

**THE PRESIDENT’S OFFICE-
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**

SCHEME OF WORK

SCHOOL’S NAME: MWASAMBA SECONDARY SCHOOL

TEACHER'S NAME: MAHANDE MAGWALA MASUNGA

SUBJECT: CHEMISTRY

CLASS: FORM FOUR

TERM: 1st& 2nd TERM

YEAR: 2025

MAIN COMPETENCE	SPECIFIC COMPETENCE	TEACHING ACTIVITIES	MONTH	WEEK	PERIODS	REFERENCE	TEACHING/LEARNING TOOLS	ASSESSMENT TOOLS	REMARKS
NON METALS AND THEIR COMPOUNDS	1.1 General chemical properties of non metals	To prepare students to discuss the oxidizing properties of non metals as good electron acceptors	JANUARY	3RD	04	Tanzania Institute of Education (2022), Chemistry for Secondary Schools, Book four, TIE, DSM.	Chart of oxidation reactions of non metal	Homework	
		To demonstrate the displacement of non – metal by another non metal from a compound					Cl ₂ KI	Quiz	
	1.2 Chlorine	To lead students to discuss and make observations on the chemical properties of chlorine Demonstrate the oxidizing properties of chlorine					SO ₂ , H ₂ S FeCl ₂ , Dyes, Cl, coloured flowers	Assignment	
		To prepare students to discuss uses of chlorine					Chart of uses of Cl ₂	Quick test	
	1.3 Hydrogen Chloride	Prepare students prepare Hcl gas in the Laboratory using conc. H ₂ SO ₄ and NaCl.	4 TH		NaCl, NH ₄ ClConc. H ₂ SO ₄ ,HCl		Exercise		
		Lead a discussion on the uses of HCl gas.			Chart of the uses of HCl gas		Exercise		
	1.4 Sulphur	To prepare students to discuss the extraction of sulphur by the Frisch process	1 ST	12	Diagram of the industrial extraction of Sulphur		Quiz		
		Lead a discussion on the properties and uses of sulphur			2 ND		S, Cu, Fe, Conc H ₂ SO ₄ , K ₂ Cr ₂ O ₇	Oral questions Homework Assignment	
	1.5 Sulphur dioxide	To prepare students to discuss the uses properties and hazards of sulphur dioxide	3 RD		SO ₂ , NaOH, KMnO ₄ , FeCl ₂ , HNO ₃ H ₂ S, Mg, PbO		Quick test		
	1.6 Sulphuric acid	To prepare students to discuss the contact process for the manufacture of H ₂ SO ₄	4 TH	08	Chart of industrial manufacture of H ₂ SO ₄		Oral questions		
		To prepare students to discuss the properties and uses of H ₂ SO ₄			Mg, MgO, NaOH, conc H ₂ SO ₄ , C, CuSO ₄ , products		Homework		
	1.7 Nitrogen	Prepare students to prepare a sample of nitrogen gas in the laboratory and discuss its uses	MARCH APRIL	1 ST 2ND	08		Gas jar, Cu, conc. KOH, heat, flosses	Assignment	
	1.8 Ammonia	To demonstrate the preparation of dry sample of NH ₃ in the laboratory		3RD	04		Ca(OH) ₂ , NH ₄ Cl, CaO, litmus, conc. HCl	quiz	
		To prepare students to discuss the uses and properties of NH ₃ gas					HCl, CaO, O ₂ , NH ₃ , H ₂ O, and Litmus	Oral questions	

	1.9 Carbon	To lead students on the discussion on the forms in which carbon exists and allotropic forms of carbon		1ST	08		Egg shells CO ₃ ²⁻ , coal, graphite and Diamond	Homework	
	1.10 Carbon dioxide	To prepare students to prepare a dry CO ₂ gas in the laboratory		2ND			CaCO ₃ , HCl, Apparatus	Assignment	
		To lead students to observe and analyze the properties and uses of CO ₂					CO ₂ , Ca(OH) ₂ , Ba (OH) ₂ CaCO ₃ , Mg, H ₂ O	Test	

MID-TERM ASSESSMENT & MID-TERM BREAK (11/04/2025 - 21/04/2025)

ORGANIC CHEMISTRY	3.1Introduction to organic chemistry	To prepare students to compare organic chemistry with inorganic chemistry	APRIL	4 TH	04	Tanzania Institute of Education (2022), Chemistry for Secondary Schools, Book four, TIE, DSM. ❖ SCSU &MoEVT	Organic and inorganic compounds	Oral questions		
		To lead students to discuss the importance of organic chemistry					Samples of organic compounds	Oral questions		
		Prepare student to discuss the origin of organic compounds					Synthetic organic compounds	Homework		
		To prepare students to discuss the fractional distillation of crude oil					Chart of fractional distillation	Assignment		
	3.2 Hydrocarbons	Lead students to discuss the classification and homologous series of hydrocarbons	MAY	1 ST	08		Chart of classes and series of homologous of hydrocarbons	Test		
		To guide students to discuss on the Isomerism, Isomers, general formula of hydrocarbons.					Isomers of hydrocarbons	Quiz		
	3.3Properties of hydrocarbons	To prepare students to discuss on the physical properties, saturated/ unsaturated and chemical properties of hydrocarbons		2 ND	08		Chart of saturated or unsaturated and properties of hydrocarbons	Exercise		
	3.4Alcohols	To prepare students to discuss on the Lab. Prep. Of Ethanol, homologous series, structures of isomers properties of alcohol their uses and the harmful effects of alcohol		3rd & 4th			Charts of isomers, yeast, H ₂ O and sugar	Homework		
	3.5 Carboxylic acids	To prepare students to find out sources of acids, discuss on the oxidation of ethanol, homologous series, properties and soap preparation		08	NaOH, Na ₂ CO ₃ , NaHCO ₃ , acids and soap		Quiz			

TERMINAL ASSESSMENT & FIRST TERM BREAK (06/06/2025 - 07/07/205)

SOIL CHEMISTRY	3.1 Soil Formation	To prepare students to discuss the process soil formation and factors	JULY	2ND	08		Soil samples of different end types marble Dilute acid	Assignment	
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	3.2 Soil Reaction	To prepare students to discuss the concept of soil reaction, its causes, and effects to plant growth and how to measure pH of the soil. To guide students to manage the soil pH by liming.		3 RD	04		pH meter soil pH Kit samples of soil Liming material	Test		
	3.3Plant nutrients in the soil	prepare students to discuss on the microelements and macro elements		4 TH	04			Chart showing soil nutrients	Exercise	
	3.4Manure and fertilizers	prepare a discussion on * Preparation of composite manure * Advantages and elements of natural manure * Types of fertilizers. * Fertilizer grackles and analysis * <u>Methods of fertilizer application</u>						Samples of composite manure fertilizers (NPK, MSP, DSP, TSP Urea, CAN Superphosphate. Natural Manure	Homework	
	3.5Soil fertility and productivity	prepare students to discuss about the soil fertility and productivity						Samples or plots of soil fertile and productive soil.	Quiz	
4. POLLUTION	4.1 Concept of pollution	prepare students to discuss the meaning of pollution land give examples of pollution in real life situations	AUGUST	1 ST	04	TIE(2022), Chemistry for Secondary Schools, Book four, TIE, DSM.	Charts and pictures of pollution	Homework		
	4.2 Terrestrial pollution	prepare a discussion on; - Human activities which cause terrestrial pollution - Hazards caused by terrestrial pollution - Methods of preventing terrestrial pollution					Land pollution	Exercise		
	4.3 Aquatic pollution	prepare students to discuss on; - Human activities which cause water pollution - Hazards which are caused by water pollution - Ways of preventing water pollution		2 ND	04	Tanzania Institute of Education (2022), Chemistry for Secondary Schools, Book four, TIE, DSM.	Water pollution	Homework		
	4.4 Aerial pollution	Organize students to discuss on - Human activities causes aerial pollution - Hazards caused by air pollution - Methods of preventing air pollution Control/preventive measures of air pollution					Air pollution	Quiz		
	4.5 Environmental conservation	prepare students to - Discuss the meaning of environmental conservation. - Guide students to plant flowers and tree, clean the environment and conserve the environments		3 rd	04		Pictures of un-conserved and conserved environment	Assignment		
	4.6 Global warming	prepare a discussion on: - Meaning of global warming and green house effect - Green house gases - Climatic condition caused by global warming <u>Ways of preventing global warming</u>					Pictures to illustrate the green house effects, hurricanes, deserts floods	Test		
	4.7. O-zone layer Destruction	To discuss on: - Meaning and significance of the Ozone layer. - How ozone layer is destroyed - Protective methods of Ozone layer		4 TH	04		Charts illustrates Ozone layer destruction	Exercise		
	MID-TERM ASSESSMENT & MID-TERM BREAK (29/08/2025 - 14/09/2025)									
5. QUALITATIVE ANALYSIS	5.1 The concept of qualitative Analysis	To prepare a discuss on the meaning and importance of qualitative analysis in real life	SEPTEMBER	3 RD	04	Tanzania Institute of Education (2022), Chemistry for Secondary Schools, Book four, TIE, DSM.	Apparatus for a qualitative analysis	Homework		
	5.2 Qualitative analysis procedures	prepare students to practice the use of apparatus for qualitative analysis			4		Apparatus for qualitative analysis	Exercise Homework Quiz Assignment Test		

