COMPETENCE BASED CURRICULUM SCHEME OF WORK

TERM: ..1, 2024 SCHOOL: …… CLASS: ..S.4.. SUBJECT: …PHYSICS… TEACHER: …….

WEEK	PERIODS	THEME	TOPIC	SUB TOPIC	LEARNING AREA	COMPETENCY	LEARNING OUTCOME	METHODOLOGY	TEACHING AND LEARNING AID	COMMENT
1	06	ELECTRICITY	INTRODUCTION TO ELECTRICITY	CHEMICAL CELLS	• THE CONCEPT OF e.m.f. • CURRENT AND ITS MEASUREMENT. • SOURCES OF e.m.f AND CURRENT • SIMPLE CELLS • PRIMARY AND SECONDARY CELLS • APPLICATION OF CELLS • RECENT DEVELOPMENTS IN THE CELL INDUSTRY	LEARNERS SHOULD APPRECIATE THAT ELECTRIC CURRENT IS THE TRANSFER OF CHARGE THROUGH A CONDUCTOR, EITHER BY ELECTRONS OR IONS	THE LEARNER SHOULD BE ABLE TO: • UNDERSTAND WHAT e.m.f IS. • UNDERSTAND THAT CELLS CONVERT CHEMICAL ENERGY INTO ELECTRICAL ENERGY, PRODUCING CURRENT. • UNDRSTAND THAT A FORCE IS NEEDED TO DRIVE A CURRENT THROUGH A CIRCUIT. • UNDERSTAND THE NATURE OF ELECTRIC CURRENT, ITS SOURCES, WHAT MAKES IT TO FLOW AND HOW IT IS MEASURED. • KNOW THAT SOME MATERIALS ARE CONDUCTORS AND OTHERS ARE NON CONDUCTORS. • RECOGNISE, UNDERSTAND AND APPLY SERIES AND PARALLEL CIRCUITS. • APPRECIATE THAT CIRCUITS MAY BE REPRESENTED AS CIRCUIT DIAGRAMS.	• GROUP DISCUSSION • GROUP RESEARCH • QUESTION AND ANSWER • DEMONSTRATION • PROBLEM SOLVING • QUIZ • SIMULATION • OBSERVATION • ROLE PLAY • PROJECT • EXPERIMENTATION	• LIBRARY RESOURCE • PICTURES • PROJECTOR • DICTIONARY • MANILA PAPER • INTERNET • ACCUMULATOR • DRY CELLS • BEAKER • SULPHURIC ACID • CONNECTING WIRES • TORCH BULB • AMMETER • VOLTMETER	
2	06									
3	04			ELECTRICAL CIRCUITS	• CIRCUIT SYMBOLS. • CIRCUIT DIAGRAMS • OPEN AND CLOSED CIRCUITS					
	02	ACTIVITY OF INTEGRATION (INTRODUCTION TO ELECTRICITY)								
4	06	ELECTRICITY	VOLTAGE, RESISTANCE AND OHM'S LAW	VOLTAGE AND RESISTANCE	• MEANING OF VOLTAGE. • MEASUREMENT OF VOLTAGE. • THE CONCEPT OF RESISTANCE. • TYPES OF RESISTORS AND THEIR ARRANGEMENT IN CIRCUITS	THE SHOULD UNDERSTAND THE CONCEPT OF ELECTRICAL RESISTANCE AND APPLY OHM'S LAW	THE LEARNER SHOULD BE ABLE TO: • UNDERSTAND ELECTRICAL RESISTANCE, HOW IT IS MEASURED, FACTORS AFFECTING IT AND ITS RELATIONSHIP WITH CURRENT AND VOLTAGE. • KNOW THE FUNCTION AND USE OF A DIODE, TRANSISTOR, THERMISTER, LDR, LED AND POTENTIOMETER.	• GROUP DISCUSSION • GROUP RESEARCH • QUESTION AND ANSWER • DEMONSTRATION • PROBLEM SOLVING • QUIZ • SIMULATION • OBSERVATION • ROLE PLAY • PROJECT	• LIBRARY RESOURCE • PICTURES • PROJECTOR • DICTIONARY • MANILA PAPER • INTERNET • DRY CELLS • CONNECTING WIRES • AMMETER • VOLTMETER • RESISTORS	
5	06									
6	06			OHM'S LAW	• STATEMENT OF OHM'S LAW. • INVESTIGATION OF OHM'S LAW					
7	04			DIODES, TRASISTORS, THERMISTERS, LDR, LED AND POTENTIOMETER	IMPORTANCE OF DIODES, TRASISTORS, THERMISTERS, LDR, LED AND POTENTIOMETER IN A CIRCUIT.					
	02	ACTIVITY OF INTEGRATION (VOLTAGE, RESISTANCE AND OHM'S LAW)								

WEEK	PERIODS	THEME	TOPIC	SUB TOPIC	LEARNING AREA	COMPETENCY	LEARNING OUTCOME	METHODOLOGY	TEACHING AND LEARNING AID	COMMENT
8	O6	MAGNETISM	ELECTROMAGNETIC EFFECTS	ELECTRIC EFFECT OF MAGNETS	• FORCE ON A CURRENT CARRYING CONDUCTOR IN A MAGNETIC FIELD • FACTORS AFFECTING THE MAGNITUDE OF THE FORCE • APPLICATIONS: -SIMPLE D.C MOTOR -MOVING COIL GALVANOMETER -MOVING COIL LOUDSPEAKERS	THE LEARNER SHOULD KNOW AND UNDERSTAND HOW MAGNETIC FIELDS INTERACT WITH ELECTRIC FIELDS AND THE APPLICATIONS OF THIS PHENOMENON	THE LEANER SHOULD BE ABLE TO: • INVESTIGATE THE BEHAVIOUR OF MAGNETS AND MAGNETIC FIELDS • UNDERSTAND THAT A CURRENT CARRYING CONDUCTOR PRODUCES A MAGNETIC FIELD THAT CAN BE DETECTED • UNDERSTAND THE APPLICATION OF ELECTROMAGNETS IN DEVICES SUCH AS MOTORS, BELLS AND GENERATORS • UNDERSTAND THE DIFFERENCE BETWEEN A.C AND D.C • KNOW HOW A.C AND D.C CAN BE INTERCONVERTED USING INVERTERS AND RECTIFIERS • UNDERSTAND THE ACTION AND APPLICATION OF TRANSFORMERS	• GROUP DISCUSSION • GROUP RESEARCH • QUESTION AND ANSWER • DEMONSTRATION • PROBLEM SOLVING • QUIZ • SIMULATION • OBSERVATION • ROLE PLAY • PROJECT	• LIBRARY RESOURCE • PICTURES • PROJECTOR • DICTIONARY • MANILA PAPER • INTERNET • IRON NAIL • CAMPASS NEEDLE • BAR MAGNETS • CONNECTING WIRES • SIMPLE MOTOR • SMALL LOUD SPEAKER • BELL	
9	06									
10	06			ELECTROMAGNETIC INDUCTION	• THE PRINCIPLE OF ELECTRO-MAGNETIC INDUCTION. • FARADAY'S AND LENZ'S LAWS • FACTORS AFFECTING THE MAGNITUDE OF THE INDUCED EMF. • SIMPLE A.C AND D.C GENERATORS • THE TRANSFORMER. • CONVERSION OF A.C TO D.C.. • ADVANTAGES AND DISADVANTAGES OF A.C. OVER D.C.					
11	04									
	02	ACTIVITY OF INTEGRATION (MEASUREMENT IN PHYSICS)								
12		END OF TERM 1 ASSESSMENT								

REFERENCE:

1. **A.F. ABBOT (1989), PHYSICS, 5TH EDITION HEINEMAN EDUCATIONAL PUBLISHERS, ENGLAND.**
2. **ATIKINSON A (1993), COMPLETE JUNIOR PHYSICS, INTERNATIONAL EDITION, LONGMAN PUBLISHERS.**
3. **JOHN AVISION (1985), THE WORLD OF PHYSICS, THOMAS NELSON AND SONS, UK.**
4. **TOM DUNCAN (2011), PHYSICS FOR TODAY AND TOMORROW, HODDER EDUCATION, UK.**
5. **L.E FOLIVI AND A GODMAN (1992), NEW CERTIFICATE PHYSICS, NEW EDITION, LONGMAN, ENGLAND.**
6. **NCDC REFERENCE BOOKS FOR THE COMPETENCE BASED CURRICULUM (S.4 LEANERS' BOOKS AND S.4 TEACHER' S GUIDES).**
7. **NELKON M (1990) PRINCIPLES PF PHYSICS, 8TH EDITION, LONGMAN PUBLISHERS**
8. **NEW LOWER SECONDARY CURRICULUM PHYSICS SYLLABUS.**
9. **WIKIPEDIA ONLINE ENCYCLOPEDIA**
10. **https://digitalteaccers.co.ug.**
11. **https://etutoring.gayazahs.sc.ug.**
12. **https://researchguides.case.edu/physics.**
13. **https://scienceeducatorsuganda.com.**

PREPARED BY; **APPROVED BY;**

……. **…….** **……..**

SUBJECT TEACHER **HOD** **DOS**