

COMPETENCE BASED ASSESSMENT CHEMISTRY PRACTICAL WORK BOOK

“SCENARIO BASED PRACTICAL GUIDE”

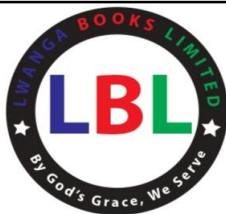
BASED ON THE NEW LOWER SECONDARY CURRICULUM

By



NAME: _____ CLASS: _____

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Table of contents

Preface.....	I
Acknowledgement.....	II
Introduction To CBA Chemistry Practicals.....	1
Indicators For Chemistry Scientific Investigations.....	3
Chemistry Practical Scoring Guide.....	12
Worked Out Scenario Items.....	14
Rates Of Chemical Reactions.....	44
Concentration On The Rate Of Reaction Items.....	47
Temperature On The Rate Of Reaction Items.....	65
Catalyst On The Rate Of Reaction Items.....	74
Thermo-Chemistry/Energy Changes/Enthalpy Changes.....	80
Enthalpy Of Solution Items.....	82
Enthalpy Of Neutralization Items.....	97
Reactivity Series/Displacement Reactions Items.....	109
Soap And Hard Water Items.....	119

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Preface

This Competence Based Assessment Chemistry Practical Work Book has been written to satisfactorily meet the demand of learners going through the Competency Based Curriculum at the New Ordinary Level in Preparation for their excellence in Uganda Certificate of Education {UCE} chemistry practical examination. It will also be helpful to teachers especially those who want to familiarize them selves with the new assessment of chemistry practicals in the new curriculum.

This practical work book consists of concise and precise notes in simple language and several examinable items intended to reinforce and test the understanding of basic chemistry skills, all based on the requirement of the new chemistry syllabus and encompasses all that is required for ordinary learners.

Teachers in various schools will have to provide learners with necessary chemical reagents and apparatus required so as they can navigate through all the practical items in this work book.

Proper utilization of this work book by learners will obviously make practical examinations easier to handle and enjoyable.

Lwanga Books Ltd feels confident that this Book will be of immense value to both the learners and the teachers.

Any suggestions for improvement of this book are most welcomed, thanks.

“It is not what We do for you but what We will teach you to do for and by yourselves that will eventually make you successful beings in the society”

Acknowledgement

Lwanga Books Limited is deeply indebted to all those who participated in the development of **Lwanga William S1-S4 Competence Based Assessment Chemistry Practical Work Book**.

Special thanks go to **Mr. Lwanga William**, CEO of Lwanga Books Ltd for his valuable insights and advice on all publishing matters.

We would like to express our sincere appreciation to all those who worked tirelessly towards the production of this CBA Chemistry Practical Work Book. First and foremost, we would like to thank our families and friends for supporting all our initiatives both financially and spiritually, Lwanga William's parents; **Mr. William Lwanga** and **Mrs. Harriet Lwanga**, his brother; Mr. Nsubuga Grace.

The initiative and guidance of the publishing partners, Ministry of Education and Sports (MoES) and National Curriculum Development Centre (NCDC) in development and implementation of the New Lower Secondary Curriculum are highly appreciated.

We thank God for the wisdom He has given us to produce this volume of work. May the Almighty God bless all the students that will use this book with knowledge to encounter all CBA Scenario Items incorporated in this Competence Based Assessment Chemistry Practical Work Book.....**AMEN**. We welcome any suggestions for improvement to continue making our service delivery better.

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Introduction to Competence Based Assessment Chemistry

Practicals

The Competence Based chemistry Assessment has two papers that is, 545/1(theory paper) and 545/2&3(practical paper).

In this guide, we are to focuss more on the practical paper.

CBA chemistry practical paper will comprise of *one compulsory* examination scenario item *coded* out of **24**. The duration of the paper will be strictly **two(2) hours**.

Only drawings and graphs should be done in pencil. Use **sharp pencils** for your drawings and graphs. Coloured pencils or crayons should **not** be used.

Answers to the item must be written only in the spaces provided.

❖ **RECALL: TAXONOMY OF THE PSYCHOMOTOR DOMAIN**

Level	Description of major categories	Illustrative verbs
1	Imitation-early stages in learning a complex skill	Assemble, attempt, calibrate, construct, dissect, repeat, sketch, and try.
2	Manipulation-individual continues to practice a given skill	Same as above- add acquire, complete, conduct, execute, operate, perform, manipulate
3	Precision- skill has been attained	Conduct, execute, operate, refine
4	Articulation-Involve a higher level of precision. Skills are well developed	Adapt, alter, revise, re-arrange
5	Naturalization- response is automatic. Individual begins to experiment, creating new ways of manipulating material.	Arrange, combine, construct, create design, refine

Task:

The task is mainly to carry out a scientific investigation on the issue at hand (based on scenario given) and therefore the learner's write up (report) must include the following:

- ✓ Aim
- ✓ Hypothesis
- ✓ Variables

- ✓ Apparatus and Materials
- ✓ Procedure(s)
- ✓ Risks and mitigations
- ✓ Presentation and recording of data
- ✓ Data Analysis and interpretation
- ✓ Conclusion and recommendations

STRUCTURE OF CHEMISTRY PAPER 2 &3

This is a practical paper for the NLSC Chemistry and it focuses on one element of construct.

This is element 5: *The learner understands that chemistry is a process of evidence-based enquiry involving collection of evidence and the development of theories that help us explain the evidence (science process skills)*

The paper has one examination item. The Item aims at scientific investigations.

The learner is required to design, perform an investigation, write a report and make conclusions basing on what he/she has performed.

The Item assesses the followings;

1. Rates of chemical reactions

- ✧ Effect of concentration on the rate of reaction
- ✧ Effect of temperature on the rate of reaction
- ✧ Effect of catalyst on the rate of reaction

2. Thermo-chemistry/Energy changes during chemical reactions/Enthalpy changes

- ✧ Heat of solution
- ✧ Heat of neutralization

3. Reactivity series/Displacement reactions

4. Soapy detergents and hard water

Note: Volumetric analysis is there inform of chemical kinetics, thermochemistry but not as titration. Other investigations from other areas as indicated in the syllabus can be examined but the above mentioned areas capture the attention and interest of UNEB item developers/ setters and examiners.

Indicators For Chemistry Scientific Investigation

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