Textbook Reference
1-3	Principles of Chemistry	Energetics	Distinguish between exothermic and endothermic reactions Construct energy profile diagrams Calculate energy changes ***Heat of solution*** ***Thermometric titration*** ***Which is the better fuel***	Chapter 15
4-5	Organic Chemistry	Sources of hydrocarbon compounds	Identify natural sources of hydrocarbons Uses of petroleum fractions Describe cracking of fractions	Chapter 16
6-8		Introduction	Illustrate bonding in carbon and carbon compounds Write formulae of organic compounds Characteristics of homologous series Write general and molecular formulae of homologous series Deduce the homologous series of compounds Draw and name structures Define structural isomerism Write and name structural isomers	Chapter 16

9 – 11		Reactions of carbon compounds	Describe the reactions of alkanes and alkenes Relate reactions of alkanes and alkenes to their structures Distinguish between alkanes and alkenes Uses of hydrocarbons Identify alcohols, acids and esters	Chapters 17-19

			Properties of alcohols, acids and esters Describe reactions of ethanol Describe fermentation Describe reactions of ethanoic acid Describe hydrolysis of esters Compare soapy and soapless detergents ***Saturated vs unsaturated compounds*** ***Mineral vs organic acids***	
12 - 14	-	Examinations	Christmas Exams	

Term 2

Proposed Week	Section	Topic	Explanatory Notes	Textbook Reference
1-2	Organic Chemistry	Polymers	Define polymers Distinguish between addition and condensation polymerization Uses of polymers	Chapter 20

3	Inorganic Chemistry	Characteristics of metals	Describe the physical and chemical properties of metals Describe the reactions of metallic oxides, hydroxides, nitrates and carbonates	Chapter 21
4	Inorganic Chemistry	Reactivity and extraction of metals	Discuss the reactivity of metals Deduce the order of reactivity of metals Describe the extraction of aluminium and iron	Chapter 22
5	Inorganic Chemistry	Uses of metals Metals and Living Systems	Explain why metal alloys are used Relate properties of metals to their uses Investigate metal corrosion Explain the importance of metals on living systems Discuss the harmful effects of metals	Chapter 23

6	Inorganic Chemistry	Non-Metals	Describe physical and chemical properties of non-metals Describe laboratory preparation of gases Explain the uses of gases List the uses of non-metals and their compounds Discuss the harmful effects of non-metals	Chapters 24 - 26
7	Inorganic Chemistry	Non-metals	Relate the properties of water in living systems Discuss the solvent properties of water Describe water treatment	Chapter 27

8	Principles of Chemistry		***Investigative Project Implementation***	
9	Inorganic Chemistry	Green Chemistry	Define Green Chemistry Outline the principles of Green Chemistry	Chapter 26
10	Inorganic Chemistry	Qualitative Analysis	Identify cations Identify anions Identify gases ***Cations in solution*** ***Anions in solution*** ***Identification of Sample***	Chapter 25
11 - 13		Examinations	Pre-CSEC Exams	

Suggested lab activities in bold.