

MANAGEMENT ACCOUNTING

ACCOUNTING PROFESSION OPTION

for Rwandan Schools

Senior

4

Teacher's Guide

Experimental Version

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FOREWORD

Dear Teachers,

Rwanda Basic Education Board is honoured to present the teacher's guide for Management accounting in the Accounting Profession Option. This book serves as a guide to competence-based teaching and learning to ensure consistency and coherence in the learning of the Management Accounting Subject. The Rwandan educational philosophy is to ensure that students achieve full potential at every level of education which will prepare them to be well integrated in society and exploit employment opportunities.

Specifically, the curriculum for Accounting Profession Option was reviewed to train quality Accountant Technicians who are qualified, confident and efficient for job opportunities and further studies in Higher Education in different programs under accounting career advancement.

In line with efforts to improve the quality of education, the government of Rwanda emphasizes the importance of aligning teaching and learning materials with the syllabus to facilitate their learning process. Many factors influence what students learn, how well they learn and the competences they acquire. Those factors include the relevance of the specific content, the quality of teachers' pedagogical approaches, the assessment strategies and the instructional materials.

High Quality Technician Accounting program is an important component of Finance and Economic development of the Rwanda Vision 2050, "The Rwanda We Want" that aims at transforming the country's socioeconomic status. The qualified Technicians accountant will significantly play a major role in the mentioned socioeconomic transformation journey. Management accounting textbooks and teacher's guide were elaborated to provide the accounting operations and equations that are necessary to train a Technician Accountant capable of successfully perform his/her duties.

The ambition to develop a knowledge-based society and the growth of regional and global competition in the jobs market has necessitated the shift to a competence-based curriculum.

The Management accounting teacher's guide provides active teaching and learning techniques that engage students to develop competences. In view of this, your role as a Management accounting teacher is to:

- Plan your lessons and prepare appropriate teaching materials.
- Organize group discussions for students considering the importance of social constructivism suggesting that learning occurs more effectively

- when the students works collaboratively with more knowledgeable and experienced people.
- Engage students through active learning methods such as inquiry methods, group discussions, research, investigative activities and group or individual work activities.
 - Provide supervised opportunities for students to develop different competences by giving tasks which enhance critical thinking, problem solving, research, creativity and innovation, communication and cooperation.
 - Support and facilitate the learning process by valuing students' contributions in the class activities.
 - Guide students towards the harmonization of their findings.
 - Encourage individual, pair and group evaluation of the work done in the classroom and use appropriate competence-based assessment approaches and methods.

To facilitate you in your teaching activities, the content of this book is self-explanatory so that you can easily use it. It is divided in 3 parts:

The part I explains the structure of this book and gives you the methodological guidance;

The part II gives a sample lesson plan;

The part III details the teaching guidance for each concept given in the student book.

Even though this Teacher's guide contains the guidance on solutions for all activities given in the student's book, you are requested to work through each question before judging student's findings.

I wish to sincerely express my appreciation to the people who contributed towards the development of this book, particularly, REB staff, UR Lecturers, Teachers from TTC and General Education and experts from different Education partners for their technical support. A word of gratitude goes also to the administration of Universities, Head Teachers and TTCs principals who availed their staff for various activities.

Dr. MBARUSHIMANA Nelson

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PART I. GENERAL INTRODUCTION

1.1 The structure of the guide

The teacher's guide of Management accounting is composed of three parts:

The Part I concerns general introduction that discusses methodological guidance on how best to teach and learn Management accounting, developing competences in teaching and learning, addressing cross-cutting issues in teaching and learning and Guidance on assessment.

Part II presents a sample lesson plan. This lesson plan serves to guide the teacher on how to prepare a lesson in Management accounting.

The Part III is about the structure of a unit and the structure of a lesson. This includes information related to the different components of the unit and these components are the same for all units. This part provides information and guidelines on how to facilitate students while working on learning activities. More other, all application activities from the textbook have answers in this part.

1.2 Methodological guidance

1.2.1 Developing competences

Since 2015 Rwanda shifted from a knowledge based to a competence-based curriculum for pre-primary, primary, secondary education and recently the curriculum for profession options such as TTC, Associate Nurse and Accounting programs. This called for changing the way of learning by shifting from teacher centred to a learner centred approach. Teachers are not only responsible for knowledge transfer but also for fostering students' learning achievement and creating safe and supportive learning environment. It implies also that students have to demonstrate what they are able to transfer the acquired knowledge, skills, values and attitude to new situations.

The competence-based curriculum employs an approach of teaching and learning based on discrete skills rather than dwelling on only knowledge or the cognitive domain of learning. It focuses on what learner can do rather than what learner knows. Students develop competences through subject unit with specific learning objectives broken down into knowledge, skills and attitudes/values through learning activities.

In addition to the competences related to Management accounting, students also develop generic competences which should promote the development of the higher order thinking skills and professional skills in Management

accounting teaching. Generic competences are developed throughout all units of Management accounting as follows:

Generic competences	Ways of developing generic competences
Critical thinking	All activities that require students to calculate, convert, interpret, analyse, compare and contrast, etc. have a common factor of developing critical thinking into students
Creativity and innovation	All activities that require students to plot a graph of a given algebraic data, to organize and interpret statistical data collected and to apply skills in solving problems of production/ finance/ economic have a common character of developing creativity into students
Research and problem solving	All activities that require students to make a research and apply their knowledge to solve problems from the real-life situation have a character of developing research and problem solving into students.
Communication	During Mathematics class, all activities that require students to discuss either in groups or in the whole class, present findings, debate ...have a common character of developing communication skills into students.
Co-operation, interpersonal relations and life skills	All activities that require students to work in pairs or in groups have character of developing cooperation and life skills among students.

Lifelong learning	All activities that are connected with research have a common character of developing into students a curiosity of applying the knowledge learnt in a range of situations. The purpose of such kind of activities is for enabling students to become life-long students who can adapt to the fast-changing world and the uncertain future by taking initiative to update knowledge and skills with minimum external support.
Professional skills	Specific instructional activities and procedures that a teacher may use in the class room to facilitate, directly or indirectly, students to be engaged in learning activities. These include a range of teaching skills: the skill of questioning, reinforcement, probing, explaining, stimulus variation, introducing a lesson; illustrating with examples, using blackboard, silence and non-verbal cues, using audio – visual aids, recognizing attending behaviour and the skill of achieving closure.

The generic competences help students deepen their understanding of Management accounting and apply their knowledge in a range of situations. As students develop generic competences they also acquire the set of skills that employers look for in their employees, and so the generic competences prepare students for the world of work.

1.2.2 Addressing cross cutting issues

Among the changes brought by the competence-based curriculum is the integration of cross cutting issues as an integral part of the teaching learning process-as they relate to and must be considered within all subjects to be appropriately addressed. The eight cross cutting issues identified in the national curriculum framework are: Comprehensive Sexuality Education, Environment and Sustainability, Financial Education, Genocide studies, Gender, Inclusive Education, Peace and Values Education, and Standardization Culture.

Some cross-cutting issues may seem specific to particular learning areas/ subjects but the teacher need to address all of them whenever an opportunity arises. In addition, students should always be given an opportunity during the learning process to address these cross-cutting issues both within and out of the classroom.

Below are examples of how crosscutting issues can be addressed:

Cross-Cutting Issue	Ways of addressing cross-cutting issues
<p>Comprehensive Sexuality Education: The primary goal of introducing Comprehensive Sexuality Education program in schools is to equip children, adolescents, and young people with knowledge, skills and values in an age appropriate and culturally gender sensitive manner so as to enable them to make responsible choices about their sexual and social relationships, explain and clarify feelings, values and attitudes, and promote and sustain risk reducing behaviour.</p>	<p>Using different charts and their interpretation, Management accounting teacher should lead students to discuss the following situations: “Alcohol abuse and unwanted pregnancies” and advise students on how they can fight against them.</p> <p>Some examples can be given when learning, recruitment process and the related graphical interpretation.</p>
<p>Environment and Sustainability: Integration of Environment, Climate Change and Sustainability in the curriculum focuses on and advocates for the need to balance economic growth, society well-being and ecological systems. Students need basic knowledge from the natural sciences, social sciences, and humanities to understand to interpret principles of sustainability.</p>	<p>Using Real life models or students’ experience, Management accounting Teachers should lead students to illustrate the situation of “population growth” and discuss its effects on the environment and sustainability.</p>

<p>Financial Education: The integration of Financial Education into the curriculum is aimed at a comprehensive Financial Education program as a precondition for achieving financial inclusion targets and improving the financial capability of Rwandans so that they can make appropriate financial decisions that best fit the circumstances of one's life.</p>	<p>Through different examples and calculations on labour payment (wages and salaries), cost sheet problems, and total cost, Management accounting teacher can lead students to discuss how to make appropriate financial decisions.</p>
<p>Gender: At school, gender will be understood as family complementarities, gender roles and responsibilities, the need for gender equality and equity, gender stereotypes, gender sensitivity, etc.</p>	<p>Management accounting Teachers should address gender as cross-cutting issue through assigning leading roles in the management of groups to both girls and boys and providing equal opportunity in the lesson participation and avoid any gender stereotype in the whole teaching and learning process.</p>
<p>Inclusive Education: Inclusion is based on the right of all students to a quality and equitable education that meets their basic learning needs and understands the diversity of backgrounds and abilities as a learning opportunity.</p>	<p>Firstly, Management accounting teachers need to identify/ recognize students with special needs. Then by using adapted teaching and learning resources while conducting a lesson and setting appropriate tasks to the level of students, they can cater for students with special education needs. They must create opportunity where students can discuss how to cater for students with special educational needs.</p>

<p>Peace and Values Education: Peace and Values Education (PVE) is defined as education that promotes social cohesion, positive values, including pluralism and personal responsibility, empathy, critical thinking and action in order to build a more peaceful society.</p>	<p>Through a given lesson, a teacher should:</p> <ul style="list-style-type: none"> ▪ Set a learning objective which is addressing positive attitudes and values, ▪ Encourage students to develop the culture of tolerance during discussion and to be able to instil it in colleagues and cohabitants; ▪ Encourage students to respect ideas from others.
<p>Standardization Culture: Standardization Culture in Rwanda will be promoted through formal education and plays a vital role in terms of health improvement, economic growth, industrialization, trade and general welfare of the people through the effective implementation of Standardization, Quality Assurance, Metrology and Testing.</p>	<p>With different word problems related to the effective implementation of Standardization, Quality Assurance, Metrology and Testing, students can be motivated to be aware of health improvement, economic growth, industrialization, trade and general welfare of the people.</p>

1.2.3 Guidance on how to help students with special education needs in classroom

In the classroom, students learn in different way depending to their learning pace, needs or any other special problem they might have. However, the teacher has the responsibility to know how to adopt his/her methodologies and approaches in order to meet the learning need of each student in the classroom. Also teachers need to understand that student with special needs, need to be taught differently or need some accommodations to enhance the learning environment. This will be done depending to the subject and the nature of the lesson.

In order to create a well-rounded learning atmosphere, teachers need to:

- Remember that students learn in different ways so they have to offer a variety of activities (e.g. role-play, music and singing, word games and quizzes, and outdoor activities);

- Maintain an organized classroom and limits distraction. This will help students with special needs to stay on track during lesson and follow instruction easily;
- Vary the pace of teaching to meet the needs of each student. Some students process information and learn more slowly than others;
- Break down instructions into smaller, manageable tasks. Students with special needs often have difficulty understanding long-winded or several instructions at once. It is better to use simple, concrete sentences in order to facilitate them understand what you are asking.
- Use clear consistent language to explain the meaning (and demonstrate or show pictures) if you introduce new words or concepts;
- Make full use of facial expressions, gestures and body language;
- Pair a student who has a disability with a friend. Let them do things together and learn from each other. Make sure the friend is not over protective and does not do everything for the one with disability. Both students will benefit from this strategy;
- Use multi-sensory strategies. As all students learn in different ways, it is important to make every lesson as multi-sensory as possible. Students with learning disabilities might have difficulty in one area, while they might excel in another. For example, use both visual and auditory cues.
- Below are general strategies related to each main category of disabilities and how to deal with every situation that may arise in the classroom. However, the list is not exhaustive because each student is unique with different needs and that should be handled differently.

Strategy to help students with developmental impairment:

- Use simple words and sentences when giving instructions;
- Use real objects that students can feel and handle. Rather than just working abstractly with pen and paper;
- Break a task down into small steps or learning objectives. The student should start with an activity that she/he can do already before moving on to something that is more difficult;
- Gradually give the student less help;
- Let the student with disability work in the same group with those without disability.

Strategy to help students with visual impairment:

- Help students to use their other senses (hearing, touch, smell and taste) and carry out activities that will promote their learning and development;
- Use simple, clear and consistent language;
- Use tactile objects to help explain a concept;

- If the student has some sight, ask him/her what he/she can see;
- Make sure the student has a group of friends who are helpful and who allow him/her to be as independent as possible;
- Plan activities so that students work in pairs or groups whenever possible;

Strategy to help students with hearing disabilities or communication difficulties

- Always get the student's attention before you begin to speak;
- Encourage the student to look at your face;
- Use gestures, body language and facial expressions;
- Use pictures and objects as much as possible.
- Keep background noise to a minimum.

Strategies to help students with physical disabilities or mobility difficulties:

- Adapt activities so that students who use wheelchairs or other mobility aids, can participate.
- Ask parents/caregivers to assist with adapting furniture e.g. the height of a table may need to be changed to make it easier for a student to reach it or fit their legs or wheelchair under;
- Encourage peer support when needed;
- Get advice from parents or a health professional about assistive devices if the student has one.

Adaptation of assessment strategies:

At the end of each unit, the teacher is advised to provide additional activities to help students achieve the key unit competence. These assessment activities are for remedial, consolidation and extension designed to cater for the needs of all categories of students; slow, average and gifted students respectively. Therefore, the teacher is expected to do assessment that fits individual students.

Remedial activities	<p>After evaluation, slow students are provided with lower order thinking activities related to the concepts learnt to facilitate them in their learning.</p> <p>These activities can also be given to assist deepening knowledge acquired through the learning activities for slow students.</p>
Consolidation activities	<p>After introduction of any concept, a range number of activities can be provided to all students to enhance/ reinforce learning.</p>
Extended activities	<p>After evaluation, gifted and talented students can be provided with high order thinking activities related to the concepts learnt to make them think deeply and critically. These activities can be assigned to gifted and talented students to keep them working while other students are getting up to required level of knowledge through the learning activity.</p>

1.2.4. Guidance on assessment

Assessment is an integral part of teaching and learning process. The main purpose of assessment is for improvement of learning outcomes. Assessment for learning/ Continuous/ formative assessment intends to improve students' learning and teacher's teaching whereas assessment of learning/summative assessment intends to improve the entire school's performance and education system in general.

Continuous/ formative assessment

It is an on-going process that arises during the teaching and learning process. It includes lesson evaluation and end of sub unit assessment. This formative assessment should play a big role in teaching and learning process. The teacher should encourage individual, pair and group evaluation of the work done in the classroom and uses appropriate competence-based assessment approaches and methods.

Formative assessment is used to:

- Determine the extent to which learning objectives are being achieved and competences are being acquired and to identify which students need remedial interventions, reinforcement as well as extended activities. The application activities are developed in the student book and they are designed to be given as remedial, reinforcement, end lesson assessment, homework or assignment
- Motivate students to learn and succeed by encouraging students to read, or learn more, revise, etc.
- Check effectiveness of teaching methods in terms of variety, appropriateness, relevance, or need for new approaches and strategies. Mathematics teachers need to consider various aspects of the instructional process including appropriate language levels, meaningful examples, suitable methods and teaching aids/ materials, etc.
- Help students to take control of their own learning.

In teaching Mathematics, formative or continuous assessment should compare performance against instructional objectives. Formative assessment should measure the student's ability with respect to a criterion or standard. For this reason, it is used to determine what students can do, rather than how much they know.

Summative assessment

The assessment can serve as summative and informative depending to its purpose. The end unit assessment will be considered summative when it is done at end of unit and want to start a new one.

It will be formative assessment, when it is done in order to give information on the progress of students and from there decide what adjustments need to be done.

The assessment done at the end of the term, end of year, is considered as summative assessment so that the teacher, school and parents are informed of the achievement of educational objective and think of improvement strategies. There is also end of level/ cycle assessment in form of national examinations.

When carrying out assessment?

Assessment should be clearly visible in lesson, unit, term and yearly plans.

- Before learning (diagnostic): At the beginning of a new unit or a section of work; assessment can be organized to find out what students already know / can do, and to check whether the students are at the same level.

- During learning (formative/continuous): When students appear to be having difficulty with some of the work, by using on-going assessment (continuous). The assessment aims at giving students support and feedback.
- After learning (summative): At the end of a section of work or a learning unit, the Management accounting Teacher has to assess after the learning. This is also known as Assessment of Learning to establish and record overall progress of students towards full achievement. Summative assessment in Rwandan schools mainly takes the form of written tests at the end of a learning unit or end of the month, and examinations at the end of a term, school year or cycle.

Instruments used in assessment.

- **Observation:** This is where the Mathematics teacher gathers information by watching students interacting, conversing, working, playing, etc. A teacher can use observations to collect data on behaviours that are difficult to assess by other methods such as attitudes, values, and generic competences and intellectual skills. It is very important because it is used before the lesson begins and throughout the lesson since the teacher has to continue observing each and every activity.
- **Questioning**
 - a) Oral questioning: a process which requires a student to respond verbally to questions
 - b) Class activities/ exercise: tasks that are given during the learning/ teaching process
 - c) Short and informal questions usually asked during a lesson
 - d) Homework and assignments: tasks assigned to students by their teachers to be completed outside of class.

Homework assignments, portfolio, project work, interview, debate, science fair are the different forms/instruments of assessment.

1.2.5. Teaching methods and techniques that promote active learning

The different learning styles for students can be catered for, if the teacher uses active learning whereby students are really engaged in the learning process.

The main teaching methods used in Management accounting are the following:

- **Dogmatic method** (the teacher tells the students what to do, What to observe, How to attempt, How to conclude)

- **Inductive-deductive method:** Inductive method is to move from specific examples to generalization and deductive method is to move from generalization to specific examples.
- **Analytic-synthetic method:** Analytic method proceeds from unknown to known, 'Analysis' means 'breaking up' of the problem in hand so that it ultimately gets connected with something obvious or already known. Synthetic method is the opposite of the analytic method. Here one proceeds from known to unknown.
- **Skills lab method:** Skills lab method is based on the maxim "learning by doing." It is a procedure for stimulating the activities of the students and to encourage them to make discoveries through practical activities.
- Problem solving method, Project method and Seminar Method.

The following are some active techniques to be used in Management accounting:

- Group work
- Research
- Probing questions
- Practical activities (drawing, plotting, interpreting graphs)
- Modelling
- Brainstorming
- Quiz Technique
- Discussion Technique
- Scenario building Technique

What is Active learning?

Active learning is a pedagogical approach that engages students in doing things and thinking about the things they are doing. Students play the key role in the active learning process. They are not empty vessels to fill but people with ideas, capacity and skills to build on for effective learning. Thus, in active learning, students are encouraged to bring their own experience and knowledge into the learning process.

The role of the teacher in active learning	The role of students in active learning
<ul style="list-style-type: none"> - The teacher engages students through active learning methods such as inquiry methods, group discussions, research, investigative activities, group and individual work activities. - He/she encourages individual, peer and group evaluation of the work done in the classroom and uses appropriate competence-based assessment approaches and methods. - He provides supervised opportunities for students to develop different competences by giving tasks which enhance critical thinking, problem solving, research, creativity and innovation, communication and cooperation. - Teacher supports and facilitates the learning process by valuing students' contributions in the class activities. 	<p>A learner engaged in active learning:</p> <ul style="list-style-type: none"> - Communicates and shares relevant information with fellow students through presentations, discussions, group work and other learner-centred activities (role play, case studies, project work, research and investigation); - Actively participates and takes responsibility for his/her own learning; - Develops knowledge and skills in active ways; - Carries out research/investigation by consulting print/online documents and resourceful people, and presents their findings; - Ensures the effective contribution of each group member in assigned tasks through clear explanation and arguments, critical thinking, responsibility and confidence in public speaking - Draws conclusions based on the findings from the learning activities.

Main steps for a lesson in active learning approach

All the principles and characteristics of the active learning process highlighted above are reflected in steps of a lesson as displayed below. Generally, the lesson is divided into three main parts whereby each one is divided into smaller steps to make sure that students are involved in the learning process. Below are those main part and their small steps:

1. Introduction

Introduction is a part where the teacher makes connection between the current and previous lesson through appropriate technique. The teacher opens short discussions to encourage students to think about the previous learning experience and connect it with the current instructional objective. The teacher reviews the prior knowledge, skills and attitudes which have a link with the new concepts to create good foundation and logical sequencings.

2. Development of the new lesson

The development of a lesson that introduces a new concept will go through the following small steps: discovery activities, presentation of students' findings, exploitation, synthesis/summary and exercises/application activities.

* Discovery activity

Step 1:

- The teacher discusses convincingly with students to take responsibility of their learning
- He/she distributes the task/activity and gives instructions related to the tasks (working in groups, pairs, or individual to prompt /instigate collaborative learning, to discover knowledge to be learned)

Step 2:

- The teacher let students work collaboratively on the task;
- During this period the teacher refrains to intervene directly on the knowledge;
- He/she then monitors how the students are progressing towards the knowledge to be learned and boosts those who are still behind (but without communicating to them the knowledge).

* Presentation of students' findings/productions

- In this part, the teacher invites representatives of groups to present their productions/findings.
- After three/four or an acceptable number of presentations, the teacher decides to engage the class into exploitation of students' productions.

* Exploitation of students' findings/ productions

- The teacher asks students to evaluate the productions: which ones are correct, incomplete or false

- Then the teacher judges the logic of the students' products, corrects those which are false, completes those which are incomplete, and confirms those which are correct.
- Institutionalization or harmonization (summary/conclusion/ and examples)
- The teacher summarizes the learned knowledge and gives examples which illustrate the learned content.

*** Application activities**

- Exercises of applying processes and products/objects related to learned unit/sub-unit
- Exercises in real life contexts
- Teacher guides students to make the connection of what they learnt to real life situations.
- At this level, the role of teacher is to monitor the fixation of process and product/object being learned.

3. Assessment

In this step the teacher asks some questions to assess achievement of instructional objective. During assessment activity, students work individually on the task/activity. The teacher avoids intervening directly. In fact, results from this assessment inform the teacher on next steps for the whole class and individuals. In some cases, the teacher can end with a homework/ assignment. Doing this will allow students to relay their understanding on the concepts covered that day. Teacher leads them not to wait until the last minute for doing the homework as this often results in an incomplete homework set and/or an incomplete understanding of the concept.

PART II: SAMPLE LESSON

School Name: X Teacher's name: Y

Term	Date	Subject	Class	Unit No	Lesson No	Duration	Class size
.....	.../.....	Management accounting	S4	6	4 of 6	80 min	25 students
Type of Special Educational Needs to be catered for in this lesson and number of learners in each category				Two (2) students have hearing impairment. Those two students with hearing impairment will sit in front, and use hearing materials.			
Unit title		Labor management					
Key Unit Competence:		Calculate labor payment					
Title of the lesson		Bonus schemes					
Instructional Objective		All students should be able to calculate the bonus scheme accurately according to Halsey in 15 minutes.					
Plan for this Class (location: in / outside)		Inside the class Student will sit in U shape					
Learning Materials (for all learners)		Basic materials for a class/ lesson to be conducted: students' books, teacher's guide, internet and projector, text books, calculator, pen, chalkboard, chalks, manila paper, marker pens, image, resourceful person and any other trustworthy and reliable resources to enhance learning.					
References		J. MADEGOWDA, p. (2007). COST ACCOUNTING (Elements of cost and methods of Costing. Mumbai -400 004.: Mrs. Meena Pandey for HIMALAYA PUBLISHING HOUSE, <Ramdoot>, Dr Bhalerao Marg, Grgaon.					

Timing for each step	Description of teaching and learning activity		Generic competences and cross cutting issues to be addressed + a short explanation
	Teacher activities	Students activities	
	<p>Students are organized into small groups and provided by clear instructions to discuss and work out the activity 6.4. The group members present their findings and teacher facilitates students to capture the key concepts of the lesson through harmonization.</p> <p>Teacher use various probing questions to guide students to explore examples and content related to bonus scheme according to Halsey</p> <p>Finally, the Students are assigned to individual tasks / application activity 6.4 and the collective correction is done on the chalk board.</p>		
1. Introduction 10 min	<p>Greets students.</p> <p>Checks the attendance.</p> <p>Check the proper sitting arrangement, more specially the student with hearing impairment.</p> <p>Asks students questions about studied methods of computing wages and salary.</p>	<p>Greet the teacher.</p> <p>Inform the teacher how many students are absent and why.</p> <p>Sit in their respective places and the ones with hearing impairment sit in front.</p> <p>Individually students answer questions by saying the two studied methods used to compute wages and salary: Time rate method and piecework ticket method. And say how they are used.</p>	<p>Communication: This will be addressed through answering questions orally. It will also be developed through listening from each other.</p> <p>Critical thinking: While brainstorming they will be developing critical thinking.</p> <p>Inclusive education: Will be addressed when the teacher provides the special support for the students with the hearing impairment.</p>
2. Development of the lesson : 50 min			

<p>a) Discovery activity</p>	<p>Communicate and write the title of the lesson.</p> <p>Forms small groups by ensuring gender balance.</p> <p>Distributes a printed copy of Image in all groups.</p> <p>Invite students in their groups to analyze and discuss about what they see on the given image.</p> <p>Distributes a printed questionnaire related to the given image in all groups.</p> <p>Asks students to base on what they observe on the image and write their answers on manila paper.</p> <p>Move around the groups, and supports if necessary to help students find correct answers.</p>	<p>One student read the title of the lesson plan.</p> <p>Join their groups together both girls and boys.</p> <p>Each group receive the picture</p> <p>Students analyze and discuss about the content of the image.</p> <p>Each group receive the questionnaire.</p> <p>Each group provide answers by writing them on manila paper.</p> <p>Answer questions related to the image. Use marker pen and manila paper to explain how the employees on the image will receive different bonus depending on the number of time allowed and time taken to produce 10 bags).</p>	<p>Communication: Will be developed through listening from one another.</p> <p>Critical thinking: Through appreciation/ evaluation of peer's ideas views.</p> <p>Gender education: Will be addressed when the teacher engages both boys and girls in answering the questions.</p> <p>Cooperation: Will be addresses through working in groups</p> <p>Professional skills: Will be developed through giving instructions about the discovering activity and procedures used to facilitate, students to be engaged in learning activities.</p>
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<p>b) Presentation and exploitation of learner's productions</p>	<p>Invite groups to present their answers (findings).</p> <p>Make comment on their answer where necessary</p> <p>Engage the whole class in evaluations of ideas in different presentations. Make required correction if necessary.</p>	<p>Each group representative presents their answers.</p> <p>Listen actively to the comment from the teacher and from their peers, and ask questions if any.</p> <p>Display the manila paper on the classroom wall after every presentation.</p> <p>Take their books gather around their displayed manila paper.</p> <p>Match their views with the Halsey premium bonus scheme as written in the student book page (...)</p> <p>Appreciate peer's idea and views</p>	<p>Research and problem solving:</p> <p>Will be developed through research and application of prior knowledge to answer asked questions.</p>
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<p>c) Summary/ conclusion</p>	<p>Asks questions to the student to make summary of the lesson.</p> <p>Ask individually student to write a formula of calculating bonus scheme according to Halsey.</p>	<p>Answer to the questions orally and by writing and make summary of the lesson.</p> <p>One student write a formula used to calculate the bonus scheme according to Halsey.</p>	<p>Communication:</p> <p>Will be developed through asking and answering question.</p> <p>Critical thinking:</p> <p>Will be developed when student make summary of what they have learnt.</p> <p>Decision making:</p> <p>Developed when taking decision on what should be done in summary and conclusion</p>
<p>3. Assessment</p> <p>20 min</p>	<p>Have a question on manila and invites the student to answer it.</p> <p>Question: take one question from the student book in application activity, then asks students to calculate the bonus scheme according to Halsey only.</p>	<p>On a sheet of paper individual student answer the question.</p>	<p>Communication:</p> <p>Will be developed through calculation of bonus.</p> <p>Critical thinking:</p> <p>This will be developed while answering the application question.</p>
<p>Teacher self-evaluation</p>	<p>This lesson has been delivered well as the student teachers were motivated and actively involved in learning of calculation of premium bonus scheme according to Halsey. However, the teaching and learning aids should be improved according to the size of the class.</p>		

PART III: UNIT DEVELOPMENT

UNIT 1

THE NATURE OF BUSINESSES TRANSACTION TO ACCOUNTING SYSTEM

1.1 Key unit competence

To be able to explain the nature of businesses transaction in relation to accounting system

1.2 Prerequisite (entrepreneurship senior 2 units seven)

1.3 Cross-cutting issues to be addressed:

- * **Gender education:** Remind students that both males and females have similar opportunities, rights and obligations in the workplace, and therefore need to be treated fairly and equally when dealing with contracts or resolving conflicts. People's opinion of gender roles should not deny or hinder one's right or responsibilities to meet his or her contractual obligations while teaching contracts in business operations.
- * **Environment and sustainability:** During Inventory management and Manufacturing company, students need to acknowledge on the Environment and sustainability
- * **Inclusive education:** All students need to realize that universal laws do not discriminate as they do apply to all regardless of social, economic, political, physical background. Emphasis should be put on how we all have the same rights. During business organization unit, Student may discuss and appreciate need to respect and advocate for employer's and worker's rights and responsibilities at a workplace.
- * **Peace and Values:** Right before the lesson begins; there are quite a lot of opportunities for teachers to promote peace and values. Being punctual for activities (time management), involvement in various activities (teamwork), keeping their school environment clean (responsibility), greeting one another are among such opportunities (empathy).

- * **Financial Education:** Financial management and institutions, student need to appreciate the need for managing their finances and proper ways of managing their finances such as opening a bank account among others students, may know the similarities between Financial accounting, Cost accounting and management Accounting

1.4. Guidance on introductory activity

Students in groups study the photo on the introductory activity and try to identify the different activities it shows, accounting sciences involved in the above activities, which kind of agents intervening in the specified activities, and the teacher asks student if all agents have the same intention.

1.5. List of lessons/sub-heading

#	Lesson title	Learning objectives	Number of periods (p)
1	Definitions of concepts	Explain clearly the technical terms used in management accounting.	3p
2	Types of business according to ownership	Explain the types of business.	3p
	Types of business according to share		2p
	Types of business according to function		4p
3	Definition of transaction	Define the concept "transaction".	1p
	Types of transaction	Explain the types of transaction.	2p
4	The similarities between Financial accounting, Cost accounting and management Accounting	Identify the similarities and difference between Financial accounting, Cost accounting and Management Accounting.	3p
	The difference between Financial accounting, Cost accounting and management Accounting		3p
5	Purpose of Cost and Management accounting	Explain the objectives of Management accounting.	4p

6	Principles of costing/cost accounting	Describe the principle of costing.	2p
	Assessment		3p
Total number of periods			30p

LESSON 1: Meaning of concepts

- a) Learning objective:** Explain clearly the technical terms used in Management accounting.
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted: Student's books and any other trustworthy and reliable resources to enhance learning.
- c) Prerequisites:** Read unit 7, Initial accounting transactions of a business.
- d) Teaching activities**

Students in small groups, pairs or individual, do research and analyze the illustration to derive the meaning of concept. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work.

Conclude the lesson by guiding the students on the meaning and material.

Introductory activity Answers

- i) The different activities are :
 - Maize flour processing
 - Selling of goods
 - Rendering services
 - Loading and offloading the cars
- ii) The agents intervening are:
 - Manufacturing business
 - Services business
 - Merchandizing business
- iii) No, some are producing the maize flour, other rendering services, and the last ones selling goods to the different customers.
- iv) Accounting sciences involved in the above activities are:
 - Cost accounting
 - Financial accounting
 - Management accounting
- v) To record the accounting information is necessary because of it helps:
 - Keeping the accounting data
 - Evaluating the process of production
 - Calculating the unit cost
 - Fixing the selling price
 - Evaluating the profitability of product
 - Decision making
 - Helping management in planning and forecasting

Teaching activities

Students in small groups, pairs or individual, do research and analyze the illustration to derive the meaning of cost. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work.

Activity Answer 1.1

1. The problems faced NYIRABYATSI PLC up to bankruptcy are:
 - Decrease of sales
 - Mismanagement of fund
 - Economic crisis caused by Covid-19
2. Accounting terms used are: Profit, loss, sales, assets, cost, accounting, cost accounting, decision making, reporting, costing, management, bankruptcy, etc.

Application activity

Guidance

This activity can be done individually, in pairs, or small groups.

Give clear instructions and ensure a balance in the groups. Monitor the activity to ensure students are on track and actively participating.

Students share their findings to the large group. Assess their answers depending on the purpose of the application activity. Refer to the possible answers below as you assess their work.

Application activity answer 1.1

1. Management accounting

It is the application of professional knowledge and skill in the preparations and presentations of accounting information in such way as to assist management in the formulations of policies and in planning and control of operations of the undertaking.

2. Define the following concepts :

- Costing : is any system for assigning cost to an element of a business.
- Business: is defined as an economic activity which involves regular production or exchange of goods and services with the main purpose of earning profits through the satisfaction of human wants.
- Cost centre: is any particular part of an enterprise.

3. What is the difference between cost and expenses ?

Cost is resource value used for future benefits whereby Expense is cost expired.

LESSON 2: Types of business

Learning objectives: Explain the types of business.

- a) Teaching resources:** Basic materials for a class/ lesson to be conducted, Student's books, and any other trustworthy materials and reliable resources to enhance learning.
- b) Prerequisites:** Read unit 7 Initial accounting transactions of a business senior 2 ordinary level, and the nature of businesses transactions to accounting system
- c) Teaching activity**

Guidance

Students in small groups, pairs or individual, do research and analyze types of business. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work.

Activity Answer 1.2

1. Three sectors of Rwandan economy are: Agriculture sector (primary sector), Industry/company (secondary sector) and Services sector (Tertiary sector).
2. The types of business discussed are:
 - Manufacturing company
 - Services company
 - Merchandizing company.

Application activity

Guidance

This activity can be done individually, in pairs, or small groups.

Give clear instructions and ensure a balance in the groups. Monitor the activity to ensure students are on track and actively participating.

Students share their findings to the large group. Assess their answers depending on the purpose of the application activity.

Refer to the possible answers below as you assess their work.

Application Activities Answer 1.2

1.
 - a. Service company is a business that provides intangible products
 - b) Services companies operating in Rwanda are: MTN, Airtel, Horizon, Virunga, Legacy clinics, King faysal, Fatima hotel, Serena hotel, etc.
2. The two types of businesses according to their functions are:
 - * **Manufacturing company:** The businesses that transforms raw materials into finished goods.
 - * **Merchandizing Company:** this is a type of business that buys products at wholesale price and resells the same products at retail price.
3. A private company is a firm held under private ownership. Private companies may issue stock and have shareholders, but their shares do not trade on public exchanges and are not issued through an initial public offering whereby a public company is a company that sell all or a portion of itself to the public via an initial public offering.

LESSON3: Business transaction

- a) **Learning objectives:** Explain the types of business.
- b) **Teaching resources:** Basic materials for a class/ lesson to be conducted, Student's books, and any other trustworthy materials and reliable resources to enhance learning.
- c) **Prerequisites:** Read unit 7 Initial accounting transactions of a business senior 2 ordinary level, and the nature of businesses transactions to accounting system.

d) Teaching activity

Guidance

Students in small groups, pairs or individual, do research and analyze types of business. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work.

Activity Answer 1.3

1. The different activities carried are:
 - a) Exchanging = Cash transaction
 - b) Investment = Capital transaction
 - c) Sending money = Revenue transaction

Application activity

Guidance

This activity can be done individually, in pairs, or small groups.

Give clear instructions and ensure a balance in the groups. Monitor the activity to ensure students are on track and actively participating.

Students share their findings to the large group. Assess their answers depending on the purpose of the application activity.

Refer to the possible answers below as you assess their work.

Application Activity Answer 1.3

- 1. Transaction** means a financial event between two or more persons involving the exchange of goods or services.
- 2. Revenue transactions differ from capital transactions by**

Revenue transactions refer to transactions that arise due to day to day business activities and the transactions affect only one accounting period or transactions whose benefits are received within one year whereby **Capital Transactions** are those whose effects occur on more than one accounting period(s) or transactions incurred with the benefits to be received more than one year.

LESSON4: Distinguish the branches of accounting

- a) Learning Objectives:** Identify the similarities and difference between Financial accounting, Cost accounting and Management accounting
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted, Student's books, and any other trustworthy materials and reliable resources to enhance learning.
- c) Prerequisites:** Read unit 7 Initial accounting transactions of a business senior 2 ordinary level, and the nature of businesses transaction to accounting system.
- d) Teaching activity**

Guidance

Students in small groups, pairs or individual, do research and analyze types of business. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work.

Activity answer 1.4

1. Accounting is the art or science of recording and classifying financial transactions in the books, summarizing and communicating financial information through the production of financial statements/reports and interpretations of operating results portrayed in financial statements/reports to facilitate decision making.
2. According to the scenario above, there are three branches of accounting
 - * Financial accounting
 - * Cost accounting
 - * Management accounting.

Application activity

Guidance

This activity can be done individually, in pairs, or small groups.

Give clear instructions and ensure a balance in the groups. Monitor the activity to ensure students are on track and actively participating.

Students share their findings to the large group. Assess their answers depending on the purpose of the application activity.

Refer to the possible answers below as you assess their work.

Application Answer 1.4

1. Definition of accounting branches
 - a) Financial accounting:** is a branch of accounting concerning with the recording of accounting data, classifying, summarizing the recorded data and communicating the results to interested parties/ accounting information users.
 - b) Management accounting:** This is a branch of accounting concerned with decision-making within the business. It collects the information from both cost accounting and financial accounting to managers for making decisions toward an organization's goals
 - c) Cost accounting:** This is a branch of accounting concerned with the accumulation and determination of costs within the business.

2. Three similarities between Financial accounting and Cost accounting:
 - Both use double entry method
 - Both are branches of accounting
 - Both record the financial information (data).
 - Both use the same source information
3. For Management accounting, internal measures and reports do not have to follow GAAP but are based on cost-benefit analysis but Financial accounting on other side; financial statements must be prepared in accordance with GAAP and be certified by an external, independent auditors.

LESSON5: Purpose of Cost and Management accounting

a) Teaching resources: Basic materials for a class/ lesson to be conducted, student's books, and any other trustworthy materials and reliable resources to enhance learning.

b) Prerequisites: Read unit 7 Initial accounting transactions of a business senior 2 ordinary level, and the nature of businesses transaction to accounting system.

c) Teaching activity

Guidance

Students in small groups, pairs or individual, do research and analyze types of business. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work.

Activity answer 1.5

1. **Decision making** is the process of making choices by gathering information and assessing alternative resolutions.
2. **The five objectives of cost and management accounting are:**
 - a) Cost ascertainment
 - b) Planning
 - c) Decision making
 - d) Setting price
 - e) Evaluation of profitability

Application activity

This activity can be done individually, in pairs, or small groups.

Give clear instructions and ensure a balance in the groups. Monitor the activity to ensure students are on track and actively participating.

Students share their findings to the large group. Assess their answers depending on the purpose of the application activity.

Refer to the possible answers below as you assess their work.

Application activity answer 1.5

1. **The ten purposes of cost and management accounting are :**

a) Cost ascertainment	b) Inventory management
c) Pricing of products and project	d) Setting selling prices
e) Measurement of efficiency	f) Planning
g) Cost control	h) Decision making
i) Analysis of financial statements	j) Controlling

LESSON6: Principles of costing/ cost accounting

- a) **Learning objectives:** Describe the principles of costing
- b) **Teaching resources:** Basic materials for a class/ lesson to be conducted, student's books, and any other trustworthy materials and reliable resources to enhance learning.
- c) **Prerequisites:** Read unit 7 Initial accounting transactions of a business senior 2 ordinary level, and the nature of businesses transaction to accounting system

d) Teaching activities

Guidance

Students in small groups, pairs or individual, do research and analyze types of business. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work.

Activity answer 1.6

1. **Cost Accounting** is a branch of accounting concerned with ascertainment of cost with the purpose of selling price determination.
2. Some principles to be followed in business are:
 - Cause-effect relationship
 - Charge cost only after its incurrence
 - Ignore the convention of prudence
 - Past costs should not form part of future costs
 - Exclusion of abnormal costs from cost accounts
 - Principle of double entry should be followed preferably.

Application activity answer 1.6

1. One of the principles of cost accounting are:
 - **Cause-Effect relationship:** each item of cost should be related to its cause as minutely as possible and the effect of the same on various departments should be ascertained. This cost should be shared only by those units for which cost has been incurred.
 - **Principle of double entry should be followed preferably:** to lessen the chances of any mistake or error, cost ledger and cost control accounts, as far as possible, should be maintained on the double-entry principle. This will ensure the correctness of sheet and cost statements prepared for cost ascertainment and cost control.

1.6 End unit assessment answers

1. b
2. A. iv (b and d)
B. iii (1 and 3)
3. No, Management Accounting deals with not only cost (cost accounting) but also revenues (Financial accounting) and take decision as results from a combination of those two accounting branches.
4. Difference between financial accounting and management accounting

Basic of comparison	Financial accounting	Management accounting
Purpose of information	Help managers make decisions to fulfill an organization's goals	Communicate the organization's financial position to investors, banks, regulators and other outside parties.
Primary users	Manager of organization	External users such as investors, banks, regulators, and suppliers
Focus and emphasis	Future-oriented	Past –oriented
Rules of measurement and reporting	Internal measures and reports do not have to follow GAAP but are based on cost-benefit analysis	Financial statements must be prepared in accordance with GAAP and be certified by external, independent auditors
Time span and types of reports	Varies from hourly information to 15 to 20 years, with financial and non-financial reports on products, departments, territories, and strategies	Annual and quarterly financial reports, primarily on the company as a whole
Behavioral implications	Designed to influence the behavior of managers and other employees	Primarily reports economic events but also influences behavior because manager's compensation is often based on reported financial results.

1.7 SUMMARY OF THE UNIT

Types of business:

According to ownership:

- Sole trader
- Partnership
- Franchises
- A company limited by guarantee
- A limited liability company
- An unlimited company with or without a share capital.

Types of business according to function

- Manufacturing company
- Services company
- Merchandizing company

The similarities between Financial accounting, Cost accounting and Management accounting. The difference between Financial accounting, Cost accounting and Management accounting

Purpose of Cost and Management accounting

Principles of costing/cost accounting:

- Cost ascertainment
- Disclosure of wastes
- Decision making
- Cost control
- Planning
- Measurement of efficiency
- Setting selling prices
- The evaluation of profitability
- Pricing of products and projects
- Inventory management
- Analysis of financial statements
- Controlling

1.8. Additional information for teachers

By visiting different types of manufacturing industries.

Accounting organization performs many functions. These may be classified for convenience into three groups:

External reporting functions. Preparation of financial and statistical report to shareholders, tax authorities and other interested parties

Internal control functions: administration of systems to safeguard assets, maintain the accuracy of accounts and review adherence to prescribed policies and procedures.

Routine services functions: maintenance of data and document files, preparation of invoices, statement, and payroll, etc.

Additional activities

I) Remedial activities (Questions and answers)

(i) Which of these is not an objective of Cost accounting?

- a) Ascertainment of Cost
- b) Determination of selling price
- c) Cost control and Cost reduction
- d) Assisting shareholders in decision making

Solution: d) Assisting shareholders in decision making

(ii) A profit centre is a centre:

- a) Where the manager has the responsibility of generating and maximising profits
- b) Which is concerned with earning an adequate Return on Investment
- c) Both of the above
- d) Which manages cost

Solution: a) Where the manager has the responsibility of generating and maximising profits

(iii) Cost unit is defined as:

- a) Unit of quantity of product, service or time in relation to which costs may be ascertained or expressed
- b) A location, person or an item of equipment or a group of these for which costs are ascertained and used for cost control

- c) Centres having the responsibility of generating and maximising profits
- d) Centres concerned with earning an adequate return on investment

Solution: Unit of quantity of product, service or time in relation to which costs may be ascertained or expressed.

(iv) Explain :

- a) Transaction
- b) Cash transaction
- c) Credit transaction.
- d) Management
- e) Accounting
- f) Business
- g) Expenses

Solution :

- a) A transaction:** is an agreement between buyers and sellers to exchange goods and services for money.
- b) Cash transaction:** is when cash or cheque is used in buying and selling of goods and services. Buying something by paying cash or cheque instantly is called cash purchase while selling goods or services to someone for cash or cheque is called cash sale.
- c) Credit transaction:** is when the business supplies or is supplied with goods or services without paying cash / on credit and receives payment or pays after a certain future date.
- d) Management:** is a comprehensive function of planning, organizing, forecasting, coordinating, leading, controlling, motivating the efforts of others to achieve specific objectives.
- e) Accounting :** is the art and science of recording and classifying financial transactions in the books, summarizing and communicating financial information's through production of financial statements/ reports and interpretations of operating results portrayed in financial statements/reports to facilitate decision making.
- f) Business:** is a legally recognized organisation or enterprise that operates with the objectives of profit maximization. Or

It is also defined as an economic activity which involves regular production or exchange of goods and services with the main purpose of earning profits through the satisfaction of human wants.

g) Expenses: It is the monetary value paid or payable for goods and services in the course of business transaction.

(v) Identify different branch of accounting

- a) Financial Accounting
- b) Management accounting
- c) Cost accounting

II) Consolidation activities (Questions and answers)

1. What are the important limitations of conventional Financial accounting?

Solution:

1. Review only overall performance
 2. It is historical in nature
 3. Comparison of performance is not made
 4. No cost control
 5. Non Proper classification of cost
 6. Fail to furnish relevant information to management
 7. Fail to help in price fixation and /or revision
 8. No analysis of losses
 9. Inefficient segments are not identified
2. Identify purposes of cost accounting and management accounting

Solution:

- Cost ascertainment
- Disclosure of wastes
- Decision making
- Cost control
- Planning
- Measurement of efficiency
- Setting selling prices
- The evaluation of profitability
- Pricing of products and projects

- Inventory management
- Analysis of financial statements
- Controlling

a) Extended activities (Questions and answers)

- What are difference between branches of accounting?

*** Cost accounting and Management accounting**

Basic for comparison	Cost accounting	Management accounting
Inherent meaning	Cost accounting revolves around cost computation, cost control, and cost reduction.	Management accounting helps management make effective decisions about business.
Application	Cost accounting prevents a business from incurring cost beyond budget.	Management accounting offers a big picture of how management should strategize.
Scope	Scope is much narrow	Scope is much broader
Measuring grid	Quantitative	Quantitative and qualitative both.
Sub-set	Cost accounting is one of the many sub-sets of management accounting.	Management accounting itself is pretty vast.
Basis of decision making	Historic information is basis of decision making.	Historic and predictive information are basis of decision making.
Statutory requirement	Statutory audit of cost accounting is a requirement in big business houses.	Audit of management accounting has no statutory requirement.
Dependence	Cost accounting isn't dependent on management accounting to be successfully implemented.	Management accounting is dependent on both cost & financial accounting for successful implementation.
Used for	Management, shareholder, and vendors.	Only for management.

Cost accounting and Financial accounting

Basic for comparison	Financial accounting	Cost accounting
Audience	It involves the preparation of a standard set of reports for an outside audience, which may include investors, creditors, credit rating agencies, and regulatory agencies.	It involves the preparation of a broad range of reports that management needs to run a business.
Format	The reports prepared under financial accounting are highly specific in their format and content, as mandated by either generally accepted accounting principles or international financial reporting standards.	It involves creating reports that can be in any format specified by management, with the intention of including only that information pertinent to a specific decision or situation.
Level of detail	Financial accounting primarily focuses on reporting the results and financial position of an entire business entity.	Cost accounting usually results in reports at a much higher level of detail within the company, such as for individual products, product lines, geographical areas, customers, or subsidiaries
Product costs	It incorporates this information into its financial reports (primarily into the balance sheet).	It compiles the cost of raw materials, work-in-process, and finished goods inventory.
Regulatory framework	The structure of financial accounting reports are tightly governed by either generally accepted accounting principles or international financial reporting standards.	There is no regulatory framework governing cost accounting reports.

Report content	A financial report contains an aggregation of the financial information recorded through the accounting system.	The information in a cost accounting report can contain both financial information and operational information. The operational information can come from a variety of sources that are not under the direct control of the accounting department.
Report timing	Financial accounting personnel issue reports only at the end of a reporting period.	Cost accounting staff may issue reports at any time and with any degree of frequency, depending upon management's need for the information.
Time horizon	Financial accounting is only concerned with reporting the results of reporting periods that have already been completed.	Cost accounting does this too, but also can be involved in a variety of projections for future periods.

Financial accounting and Management accounting

Basic of comparison	Management accounting	Financial accounting
Purpose of information	Help managers to make decisions to fulfill an organization's goals	Communicate organization's financial position to investors, banks, regulators and other outside parties.
Primary users	Managers of organisation	External users such as investors, banks, regulators and suppliers
Focus and emphasis	Future –oriented	Past -oriented
Rules of measurement and reporting	Internal measures and reports do not have to follow GAAP but are based on cost-benefit analysis	Financial statements must be prepared in accordance with GAAP and be certified by an external, independent auditors
Time span and types of reports	Varies from hourly information to 15 to 20 years, with financial and non-financial reports on products, departments, territories, and strategies	Annual and quarterly financial reports, primarily on the company as a whole
Behavioral implications	Designed to influence the behavior of managers and other employees	Primarily reports economic events but also influences behavior because manager's compensation is often based on reported financial results.

UNIT 2

SOURCE OF INCOME AND EXPENDITURE INFORMATION

2.1 Key unit competence:

Identify source of income and expenditure information

2.2. Prerequisite (knowledge, skills, attitudes and values)

In senior, 2, and 3 you have studied entrepreneurship in which you have developed income and expenditure. This prior knowledge, skills or competences should help the learners to be able to develop the sources of income and expenditure information in the company, and it can help them to be able to realize how they can extract income and expenditure information from different source documents in their daily working activities.

2.3 Cross-cutting issues to be addressed:

Note: The examples below are just to guide you on how to address crosscutting issues throughout the unit but this does not mean that these are the only ones. You can address and give learners opportunities to discuss all the crosscutting issues where possible taking consideration of their environment or community around them.

Gender education: Emphasis throughout this unit has to be put on how both males and females have same chance to do business activities or to be employed, which can be the source of income and expenditure information in their local community. So as to promote better standard of living of their families and in the locality by creation of business based employment opportunities and the country by paying taxes leading to socioeconomic development.

Environment and society: The greatest source of income and expenditure information is the source documents that contain information about the transactions done, and those transaction are done through exploitation of the environment and the society. Business, employment or any other income generating activity cannot be implemented without the environment, and the

society, both are combined. Therefore, great care has to be taken for environment and society. Therefore, business activities should be done appropriately or in such a way that the environment and the society can be safe from harm.

Inclusive education: In addition to all having equal opportunities accountant, attention will be made on how we all regardless of our background have right to generate ideas that do not discriminate as our needs are the same. Learners need to understand that business owners should not discriminate but promote inclusiveness of all.

Peace and Values: You need to emphasize on learners need to live in peace and harmony with others. Learners also need to develop positive attitude towards the society, customers, shareholders, environment, agriculture, and government, among others as the socio-economic development. They need also to know that the security is important for people to live in high standard of living.

Standardization culture: You need to emphasize to learners the need for standards even in business activities to ensure that to keep income and expenditure information bring in the business enough income to the company.

2.4. Guidance on introductory activity

NOTE: The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell learners that they will learn more about sources of income and expenditure information in the corresponding lessons.

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the source of income information and the importance of recording income and expenditure information.

The introductory activity will also arouse learners' interests about what to expect in this unit as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Possible answer to the introductory activity

1. The scenario is talking about a poultry project carried by IKIREZI PLC.
2. The purpose of doing a business is gaining the profit (income).
3. All activities involving IKIREZI PLC is investment or expenditures.
4. The challenge faced by IKIREZI PLC is mis-recording /non recording of accounting data.
5. The answer to the challenges faced is to hire the professional accountant.
6. The responsibilities of hired accountant are:
 - Recording income and expenditure transactions
 - Preparing the periodic reports
7. The hired accountant will get the data from source documents.

2.5. List of lessons/sub-heading

#	Lesson title/ Sub-heading	Learning objectives	Number of periods (p)
1	Définition of concepts	Define “income and expenditure” as used in management accounting	3p
2	Types of income	Explain the types of income	4p

3	Types of expenditure	Explain the types of expenditure	4p
4	Source of income and expenditure information	Extract income detail from relevant source documents	4p
		Extract income detail from relevant source documents	4p
		Extract expenditure detail from relevant source documents.	4p
		Extract expenditure detail from relevant source documents.	4p
5	End unit assessment	3p	
Total number of periods			30p

LESSON 1: Definition of concepts

a) Learning objective: Define “income and expenditure” as used in management accounting.

b) Teaching resources: Learner’s books, teacher’s book, internet, case studies, projector, computer, note books, chalkboard or white board, chalks, marker pen, manila paper, resourceful person and any other trustworthy and reliable resources to enhance learning.

c) Prerequisites/Revision/Introduction

In entrepreneurship you have developed income and expenditure. This prior knowledge, skills or competences should help the learners to be able to define income and expenditure in the business, and know to differentiate business activities that generate income and that create expenditure.

d) Learning activities

Guidance

The students must not answer to all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this lesson. Tell learners that they will learn about the meaning of income and expenditure and features of income and expenditure accounts.

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the meaning of income and expenditure.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answer 2.1

1. The name of money generated in business is income
2. The name of money spent from the business to be returned after year is Expenditure.

e) Application activities

▪ Guidance

Read and explain the instructions on the assessment sheet to make them clear.

Application Activity answer 2.1

1. e
2. b
3. c
4. Income is the inflow of cash or cash equivalents whereby expenditure is outflow of funds.
5. The rule of nominal account said that “debit all expenses and losses and credit all incomes and gains”.
6. Income may increase the economy of the company in the form of inflows or improvement of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants.

LESSON 2: Types of income

a) Learning objective: Explain the types of income

b) Teaching resources: Learner’s books, teacher’s book, internet, case studies, projector, computer, note books, black boards or white board, chalks or marker pen.

c) Prerequisites/Revision/Introduction

In the previous session in which you have introduced the meaning of income and expenditure. This prior knowledge, skills or competences should help the learners to be able to develop the types of income, and it can help them to be able to realize how they can generate different types of income from different nature of business activities.

d) Learning activities

Guidance

The students won’t be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this lesson. Tell learners that they will learn more about the types of income and different activities that can generate those types of income.

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the types of income and business activities that generate those types of income.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answer 2.2

1. Image is about people doing different business activities.
2. Not, because each one gets the income depending on the type of the activity done.
3. Salary, wage, profit, rental income,
- 4.

Earned income	Portfolio income	Passive income
Salary	Profit	Rental income
Wage		

e) Application activity

Application activity *answer 2.2*

1. The main activities that can generate portfolio income are :
 - Trading (buying/selling) Paper Assets; Paper assets refer to things like stocks, bonds, mutual funds, T-bills, currencies or other types of futures/derivatives. Stock market investing is the most common generator of portfolio income.
 - Buying and Selling Real Estate (specifically the profit from the sale)
 - Buying and Selling of any other Assets Antiques or cars, for example, or other types of collectibles that have appreciated in value.
2. One huge benefit of earned income over the other income types is the income generated without start-up capital in order to make earned income.
3. Some people refer to portfolio income as “capital gains” because it shows the income from investment.
4. Passive income is money obtained from assets use with absence of owner.

Examples:

- Rental Income
 - Note Income from Real Estate
 - Creating and Selling Intellectual Property (Books, Patents, Internet), etc.
5. No, because it requires to have some knowledge and skills.

LESSON 3: Types of expenditure

- a) Learning objective: Explain the types of expenditure
- b) Teaching resources: Learner’s books, teacher’s book, internet, case studies, projector, computer, note books, black boars or white board, chalks or marker pen.
- c) Prerequisites/Revision/Introduction

In the previous sessions in which you have introduced the meaning of income and expenditure, and the types of income. This prior knowledge, skills or competences should help the learners to be able to develop the types of expenditure, and it can help them to be able to realize how they can spend money in different business activities that can generate income.

d) Learning activities

▪ Guidance

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this lesson. Tell learners that they will learn more about the types of expenditure and different activities that can be considered as expenses for the business.

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the types of expenses and business activities that create expenses to the business.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answer 2.3

1. It is about people spending money in different business activities.
2. The relationship presented between all people is where one spends money by purchasing bread from the bakery.
3. The kind of transactions on which people are spending money are :
 - Buying items (juice and blue band) from mini market.
 - Buying bread from bakery.
 - Promoting products by advertisement
4. We can differentiate them according to their nature.

Capital Expenditure	Revenue Expenditure	Deferred Revenue Expenditure
Purchase house and equipment	Purchasing raw material	Advertisement
	Payment of wages and salary	

Application activity answer 2.3

1. Definition of :
 - Capital expenditure is an amount incurred for acquiring the long term assets such as land, building, equipment which are continually used for the purpose of earning revenue.
 - Revenue expenditure is the expenditure incurred in one accounting year and the benefits from which is also enjoyed in the same period only.
 - Deferred revenue expenditure is a revenue expenditure which is incurred in the present accounting period but it is incurred in the following or the future accounting periods.
2. Capital expenditure is an amount incurred for acquiring the long term assets such as land, building, equipment which are continually used for the purpose of earning revenue.

Example: Interest on capital paid, Expenditure on purchase or installation of an asset, brokerage and commission paid.

Where **deferred revenue expenditure** is a revenue expenditure which is incurred in the present accounting period but it is incurred in the following or the future accounting periods.

Example: Development expenditure, Advertisement etc.

3. Capital expenditure must be recorded in relative expenditure account.
4. The following expenditure are :
 - Purchase the sugar for a bread manufacturing company: **Revenue expenditure**
 - Payment of salary : **Revenue expenditure**
 - Give gifts to potential customers: **Deferred revenue expenditure**
 - Offer end year rebate: **Deferred revenue expenditure**
 - Purchase company shelves : **Capital expenditure**

LESSON 4: Source of income and expenditure information

a) Learning objective: Extract income details from relevant source documents; Extract expenditure details from relevant source documents.

b) Teaching resources: Learner's books, teacher's book, internet, case studies, projector, computer, source documents books, note books, black boards or white board, chalks or marker pen.

c) Prerequisites/Revision/Introduction

In the previous sessions in which you have introduced the meaning of income and expenditure, types of income, and types of expenditure. This prior knowledge, skills or competences should help the learners to be able to develop source documents that can serve as source of income information and source documents that can serve as source of expenditure information and the type of information that can be extracted from each source document according to its nature.

d) Learning activities

Guidance

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this lesson. Tell learners that they will learn more about accounting documents that serve as source of income and expenditure information, and details that may allow them to differentiate them as source of income information or source of expenditure information.

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the

accounting documents that serve as the source of income and expenditure information, and details that may allow them to know the type of information extracted from each document.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answer 2.4

1. There are documents and a person recording what is written on these documents.
2. Accounting information
3. Because these documents are the sources of accounting information and they are needed to be recorded in other accounting documents
4. Two types: Income and expenditure information.

e) Application activity

Explain clearly the headings of the table to make the task understandable.

▪ Guidance

Application activity answers 2.4

1

Activity	Document to be prepared	Sender	Receiver
Receiving goods ordered	Goods received note	Buyer	Seller
Sending goods to the person who ordered them	Goods delivery note	Seller	Buyer
Asking the firm to send the goods	Purchase order	Buyer	Seller

2. EPRA

Date : March 15th 2020

P.O BOX : 115 KIGALI

BILL TO :

LUMAPLANTS

P.O BOX : 112 BUTARE

INVOICE No 203

Description	Quantity	U.P	T.V
Egg plant	400 baskets * 15kgs= 6000kg	500	300,000
	Less Tare= 400 baskets *0.5=200kg	500	(100 000)
Net weight	5800 kg	500	2 900 000
Less: trade discount 2%			(58 000)
Net value			2 842 000
Packing cost	400 baskets	10	4 000
Transport cost			2,000
Total value payable			2,848,000
Only Frw two million eight hundred forty eight thousand			
Note : this invoice is payable before April 20th, 2020			

RRR	RECEIPT NO 046
P.O BOX : 234 KIGALI	.....
Kigali on 20th March 2021, received Frw 50,000 (Fifty thousand Rwandan francs) from IRAKOZE David for school fees of Second term.	Done, Kigali March 20th 2021
	School accountant
	Signature

2.6 Summary of the unit

This unit is composed of five (5) lessons based on the following:

Definition of concepts:

- Income
- Expenditure

Types of income:

- Earned income
- Portfolio income
- Passive income

Types of expenditure:

- Capital expenditure
- Revenue expenditure
- Deferred revenue expenditure

Sources of income and expenditure information:

- Source documents that serve as source of income information
- Source documents that serve as source of expenditure information

2.7 Additional information for teachers

The information provided in the students' text book is enough comparing to their level but does not restrict you as teacher to do further research from other resources for example internet or other related text books.

2.8. End unit assessment (answers)

1. f

2. e

3. a

4. c

5. a

6.

1. h

2. d

3. f

4. b

5. k

6. j

7. c

8. a

9. g

10. e

11. l

12. i

2.9. Additional activities

2.9.1 Remedial activities

Remedial activities

1. Which of the following statement is not true regarding the expenditure meaning?
 - a) It is the use of fund by a business
 - b) It is the use of resources
 - c) It is the fund of operation

- d) Use of cash equivalent
- e) No one of the above

Answer : e

2. A document issued by the seller to the buyer when goods have been sold on credit is :
- a) Credit note,
 - b) Proforma invoice
 - c) Invoice,
 - d) Debit note
 - e) B and C are correct answers
 - f) All of the above

Answer : c

3. Which one of the following is not considered as income :
- a) Salary from work done
 - b) Pocket money
 - c) Profit from sales
 - d) Assets improvement
 - e) No one of the above

Answer : b

4. All of the following are features of income and expenditure account except :
- a) Income and Expenditure Account is prepared at the end of an accounting period
 - b) Income and Expenditure Account contains revenue items only.
 - c) Income and Expenditure Account is prepared on an nature basis
 - d) Income and Expenditure Account is a nominal account
 - e) No one of the above

Answer : c

5. What is a source document?

Answer: A source document is the original document that contains the details of a business transaction and that supports transactions recorded in the books of account.

6. What is the main purpose of source documents?

Answer: The main purpose of source documents is to support whatever records or transactions have been made.

7. How many types of source of source document are there?

Answer: Two (2). Some are source of income information, others are source of expenditure information.

8. Explain concisely the following terms :

- a) Invoice,
- b) Debit note
- c) Credit note.

Answer:

- The invoice is document which is issued by the seller to the buyer when goods have been sold on credit.
- The debit note is a document sent by the seller to the buyer to correct an undercharge in an original invoice.
- The credit note is a document issued by a seller and sent to the buyer if it is necessary to reduce the amount charged on the invoice.

9. What are the features of source document?

Answer :

- a) Description of the business transaction
 - b) Date of transaction
 - c) The quantity
 - d) Name of involved parties
 - e) Description of the goods or service
 - f) Amount involved in figures and in words
 - g) stamp and signature of the company that design the source document
10. List the common source documents that can provide income and expenditure information?

Answer : Sales order, Bank statement, Debit note, Credit note, Invoice, Purchase order, Quotation, Payroll, Goods delivery note, Goods received note, Receipt.

2.9.2. Consolidation activities

▪ Consolidation activities

1. Classify the following expenditures according to their types:
 - a) Purchase the sugar for a bread manufacturing company
 - b) Payment of salary
 - c) Give gifts to potential customers
 - d) Offer end year rebate
 - e) Purchase company shelves

Answer: The following expenditure are:

- a) Purchase the sugar for a bread manufacturing company: **Revenue expenditure**
- b) Payment of salary: **Revenue expenditure**
- c) Give gifts to potential customers: **Deferred revenue expenditure**
- d) Offer end year rebate: **Deferred revenue expenditure**
- e) Purchase company shelves: **Capital expenditure**

2. Fill the following table :

Document	Person who prepare	Person to whom the document is sent
Proforma invoice		
Purchase order		
Invoice		
Goods delivery note		
Receipt		

Answer:

Document	Person who prepares	Person to whom the document is sent
Proforma invoice	Buyer	Seller
Purchase order	Buyer	Seller
invoice	Seller	Buyer
Goods delivery note	Seller	Buyer
Receipt	The person who receives money or goods	The person who pays money, or who delivers the goods

3. Match the document in column A to its purpose in column B

Answer	Document	Purpose
1.	1. Goods delivery note	A. To indicate the sales of goods and services.
2.	2. Goods received note	B. To show the list of employees of the company and their salaries
3.	3. Invoice	C. To indicate the payment order
4.	4. Payroll	D. To inform the contracting party about the sending of goods
5.....	5. Receipt	E. To request the payment of goods delivered
		F. To inform the contracting party about the reception of delivered goods
		G. To prove the payment

Answer :

Answer
1. D
2. G
3. F
4. B
5. H

4. Find the missing value in this invoice :

Description	Quantity	P.U	T.V
Roll T56 black tape	200	600	120000
Sheets R64 polythene	600	.....	.....
Sub total			500,000
Discount 10%			.....
Sub total			.....
VAT 18%			.....
TOTAL VALUE PAYABLE			.....

Description	Quantity	P.U	T.V
Roll T56 black tape	200	600	120,000
Sheets R64 polythene	600	6333333	380,000

Sub total	500,000
Discount 10%	50,000
Sub total	450,000
VAT 18%	81,000
TOTAL VALUE PAYABLE	531,000

Extended activities

Additional activities

Remedial activities

1. Which of the following statement is not true regarding the expenditure meaning?
 - a) It is the use of fund by a business
 - b) It is the use of resources
 - c) It is the fund of operation
 - d) Use of cash equivalent
 - e) No one of the above

Answer : E

2. A document issued by the seller to the buyer when goods have been sold on credit is :
 - a) Credit note,
 - b) Proforma invoice
 - c) Invoice,
 - d) Debit note
 - e) B and C are correct answers
 - f) All of the above

Answer : C

3. Which one of the following is not considered as income :
 - a) Salary from work done
 - b) Pocket money
 - c) Profit from sales
 - d) Assets improvement
 - e) No one of the above

Answer : B

4. All of the following are features of income and expenditure account except :
- a) Income and Expenditure Account is prepared at the end of an accounting period
 - b) Income and Expenditure Account contains revenue items only.
 - c) Income and Expenditure Account is prepared on an nature basis
 - d) Income and Expenditure Account is a nominal account
 - e) No one of the above

Answer : C

5. What is a source document?

Answer: A source document is the original document that contains the details of a business transaction and that supports transactions recorded in the books of account.

6. What is the main purpose of source document?

Answer: The main purpose of source documents is to support whatever records or transactions have been made.

7. How many types of source of source document are there?

Answer: two (2). Some are source of income information, others are source of expenditure information.

8. Explain concisely the following terms :

- a) Invoice,
- b) Debit note
- c) Credit note.

Answer :

- The invoice is document which is issued by the seller to the buyer when goods have been sold on credit.
- The debit note is a document sent by the seller to the buyer to correct an undercharge in an original invoice.
- The credit note is a document issued by a seller and sent to the buyer if it is necessary to reduce the amount charged on the invoice.

9. What are the features of source document?

Answer :

- i) Description of the business transaction
 - j) Date of transaction
 - k) The quantity
 - l) Name of involved parties
 - m) Description of the goods or service
 - n) Amount involved in figures and in words
 - o) stamp and signature of the company that design the source document
- List the common source documents that can provide income and expenditure informatio?

Answer : Sales order, Bank statement, Debit note, Credit note, Invoice, Purchase order, Quotation, Payroll, Goods delivery note, Goods received note, Receipt.

▪ **Consolidation activities**

1. Classify the following expenditures according to their types:
2. Purchase the sugar for a bread manufacturing company
3. Payment of salary
4. Give gifts to potential customers
5. Offer end year rebate
6. Purchase company shelves

Answer : The following expenditure are :

- a) Purchase the sugar for a bread manufacturing company : Revenue expenditure
- b) Payment of salary : Revenue expenditure
- c) Give gifts to potential customers : Deferred revenue expenditure
- d) Offer end year rebate : Deferred revenue expenditure
- e) Purchase company shelves : Capital expenditure

1. Fill the following table :

Document	Person who prepares	Person to whom the document is sent
Proforma invoice		
Purchase order		
Invoice		
Goods delivery note		
Receipt		

Answer :

Document	Person who prepares	Person to whom the document is sent
Proforma invoice	Buyer	Seller
Purchase order	Buyer	Seller
invoice	Seller	Buyer
Goods delivery note	Seller	Buyer
Receipt	The person who receives money or goods	The person who pays money, or who delivers the goods

2. Match the document in column A to its purpose in column B

Answer	document	Purpose
1.	1. Goods delivery note	A. To indicate the sales of goods and services.
2.	2. Goods received note	B. to show the list of employees of the company and their salaries
3.	3. Invoice	C. To indicate the payment order
4.	4. Payroll	D. to inform the contracting party about the sending of goods
5.....	1. Receipt	E. To request the payment of goods delivered
		F. To inform the contracting part about the reception of delivered goods
		G. To prove the payment

Answer :

Answer
3. D
4. G
2. F
3. B
4. H

5. Find the missing value in this invoice :

Description	Quantity	P.U	T.V
Roll T56 black tape	200	600	120000
Sheets R64 polythene	600	.....	.....
Sub total			500,000
Discount 10%			.....
Sub total			.....
VAT 18%			.....
TOTAL VALUE PAYABLE			.....

Answer:

Description	Quantity	P.U	T.V
Roll T56 black tape	200	600	120000
Sheets R64 polythene	600	633.3333	380000
Sub total			500000
Discount 10%			50000
Sub total			450000
VAT 18%			81000
TOTAL VALUE PAYABLE			531000

2. Mr RUGABA Jean, P.O BOX 320 Kigali lends a computer to Mr GAKUBA Cyprien P.O BOX 222 Kigali, to be remitted after two weeks.

Required: prepare the receipt.

Answer :

<p>GAKUBA Cyprien P.O BOX 222KIGALI</p>	<p>Receipt No 120</p> <p>Kigali, May 13th 2020, received from Mr RUGABA Jean</p> <p>P.O BOX 320 Kigali a computer to be pay back after fourteen days.</p> <p>Done, Kigali May 13th 2020</p> <p>GAKUBA Cyprien</p> <p>Signature</p>
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UNIT 3

COMPONENT OF COST IN AN ORGANIZATION

3.1 Key unit competence:

Explain material, procurement process, labor, expenses, and centres

3.2 Prerequisite (unit 1)

3.3 Cross-cutting issues to be addressed

Gender education: Remind students that both males and females have similar opportunities, rights and obligations in the workplace, and therefore need to be treated fairly and equally when dealing with contracts or resolving conflicts. People's opinion of gender roles should not deny or hinder one's right or responsibilities to meet his or her contractual obligations while teaching contracts in business operations.

Environment and sustainability: During codification, students need to acknowledge of the environment, and sustainable code as well in expansion of the business activities

Inclusive education: All students need to realize that universal laws do not discriminate as they do apply to all regardless of social, economic, political, physical background. Emphasis should be put on how we all have the same rights. During business organization unit, Student may discuss and appreciate need to respect and advocate for employer's and worker's rights and responsibilities at the workplace.

Peace and Values: Right before the lesson begins; there are quite a lot of opportunities for teachers to promote peace and values. Being punctual for activities (time management), involvement in various activities (teamwork), keeping their school environment clean (responsibility), and greeting one another are among such opportunities (empathy).

Financial education:

Teachers and students should know that resources and materials used in teaching and learning activities must not be mismanaged. This issue will also be addressed when studying techniques of managing different resources especially financial resources in ECD centre or a pre-primary school. Students will learn to make budgets for resources and materials and manage them well. They will put in mind that misusing materials is wasting money.

3.4 Guidance on the introductory activity:

- from groups of 5 students
- Invite students to read the scenario from the student book, share ideas and then answer related questions.
- Guide the students' discussions
- ask students to present their findings

Supplement students' presentations and link students' answers to the new lesson.

Introductory activity answer

1. Product is manufactured from combination of raw materials treated by labor for a specific period of time @ given rate of payment. For better performance product, additional expenses incurred for production cost.
2. Recruitment process is:
 - Definition of a post
 - Definition of the candidate's profile
 - Identification of recruitment sources
 - Implementation of recruitment means
 - Recruitment Campaign
 - Selection
 - Pre-selection
 - Tests of selection
 - Interview
 - Recruitment decision
 - Integration

1. List of lessons and lesson development

Unit 3: Component of cost in organization (40P)

Key unit competence: Explain material, procurement process, labor, expenses and centers.

	Sub-heading	Lesson title	Learning objectives (from the syllabus or set according to the lesson title)	Number of periods (p)
1	Material	Definition of material Categories of material	Explain and categorize the material	3p
2	Procurement process	Meaning of procurement process	Describe the procurement process.	1p
		Type of purchase		3p
		Procurement system and procedure		3p
		Sourcing and supply chain		3p
		Contracts		1p
		E-procurement		2p
3	Labour	Definition of labor	Define the term "labor"	1p
		Labor recruitment	Explain the labor recruitment	3p
		Labor recruitment process	Explain labor recruitment stages	3p
		Labor turnover	Explain labor turnover structure	3p
4	Expenses	Definition of expense	Describe the expenses	1p
		Types of expenses		3p
5	Cost	Definition of cost	Describe the "cost".	2p
		Classes of cost		2p
6	Center	Definition of center	Describe the "Center".	1p
		Type of center in business		2p
End unit assessment				3p

LESSON 1: Material

- a) Learning objectives:** Explain and categorize the material
- b) Teaching resources:** students' books, computers, internet, books, inventory records, case studies other reliable resources, lesson plan, and enhance learning
- c) Prerequisites/Revision/Introduction (guidance on how to start the lesson :** The student have the knowledge from unit one called: the nature of businesses transaction to accounting system
- d) Learning activities 3.1**

Activity 3.1

- Invite the student to read the question
- Let them have to brainstorm the answers
- Let them share information as they sit on chairs
- Ensure that there is no student who do not understand the questions.

Activity Answers 3.1

1. The available materials are: fruits, knives, glasses, and blender...
2. They are :
 - a) Raw materials ; eg : Fruits
 - b) Tools ; eg : Knives
 - c) Machine ; Blender

Link the students' answers with the new lesson.

e) Application activities 3.1

- Invite students to read, discuss in pairs the application activities in student book
- Have some pairs to present their findings
- Ask other pairs to supplement
- Give constructive feedback

Application Activity Answers 3.1

1. Definition of:

- Material means all commodities or equipment that are consumed in the process of manufacturing.
 - Raw material means those materials whose consumption may be identified with specific production units and which usually become a part of the finished product.
 - Container means is any material used for wrapping a consumer-product in order to serve, to contain, to identify, describe, protect and displaying the product
2. The three mode of packaging are Sacks, paper board cartons and Corrugated boxes
3. Packaging is important because:
- It protects products from atmospheric conditions like too much sunshine, germs, dust, rain
 - It allows the product to be sold at self-use.
 - It allows the products to be stocked easily in shops.
 - It allows the sellers to attract the costumers

LESSON 2: Procurement process

a) Learning objectives: Describe the procurement process.

b) Teaching resources: students' books, computers, internet, books, case studies other reliable resources, lesson plans, pro-forma invoice and enhance learning

c) Prerequisites/Revision/Introduction (guidance on how to start the lesson): At the school teacher invite the accountant from school and discuss with the students in their groups how the school purchases foods and other material at school.

d) Learning activities 3.2

Activity 3.2

- Invite the student to read the question
- Let them have to brainstorm the answers
- Let them share information as they sit on chairs
- Ensure that there is no student who do not understand the questions.

Activity Answers 3.2

1. Procurement is the process of finding and agreeing to terms, and acquiring goods, services, or works from an external source, often via a tendering or competitive bidding process.
2. The goods are supplied or delivered by suppliers.
3. There are three main stages of procurement stages: Sourcing stage, purchase stage and payment stage.
4. Some documents used in procurement process are :
 - Purchase requisitions
 - Letter of inquiry
 - Quotation
 - Purchase order

Link the students' answers with the new lesson.

e) Application activities 3.2

- Invite students to read, discuss in pairs the application activities in the student book
- Have some pairs to present their findings
- Ask other pairs to supplement
- Give constructive feedback

Application Activity Answers 3.2

1. **Goods produced by AMAHORO PLC are** : breads, cakes, sandwiches
2. **The materials needed** are wheat flour, sugar, kitchen oil, salt, water, gas, etc.
3. **AMAHORO PLC faces different challenges included:** lack of materials, increase of market price, increase of price on market, increase of transport expenses and high demand.
4. **Strategies to use for overcoming the challenges are:** Illustrating the procurement process, prepare the necessary useful documents, elaborating the valid written contract, using E-procurement, producing more production according to the demand.
5. **For maintaining the suppliers:** the business should elaborate the valid contract.

LESSON3: Labor

a) Learning objectives: -Define the term “labor”

- Explain the labor recruitment.
- Explain labor recruitment stages
- Explain the labor turnover structure

b) Teaching resources: students’ books, computers, internet, books, case studies other reliable resources, lesson plans, contract samples and enhance learning

c) Prerequisites/Revision/Introduction (guidance on how to start the lesson): At the school; the teacher invites the headteacher (school manager) from the same school and discuss with the students in their groups how the school process the recruitment of storekeeper and the steps follow in recruitment.

d) Learning activities 3.3

Activity 3.3

- Invite the student to read the question
- Let them have to brainstorm the answers
- Let them share information as they sit on chairs
- Ensure that there is no student who do not understand the questions.

Activity Answer 3.3

1. The core elements of cost in production process are: material, labor and overheads.
2. **Recruitment process stages are:** Definition of a post, Definition of the candidate’s profile, Identification of recruitment sources, Implementation of recruitment means, Recruitment Campaign, Selection, Pre-selection, Tests of selection, Interview, Recruitment decision and Integration
3. **The challenges of labor recruitment are:** Organization policy, Recruitment agent habit, Post requirements, Recruitment cost.
4. No, because there is always the labor turnover in different institutions.

Link the students' answers with the new lesson.

e) Application activities 3.3

- Invite students to read, discuss in pairs the application activities in the student book
- Have some pairs to present their findings
- Ask other pairs to supplement
- Give constructive feedback

Application activity answer 3.3

1. Definition of:

a) Labor: is the physical or mental effort expended in manufacturing a product or rendering service.

b) Labor turnover: is the movement of workers in and out of employment with a particular firm for specific period of time.

c) Labor turnover rate: is the percentage rate at which the workers/ labors are leaving in or out of business for specific time of business

d) Recruitment: is the process of actively seeking out, finding, hiring and integrating new candidates for a specific position or job.

2. The challenges facing recruitment are the Organization policy, Recruitment agent habit, Post requirements Recruitment cost

3. The business must avoid the labor turnover because:

Recruitment is higher costly to the business

Labor turnover leads to the interruption of process of production

Labor turnover leads to the loss of franchise of business

LESSON 4: Cost

a) Learning objectives: -Describe the "cost".

b) Teaching resources: students' books, computers, internet, books, case studies other reliable resources, lesson plans, contract samples and enhance learning

c) Prerequisites/Revision/Introduction (guidance on how to start the lesson: The student have the knowledge from unit one called: the nature of businesses transaction to the accounting system

d) Learning activities 3.4

Activity 3.4

- Invite the student to read the question
- Let them have to brainstorm the answers
- Let them share information as they sit on chairs
- Ensure that there is no student who do not understand the questions

Activity Answer 3.4

The basic of production process in organization is the necessary (direct) materials and labor costs. Their costs become the key factor in production of any item across all the businesses.

Link the students' answers with the new lesson.

e) Application activities 3.4

- Invite students to read, discuss in pairs the application activities in the student book
- Have some pairs to present their findings
- Ask other pairs to supplement
- Give constructive feedback

Application Activity Answer 3.4

1. Cost is the value of economic resources used as a result of production of any commodity or performing any service.
2. **Types of costs due to their behavior**
 - a) **Fixed cost:** This cost does not change with the change in output. It is a cost remains the same even at zero level of output.
 - b) **Variable cost:** is that cost which changes with the level of production. When production increases, variable cost also increases. Similarly, when production decreases, variable cost also decreases.
 - c) **Semi-variable cost:** is the cost which remains the same up to a specific level of output and beyond that level this cost may change by a specific amount.

LESSON 5: Expenses.

a) **Learning objectives:** - Describe the expenses

b) **Teaching resources:** students' books, computers, internet, books, case studies other reliable resources, lesson plans, and enhance learning.

c) Prerequisites/Revision/Introduction (guidance on how to start the lesson: The student have the knowledge from unit one called: the nature of businesses transaction to the accounting system

d) Learning activities 3.5

Activity 3.5

- Invite the student to read the question
- Let them have to brainstorm the answers
- Let them share information as they sit on chairs
- Ensure that there is no student who do not understand the questions

Activity Answer 3.5

The money owned by the business is used to purchase the fixed assets that will be later profitable and current asset that is profitable in the same period of year. However, there is unexpected of exact return that is the expense.

Link the students' answers with the new lesson.

e) Application activities 3.5

- Invite students to read, discuss in pairs the application activities in the student book
- Have some pairs to present their findings
- Ask other pairs to supplement
- Give constructive feedback

Application Activity Answer 3.5

1. Expense means the expired cost or an expenditure the benefits from which do not extend beyond the present.
2. Types of expenses:
 - Direct expenses: is a kind of expense that that is directly linked to the product.
 - Indirect expenses: is a kind of expense that is not directly ascertained to the product
 - Joint expenses: is a kind of indirect expense but its absence lead to non-performance of product.

LESSON 6: Centre

a) Learning objectives:-Describe the “Center”.

b) Teaching resources: students’ books, computers, internet, books, case studies other reliable resources, lesson plans, and enhance learning.

c) Prerequisites/Revision/Introduction (guidance on how to start the lesson: The student has the knowledge from unit one called: the nature of businesses transaction to the accounting system

d) Learning activities 3.6

Activity 3.6

- Invite the student to read the question
- Let them have to brainstorm the answers
- Let them share information as they sit on chairs
- Ensure that there is no student who do not understand the questions

Activity Answer 3.6

1. The scenario is talking about the poultry project.
2. The main purpose of doing business activity is to gain profit.
3. All activities involving IKIREZI PLC is investment or expenditures.
4. The challenge faced by IKIREZI PLC is missrecording /non recording of accounting data.
5. The company should hire the professional accountant as a solution of those challenges.
6. The responsibilities of hired accountant are:
 - Recording income and expenditure transactions
 - Preparing the periodic reports

Link the students’ answers with the new lesson.

e) Application activities 3.6.

- Invite students to read, discuss in pairs the application activities in the student book
- Have some pairs to present their findings
- Ask other pairs to supplement
- Give constructive feedback

Application Activity Answer 3.6

1. Center means a location, person, or item of equipment for which costs may be ascertained and used for the purposes of cost control.
2. The main centers found in manufacturing business are cost center, revenue center and profit center. Cost center is focusing on the costs from the business, where revenue center concerning the revenue and profit center shows the difference occurs from cost center and revenue department other hand

3.5 Summary of the unit

- Material in management accounting described as part of inventory. Basically, material and raw material are used for same purpose. This is main part of total cost of production. It can reduce or increase according to the fluctuation in production.
- Procurement process is the process of finding and acquiring all of the goods, services, and works an organization needs to operate and fulfill its business model.
- Labour concerning process used for engagement of workers in the organisation.
- Expenses is the other money used in the organisation but not affect directly the product produced in that organisation
- Cost is economic value of money spent but for gaining profit in future.
- Centres is a particular part of an enterprise such: purchase department, production department etc.

3.6 Additional Information

In this unit for more understanding of the content is necessary to visit the manufacturing company for showing clearly the student how the cost is different in the manufacturing company and how the company process the recruitment.

3.7 End unit assessment

1. Definition of terms
 - a) Raw material: are substances that are either available naturally (like wood, or produced by farmers, herders, and are ready to be manufactured to finished products
 - b) Labor cost: is the remuneration paid as compensation to a person effort spent on work or rendering a service.
 - c) Revenue center : part of business concerning the revenue
 - d) Procurement: is the process of finding and agreeing to terms, and acquiring goods, services, or works from an external source.
2. Raw materials are those materials that are not yet introduced in process of production where by Working in Progress are the raw materials introduced in production process but not yet finished.
3. Reasons of labor turnover are:
 - Economic growth
 - Slower growth of job seekers
 - Unemployment rate at low levels
 - Shortage of special skills
 - Entrepreneurship (innovation and creativity)
 - Job changes for more favorable climates
4. Importance of procurement are :
 - a) Avoiding the interruption to production process
 - b) Reduction of high cost in inflation period
 - c) Maintaining the good relation with customers
 - d) Rendering better service to the stakeholder
5. Limitation of procurement are:
 - Organization policy
 - Recruitment agent habit
 - Post requirements
 - Recruitment cost
6. Different documents used in procuremnt:
 - **Goods delivery note**

It is a commercial document sent by the supplier together with goods. It proves that the goods have already been received by the buyer organization.

▪ **Rejection or return of goods**

If goods received do not match with specified quality or these goods are not according to description given in the purchase order

▪ **Invoice**

Invoice is a document which gives the quantity, quality, unit price, total value of goods dispatched, any discount allowed, transport charges if any etc.

7. Like the recruitment is defined above, its process is important because each item produced from business require not only raw materials but also labor efforts. Those personals needed should be in specific skilled according to the tasks. The skilled labor, recruited/ hired must produce the items with high quality that allow the business to maintain the stakeholder specifically customer and increasing the revenues. Once the increase of sale is maintained, the business obtains an increase of profit that leads the business to be strong.

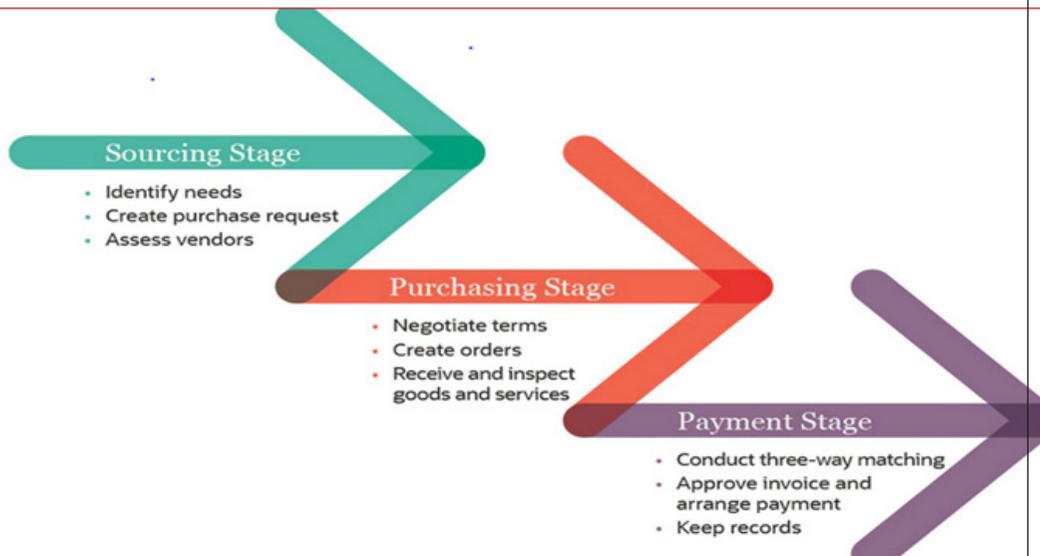
Additional activities

Remedial activities Answer

- 1) Definition
 - a) Good received note is a document written by buyer to seller indicating the goods received.
 - b) Material return note: is a document written by buyer to seller showing the goods sent but not coinciding with purchase order.
2. The importance of purchase department is to avail all resources needed by any other department to avoid the interruption of production process.
3. Various levels of materials are:
 - a) Raw materials
 - b) Working in progress
 - c) Finished goods

Consolidation activities Answer

1. Cost means the value of resources to use along process of production whereby the cost center is a department of business that is subject of cost/expenses.
2. The procurement process includes three main stages



Extended activities Answer

Suppose business A would like to hire a professional labor in cost accounting, the process of hiring to follow is: Definition of a post, Definition of the candidate's profile

Identification of recruitment sources, Implementation of recruitment means, Recruitment Campaign, Selection, Pre-selection, Tests of selection, Interview, Recruitment decision and Integration

Remedial Activities: Suggestion of Questions and Answers for remedial activities for slow learners.

- Consolidation activities: Suggestion of questions and answers for deep development of competences.
- Extended activities: Suggestions of Questions and Answers for gifted and talented students.



UNIT 4

CODING DATA METHODS

4.1 Key unit competence:

Identify correctly different methods of coding data in the company

4.2 Prerequisite:

Analyse the nature of business transaction to accounting system, Identification types of purchase, Identification of materials, Mathematics, English

4.3 Cross-cutting issues to be addressed:

- * **Gender education:** Remind students that both males and females have similar opportunities, rights and obligations in the workplace, and therefore need to be treated fairly and equally when dealing with contracts or resolving conflicts. People's opinion of gender roles should not deny or hinder one's right or responsibilities to meet his or her contractual obligations while teaching contracts in business operations.
- * **Environment and sustainability:** During codification, students need to acknowledge of the environment, and sustainable code as well in expansion of the business activities
- * **Inclusive education:** All students need to realize that universal laws do not discriminate as they do apply to all regardless of social, economic, political, physical background. Emphasis should be put on how we all have the same rights. During business organization unit, Student may discuss and appreciate need to respect and advocate for employer's and worker's rights and responsibilities at a workplace.
- * **Peace and Values:** Right before the lesson begins; there are quite a lot of opportunities for teachers to promote peace and values. Being punctual for activities (time management), involvement in various activities (teamwork), keeping their school environment clean (responsibility), greeting one another are among such opportunities (empathy).

- * **Financial Education:** For example, in setting personal goals, students, may know when they expense of codification incur. Students may describe strategies to reduce spending money for codification.

4.4 Guidance on introductory activity

Explaining the purpose of the introductory activity

This activity is intended to:

- To Provide meaning of coding system.
- To provide the challenge of coding system

Introductory Activity answer

Coding system is away by which the materials of business are recognized/ identified for better use. All equipment are coded by using different methods such as numerical, alphabetical for facilitating management in the daily control. However, this system faces with many challenges due to organizational structure.

List of lessons/sub-heading

#	Lesson title	Learning objectives	Number of periods (p)
1	Definition of coding and object to be coded	Define term" coding".	3p
		Clarify the materials to be coded	
2	Explain the principles of coding	Identify Principles of coding	3p
3	Methods of coding and importance of coding	Distinguish methods of coding	3p
		Explain the importance of coding in business	
Total number of periods			6p

LESSON 1: DEFINITION OF CODING AND OBJECT TO BE CODED

- a) Learning objectives:** Define term" coding". And object to be coded
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted: Students books, internet, case studies and any other trustworthy and reliable resources to enhance learning.

c) Possible methods: Pair share; small group discussion, brainstorm, research in the library, and research on the internet.

d) Teaching activities

Students in small groups, pairs or individual, do research and analyse the illustration to derive the meaning of coding. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results from the activity. Encourage different students from the groups to share the group's work to avoid just a few students dominating. Encourage students to respect other students' contributions to the activity.

Students discuss their answers with the whole class. Assess their answers depending on the purpose of the activity. Refer to the possible answers below as you assess their work. Conclude the lesson by guiding the students on the meaning and material

Activity answer 4.1

- a) KAMALI wants to assign a code to each item of asset for classification or identification.
- b) KAMALI needs to encrypt the all items from the business. Those items include current assets (inventory) and fixed assets (office machine, Plant and Equipment).

Application Activity Answer 4.1

I. Examples of objects to be coded in fixed assets are:

- 1. Vehicle and truck
- 2. Office furniture (Desk, Chair, Filing cabinet, Bookcases)
- 3. Photocopy machine
- 4. Printer machine
- 5. Laptop
- 6. Computer accessories (Monitor stand, Laptop stand, Key board, Mic,Router)
- 7. Stamps (postage machine)

II. Examples of objects to be coded in current assets are

Rice, beans, ...

LESSON 2: Methods of coding and importance of coding

- a) Learning objectives:** Distinguish correctly methods of coding company's asset
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted, students books, and any other trustworthy materials and reliable resources to enhance learning.
- c) Possible methods:** Pair share; small group discussion, brainstorm, research in the library, and research on the internet.
- d) Teaching activities**

Students in small groups, pairs or individual brainstorm on the method of coding assets and identify importance of coding. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Monitor to confirm whether everyone is working on the activity, instructions were understood, address any challenges or questions, ensure that everyone is given an opportunity and are contributing in-group discussions. Encourage students to work together, value each other's contributions, share ideas, etc.

Student present their findings, results, answers through an appropriate method such as pair-share, small group presentations from the activity. Encourage different students from other groups to share their views and avoid just a few students dominating.

Answers to Activity 4.2

a) Methods of coding:

- * Mnemonic
- * Decimal
- * Numerical
- * Alphanumeric
- * Alphabetical
- * Color codification

b) Importance of coding

- a) Avoidance of length description
- b) Accurate Identification of stores
- c) Maintenance of secrecy
- d) Prevention of duplication
- e) Convenient in preparing Materials forms
- f) Simplification of stores accounting

Teaching activities

This activity can be done individually or in small groups. Give clear instructions and ensure a balance in the groups. Monitor the activity to ensure Students are on way and actively participating.

Students share their findings to the large group. Assess their answers depending on the purpose of the application activity.

Refer to the possible answers below as you assess their work.

LESSON 3: Explain the principles of coding

- a) Learning objective:** Identify Principles of coding during codification of company's asset.
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted, Students books, and any other trustworthy materials and reliable resources to enhance learning.
- c) Possible methods:** Pair share, small group discussion, brainstorm, research in the library, research on the internet.
- d) Teaching activities**

Students in small groups, pairs or individual, Identify Principles of coding following the instructions given. During grouping or pairing, ensure a balance between boys and girls and students' different abilities.

Students present their findings, results, answers through an appropriate method such as pair-share, small group presentations from the activity.

Harmonize their findings or answers referring to possible responses, and link the findings to the teaching objective.

Answer of activity 4.3

The guidelines to use are known as principles. Those are:

- * Exclusive
- * Certainty
- * Elasticity
- * Brevity
- * Memorization
- * Uniformity

Teaching activities

This activity can be done individually, in pairs, or small groups.

Give clear instructions and ensure a balance in the groups. Monitor the activity to ensure students are on track and actively participating.

Students share their findings to the large group. Assess their answers depending on the purpose of the application activity. Refer to the possible answers below as you assess their work.

Application activity answer 4.3

- * **Exclusive:** Each item should have unique code
- * **Certainty:** code used should be certain no possibility of confusion
- * **Elasticity:** code number should be arranged in such a way that it must be possible to add new items.
- * **Brevity:** Code should be as brief as possible
- * **Memorization:** It should be easy and possible to remember and understand the code numbers
- * **Uniformity:** Codes should be of equal length and of the same structure

Skill lab

1. Method used for coding:

- * **Mnemonic:** Different alphabets are used to help the memory
- * **Decimal:** whole and decimal numbers are used for the identification of different overhead.
- * **Numerical:** A numerical coding system is where the code is entirely numerical
- * **Alphanumeric:** An alpha-numeric coding system uses a mixture of letters and numbers to code the ledger account
- * **Alphabetical:** An alphabetic coding system uses just letters to code the ledger accounts
- * **Color codification:** colors marking are used to denote code numbers

2. Advantages of coding are:

- * Avoidance of length description
- * Accurate Identification of stores
- * Convenience in issue of materials
- * Maintenance of secrecy

4.5 Summary of unit

Coding is management method which uses symbols or numbers in order to represent specification or categories of item, so that it is easy to recognize, track and monitor them.

Object to be coded: all physical assets and inventory must have symbols.

Principles of coding

- Exclusive
- Certainty
- Elasticity
- Brevity
- Memorization
- Uniformity

* **Importance of coding materials in business.**

- Avoidance of length description
- Accurate Identification of stores
- Convenience in issue of materials
- Simplification of stores accounting
- Prevention of duplication
- Convenient in preparing Materials forms
- Other advantages

4.6 Additional information for teachers

By visiting different office, student observe all material coded

Material are coded for immediate identification. If there are different sizes or model of any materials the code number to these different size or model will assist to identify them. In this presence of the code numbers it becomes easy and simple to locate those item immediately and convenient.

4.7 Answers to end unit assessment activities

1. Coding is the process of assigning an encryption to something for classification or identification.
2. Object to be coded in fixed asset in company:

Office furniture

- Desk
 - Chair
 - Filing cabinet
 - Bookcases
- a) Office machine
 - b) Photocopy machine
 - c) Printer machine

d) Laptop

e) Computer accessories:

a) Monitor stand

b) Laptop stand

c) Key board

d) Mic

e) Router

f) Stamps (postage machine)

3. Materials we can use color codification are:

- * Metals
- * Cables
- * Small component parts
- * Drums of oil
- * Green for Iron
- * Blue for Steel
- * Red for Copper
- * Black for Aluminum

4.8 Additional activities

4.8.1 Remedial activities

- What do you understand by the term: coding, material to be coded?

Possible answer

- a) Coding is the process of marking assets for classification or identification
- b) Material to be coded are those physical fixed asset or inventory item

4.8.2 Consolidation activities

- Describe the technique of coding of properties of industry.

Possible solution:

Method used for coding:

- **Mnemonic:** Different alphabets are used to help the memory
- **Decimal:** whole and decimal numbers are used for the identification of different overhead.
- **Numerical:** A numerical coding system is where the code is entirely numerical
- **Alphanumeric:** An alpha-numeric coding system uses a mixture of letters and numbers to code the ledger account
- **Alphabetical:** An alphabetic coding system uses just letters to code the ledger accounts
- **Color codification:** colors marking are used to denote code numbers

4.8.3 Extended activities (Questions and answers)

- Discuss the importance of codification of materials

Possible solution:

- **Avoidance of length description:** codification helps in avoiding the use of length names and description for store item, thus saving time and energy
- **Accurate Identification of stores:** codification assists in the accurate and convenient identification of store items. Easy identification of store items saves time and cost involved in store handling.
- **Convenience in issue of materials:** codification of store items on scientific lines helps in eliminating the possibility of errors in issue of materials. It also increases the efficiency of store-keeping staff.
- **Maintenance of secrecy:** every manufacturing concern, owing to necessity, attempts to keep its production activities and processes a secret. codification of store items helps in maintaining secrecy in production activities.
- **Simplification of stores accounting:** codification of stores items helps in maintaining accurate records since scientific codification enables systematic.
- **Prevention of duplication:** codification prevents the duplication of items. As all similar items in the store are grouped together. When an item is coded once, it is not assigned an alternative name.
- **Convenient in preparing Materials forms:** codification of store items makes the preparation of various forms and documents relating to stores easy and convenient. (e.g., Bill of Materials, Purchase of Requisitions, and Material Requisition).
- **Other advantages:** codification helps in the standardization of store items and in the reduction in their variety. It also helps in reducing storage cost and increasing efficiency.



UNIT 5

MATERIAL AND INVENTORY MANAGEMENT IN ORGANIZATION

5.1 Key unit competence:

Explain different types of material inventory and methods used in inventory management

5.2 Prerequisite

(Unit one The nature of businesses transaction to accounting system, coding of asset, income and expenditures)

5.3 Cross-cutting issues to be addressed:

- * **Environment and sustainability:** Integration of Environment, Climate Change and Sustainability in the curriculum focuses on and advocates for the need to balance economic growth, society well-being and ecological systems. Students during this lesson should be able to show great concern on natural resources and environment. They should for instance be able to integrate environmental protection dimension in their procurement procedures.
- * **Peace and Values Education:** Peace and Values Education (PVE) is defined as education that promotes social cohesion, positive values, including pluralism and personal responsibility, empathy, critical thinking and action in order to build a more peaceful society. Through this stock control unit, a teacher should demonstrate that good stock management will promote good relations between employees and employers, managers and shareholders/business owners, etc. Students also need to work in harmony during group activities and other activities provided by the teacher.
- * **Gender:** Teacher should address gender as a cross-cutting issue through assigning leading roles in the management of groups to both girls and boys and providing equal opportunity in the lesson participation and avoiding any gender stereotype in the whole teaching and teaching process.

- * **Financial education:** The integration of Financial Education into the curriculum is aimed at a comprehensive Financial Education program as a precondition for achieving financial inclusion targets and improving the financial capability of learners. Emphasis has to be put on how students need to be financially responsible and this requires them also to be careful with how they can use available resources in the whole process of stock management. Through this unit, students will be able to appreciate the need to take care of resources and therefore note to them that utilizing resources efficiently is one way of being financially responsible in the long run.
- * **Standardization Culture:** Standardization Culture will be promoted through formal education and plays a vital role in terms of health improvement, economic growth, industrialization, trade and general welfare of the people through the effective implementation of Standardization, Quality Assurance. Emphasis has to be put on standard business legal aspect. Students should for instance be aware that in procurement procedures and during perpetual and periodical inventory control, business owners and stock managers will verify whether goods and services are designed, manufactured and supplied in a manner that matches the needs of the entire society, expectations and requirements of the purchasers and consumers, as well as those of the regulatory authorities in the local, regional and international markets
- * **Inclusive Education:** Inclusion is based on the right of all students to a quality and equitable education that meets their basic teaching needs, and understands the diversity of backgrounds and abilities as a teaching opportunity. Firstly, teachers need to identify/recognize students with special needs. Then, by using adapted teaching and learning resources while conducting a lesson and setting appropriate tasks to the level of students, they can cater for learners with special education needs.

5.4 Guidance on introductory activity

This activity is intended to provide interest and motivation for students to appreciate the need for stock management and inventory control in business. The introductory activity will also arouse students' interests about what to expect in this unit as they answer the questions that follow in the activity. Previous knowledge, skills, values and attitudes of students can help you to link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning (for example small groups or pairs, experience sharing, case studies, etc.). Provide students with the introductory activity in the students' book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and students' different abilities

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge students to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell students that they will learn more about stock management and inventory control in the corresponding lessons. Answers to the activity will be got as the unit progresses. You can support student's answers by referring to the following guidelines on responding to the introductory activity.

Introductory activity Answers

1. The main causes of poor inventory control:

- a) Limited skills and competencies
- b) Ineffective inventory management system
- c) Lack of experience about procurement procedures and clients' needs
- d) To be overloaded
- e) Poor communication between concerned persons
- f) Lack of clear guidelines

2. Main effects of poor stock management and inventory control on the industry:

- a) Missing items in the stock, despite their need by clients
- b) Goods rejected due to the expiration and damage
- c) Clients not satisfied
- d) Decreased number of customers,
- e) Decreased revenues,
- f) Difficulties in financial analysis and reporting

3. Advices to KARENZI and his employee are:

- a) Making inventory control a priority
- b) Review of their stock management system and prepare basic documents to be used, guidelines, etc.

4. What can be done in order to avoid incidents related to poor stock management in businesses:

- a) To have documents and templates to be used in stock management process
- b) Have clear guidelines/policies
- c) Competent and skilled persons
- d) Use modern Information Technology

List of lessons/sub-heading

	Sub-heading	Lesson title	Learning objectives (from the syllabus or set according to the lesson title)	Number of periods
1	Describe the material inventory	Definition of material inventory	Define material inventory	2p
		Stock-keeping and features of good store-keeping	Illustrate the structure of stock-keeping and feature of store keeping	4p
		Types of stock and conditions of good stocking.	Clarify the types of store and good condition of stocking in organization	4p
2	Stock control	Definition of stock control	Define and give the objectives of stock control	3p
		Inventory system	Demonstrate the methods of computing the material issue	1p
		Computation of stock levels		4p
		Factors affecting stock levels	Explain the factors that change the stock.	3p

3	Methods of material issues	First in First out (FIFO)	Demonstrate the methods of computing the material issue.	3p
		Last in First out (LIFO)		2p
		Averages Methods (simple and Weighted (SA&WA)		3p
		Base stock, Replacement cost (RC), Standard price (SP) methods.	3p	
End unit assessment				3p
Total number of periods				35p

LESSON 1: DESCRIBE THE MATERIAL INVENTORY

- a) Learning objective:** Define material inventory, illustrate the structure of stock-keeping and feature of store keeping, Clarify the types of store and good condition of stocking in organization
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted: Student s books, internet, case studies and any other trustworthy and reliable resources to enhance learning.
- c) Prerequisites:** Nature of businesses transaction to accounting system, Source of income and expenditure information, Component of cost in organization, Coding of data methods.
- d) Learning activities Activity 5.1**

Invite students to read individually the question in the student book and work in pairs to share with the classmates.

Have some pairs make presentations

Provide constructive feedback in terms of supplements

Activity answer 5.1

1. Material inventory: is one component of a manufacture's inventory. Sometime referred to as Store or raw materials.

2. Features of good Store –keeping:

- * Immediate location materials of materials
- * Speed receipt and issue of materials.
- * Keeping correct and up to date record of receipt, issues and stock balance of materials.
- * Full identification of all materials at all times.
- * Production of materials against pilferage and deterioration.
- * Protection of materials against fire and theft
- * Economic use of storage space

3. Types of stores are :

The main types of stores are as under:

- a) Centralized stores
- b) Decentralized stores
- c) Imprest stores

e) Application activities 5.1

- Invite students read, discuss in pairs the application activities in student book
- Have some pairs to present their findings
- Ask other pairs to supplement
- Give constructive feedback

Application Activity Answers 5.1

1. a. Three (3) documents that can be used are:
 - * Goods delivery note
 - * Goods received note
 - * Material transfer note
- b. Five (5) elements included in store ledger cards
 - * Date, Received units, unit price, total price,
 - * Issued units, unit price and Balance unit, balances values.
- c.

	Document to be prepared	Sender of documents	Receiver of documents
Receiving goods ordered	Goods received note	Buyer	Seller
Shipping goods to supplier	Goods delivery note	Supplier	Buyer

LESSON 2: Stock control

a) Objectives:

Define and give objectives of stock control

Demonstrate the methods of computing the material issue

Explain the factors that change the stock

b) Teaching resources: Basic materials for a class/ lesson to be conducted: Student's books, internet, case studies and any other trustworthy and reliable resources to enhance learning.

c) Prerequisites: Nature of businesses transaction to accounting system, Source of income and expenditure information, Component of cost in organization, Coding data methods.

d) Learning activities Activity 5.2

Invite students to read individually the question in the student book and work in pairs to share with the classmates.

Have some pairs make presentations

Provide constructive feedback in terms of supplements

Activity answers 5.2

1. a. Stock control means process of making sure that the business has the right quantity of goods, in the right place and at the right time.
- b. Factors that affect stock level are:
 - * Economic Order Quantity
 - * Re-order quantity
 - * Availability of materials
 - * Lead time
 - * Stockholding cost
 - * Consumption
 - * Trade discount
 - * Durability of material
- c. Types of stocks are the following:
 - * Stock of raw materials
 - * Stock of semi- finished goods
 - * Finished goods

Application activity 5.2

- Make groups of five
- Invite students to read the case study in the students' book
- Guide students' discussion and sharing of ideas
- Have some groups to present findings
- Provide additional explanations on students' answers and constructive feedback

Application Activity Answers 5.2

$$\text{Economic order quantity (E.O.Q)} = \sqrt{\frac{2 \times 120 \times 20}{20\% \text{ of } 100}}$$

$$\text{Economic order quantity (E.O.Q)} = \sqrt{\frac{4800}{20}}$$

$$\text{Economic order quantity (E.O.Q)} = \sqrt{240} = \mathbf{15 \text{ pieces (approximately)}}$$

2.

a) Re-order level = 300 units per month x 4 months = 1,200 units

b) Minimum level = 1,200 units - (150 units per month x 3 months) =
1,200 units - 450 units = 750 units

c) Maximum level = 1,200 units - (50 units per month x 2 months) + 300 units = (1,200 units - 100 units + 300 units) = **1,400 units**

d) Average stock level = $\frac{\text{Minimum level} + \text{maximum level}}{2}$

$$\frac{750 \text{ units} + 1,400}{2 \text{ units}} = \mathbf{1,075 \text{ units}}$$

$$\text{Economic order quantity (E.O.Q)} = \sqrt{\frac{2 \times 1800 \times 2}{0.32 \times 25\%}}$$

$$\text{Economic order quantity (E.O.Q)} = \sqrt{\frac{7,200}{0.08}}$$

$$\text{Economic order quantity (E.O.Q)} = \sqrt{90,000} = \mathbf{300 \text{ units}}$$

LESSON 3: Methods of material issues

a) Objective: Demonstrate the methods of computing the material issue.

b) Teaching resources: Basic materials for a class/ lesson to be conducted: Student's books, internet, case studies and any other trustworthy and reliable resources to enhance learning.

c) Prerequisites: Nature of businesses transaction to accounting system, Source of income and expenditure information, Component of cost in organization, Coding materials.

d) Learning activities Activity 5.3

Invite student to read individually the question in the student book and work in pairs to share with the classmates.

Have some pairs make presentations

Provide constructive feedback in terms of supplements

Activity Answer 5.3

The different methods of material issues to be used in MUHIRE business are FIFO, LIFO, AVERAGE , Base stock, Replacement cost (RC), Standard price (SP) methods.

e) Application activity 5.3

- Distribute small sheets of paper on which it is written a scenario
- Split students into groups of 4 or 5;
- Invite students to share ideas in groups
- Ask each group to present findings in plenary
- Provide supplements

Application activity Answer 5.3

The different methods of material issues to be used in MUHIRE business are: FIFO ,LIFO, AVERAGES ,Base stock, Replacement cost (RC), Standard price (SP) methods.

5.5 End unit assessment Answers Q1

Application Activity Answer 5.3

DATE	RECEIPTS			ISSUES			BALANCES		
	Units	Unit Price (Frw)	Total Price (Frw)	Units	Unit Price (Frw)	Total Price (Frw)	Units	Unit Price (Frw)	Total Price (Frw)
2019	-	-	-	-	-	-	100	800	80,000
July 1				-	-	-		(A)	
July 5	120	700	84,000				220	800	164,000
July 12				120	700	84,000	100	800	80,000
				80	800	64,000	20	(B)	16,000
July 18	30	720	21,600	-	-	-	50	(C)	37,600
July 22	-	-	-	20	720	14,400	30		23,200

Working:**Unit cost (A)**

120 units @ Frw 700 = Frw84,000

100 units @Frw 800 = Frw80,000 Frw 164,000

Units costs (B)

30 units @ Frw720 = Frw21,600

20 units @ Frw = Frw16,000 Frw 37,600

Units cost (C)

10 units@ Frw 720 = Frw7,200

20 units@Frw800 =Frw16,000 Frw23,200

30 units of MUHIRE in stock are valued at Frw 23,200

Q 2. Disadvantages of using LIFO valuation in stock valuation

- * Result in an outdated stock valuation being reported in the balance sheet.
- * Complicated to understand and apply as the cost of each particular unit must be ascertained.
- * Major issue with LIFO method is that it understates the value of ending inventory.
- * Management may feel more pressure if majority of inventory is procured at the beginning of the period under inflation economy.

5.6 SUMMARY OF THE UNIT

Stock-keeping: It means keeping the stock of materials and keeping the stores records.

Computation of stock levels each student must know how we calculate different stock level

Factors affecting stock levels:

- Economic order quantity
- Re-order quantity
- Availability of materials
- Lead time

- Stockholding cost
- Consumption
- Trade discount
- Durability of material

Methods of calculating

First in First out (FIFO)

Last in First out (LIFO)

Averages Methods (simple and Weighted (SA&WA)

Base stock, Replacement cost (RC), Standard price (SP) methods.

Note: All unsold materials / inventory i.e closing stock of raw materials, closing stock of working in progress or semi-finished goods, closing stock of finished goods must in closing balance sheet of manufacturing industry.

Additional information for teachers

Another less widely used classification of stock of basic inventories.

- **Buffer Inventory:** Buffer inventory is the inventory kept or purchased for the purpose of meeting future uncertainties. Also known as safety stock, it is the amount of inventory besides the current inventory requirement. The benefit is smooth business flow and customer satisfaction and disadvantage is the carrying cost of inventory. Raw material as buffer stock is kept for achieving nonstop production and finished goods for delivering any size, any type of order by the customer.
- **Anticipatory Stock:** Based on the past experiences, a businessman is able to foresee the future trends of the market and takes certain decisions based on that. Expecting a price rise, a spurt in demand etc some businessman invests money in stocking those goods. Such kind of inventory is known as anticipatory stock. It is normally the raw materials or finished goods and this strategy is executed by traders.
- **Decoupling Inventory:** In manufacturing concern, plant and machinery should always keep running. The act of stopping machinery, costs to the entrepreneur in terms of additional set up costs, repairs, idle time depreciation, damages, trial runs etc. The reason for halt is not always demand of the product. It may be because of availability of input. In a production line, one machine/process uses the output of other machine/ process. The speed of different machines may not always integrate with each other. For that reason, the stock of input for all the machines should be sufficient to keep the factory running. Such WIP inventory is called decoupling inventory.

5.6 Additional activities

5.6.1 Remedial activities (Questions and answers)

1. A company makes regular purchases of particular packing materials.

The price of this material has been increasing steadily during the latest period, and this trend is likely to continue into the predictable future.

Which of the following methods will produce the lowest closing inventory valuation?

- A. First in, First Out (FIFO)
- B. Last in, First out (LIFO)
- C. Next in, First out (NIFO)
- D. Average price

Solution b. use of the LIFO inventory valuation method result in closing inventories being valued at the oldest price

2. In a period of continual price inflation for materials purchases, which of the following statements is true?
- a) The LIFO method will produce lower profit than the FIFO method, and lower closing inventory values.
 - b) The LIFO method will produce lower profit than the FIFO method, and higher closing inventory values.
 - c) The FIFO method will produce lower profit than the LIFO method, and lower closing inventory values.
 - d) The FIFO method will produce lower profits than the LIFO method, and higher closing inventory values.

Solution is A.

3. The following information relates to question no 3 and 4

G LTD makes the following purchases and sales.

1 January	Purchases	4,000 units for FRW 10 m
31 January	purchases	1,000 Units for FRW 2 m
15 February	sales	3,000 units for FRW 13 m
28 February	purchase	1,500 units for FRW 3.75m
14 March	Sales	500 units for FRW 1.2 m

1. At 31 March which of the following closing inventory valuation using FIFO is correct?
- A. FRW 8 m
 - B. FRW 7.5m
 - C. FRW 7m
 - D. FRW 6.5m

Solution is: c

4. At 31 March which of the following closing inventory valuations using LIFO is correct
- A. FRW 6.5 m
 - B. FRW 7 m
 - C. FRW 7.5 m
 - D. FRW 8m

Solution is: c

5. Explain correctly Storekeeping

Solution: Storekeeping is keeping the sock materials and keeping the stores records

6. List two (2) features of effective store keeping

Solution: Features of effective store keeping

- a) Immediate location materials of materials
- b) Speed receipt and issue of materials.
- c) Keeping correct and up to date record of receipt, issues and stock balance of materials.
- d) Full identification of all materials at all times.
- e) Production of materials against pilferage and deterioration.

7. Find out the economic order quantity from the following particulars.

Annual usage: 3,000 units

Cost of material per units: FRW 10

Annual carrying cost per units: 10% of inventory value.

$$\text{Solution: } = \text{Economic order quantity (E.O.Q)} = \sqrt{\frac{2 \times 3,000 \times 60}{10 \times 10\%}} =$$

$$\text{Economic order quantity (E.O.Q)} = \sqrt{\frac{360,000}{1}} = 600 \text{ units}$$

5.6.2. Consolidation activities (questions and answers)

Calculate various stock levels from the following data:

Re order quantity = 360 units

Maximum consumption = 900 units per week

Normal consumption = 600 units per week

Minimum consumption = 300 units per week

Re-order period 3 to 5 weeks' emergency period = 2 weeks

Solution:

Re-order level = maximum consumption x maximum Lead time

$$900 \text{ unit's} \times 5 \text{ weeks} = 4,500 \text{ units}$$

Minimum level = Re order level - (normal consumption x Average Lead time)

$$4,500 \text{ units} - (600 \text{ units per week} \times 4 \text{ weeks}) = 2,100 \text{ units}$$

Maximum level = ((Re order level - minimum Consumption) + Re- order Quantity)

$$4,500 \text{ units} - (300 \text{ units per week} \times 3 \text{ weeks}) + 360 \text{ units} = ((4,500 - 900 \text{ units}) + 360 \text{ units})$$

$$= \mathbf{3,960 \text{ units}}$$

$$\text{Average stock level} = \frac{\text{Minimum level} + \text{maximum level}}{2}$$

$$\frac{2,100 \text{ units} + 3,960 \text{ units}}{3} = 3,030 \text{ Units}$$

Extended activities (Questions and answers)

1. The following information is extracted in the books of a stock manager:

200 bags of 50 kg of Terrazzo are bought in January 2016 at a cost of 10,000 Frw each

- 100 bags are sold in February
- 60 bags are bought in March at a cost of 9,500 Frw each
- 100 bags are sold in April
- 150 bags are bought in May at a cost of 9,800 Frw each.

From this information, prepare stock cards for cement using:

- a) FIFO
 - b) LIFO
 - c) WAC
2. Differentiate between bin card from store ledger card

Solution:

Bin card	Store ledger card
Bin card records only the quantity of the materials. Materials movements such as receipts, issues, and balances of materials are shown in quantity.	Store ledger is the subsidiary ledger of the cost ledger that tracks the movements of inventory with the value of the inventory.
Bin card recorded only the stock movements i.e receipts , issues , and balances of inventory.	Store ledger card is the accounting records of inventory.
store keeper maintain bin card	Costing department maintain the store ledger
Bin cards are update immediately after each transaction	Store ledger update periodically.
Bin Card is stock record in true sense	Store ledger is stock control records

Bin card cannot provide closing stock value for preparation of financial statement	Store ledger can provide closing stock value to prepare financial profit & loss account
The officer in charge of Bin card is responsible for any discrepancy in materials	The personnel in charge of the store ledger is not responsible for any discrepancy.
Interdepartmental transaction are not recorded in Bin Card	Interdepartmental transaction are recorded for costing purpose.

Answer 1

a) STORES LEDGER CARD UNDER FIFO (TERRAZZO)

DATE	Receipts			Issues			Balances		
	Quantity of sac of 50kgs	Cost per sac	Total Cost	Quantity of sac of 50kgs	Cost per sac	Total cost	Quantity of sac of 50kgs	Cost per sac FRW	Total Cost(
Balance at January	-	-	-	--	-	-	200	10,000	2,000,000
February	-	--	-	100	10,000	1,000,000	100	10,000	1,000,000
March	60	9,500	570,000	-	-	-	100	10,000	1,000,000
							60	9,500	570,000
							160		1,570,000
April	-	--	-	100	10,000	1,000,000	60	9,500	570,000
May	150	9,800	1,470,000	-	--	-	60	9,500,000	570,000
							150	9,800	1,470,000
							210		2,040,000

b) STORES LEDGER CARD USING LIFO (TERRAZZO)

DATE	Receipts			Issues			Balances		
	Quantity of sac of 50kgs	Cost per sac	Total Cost	Quantity of sac of 50kgs	Cost per sac	Total Cost	Quantity of sac of 50kgs	Cost per sac	Total Cost
2016									
Balance at January	-	-	-	--	-	-	200	10,000	2,000,000
February	-	--		100	10,000	1,000,000	100	10,000	1,000,000
March	60	9,500	570,000		-	-	100	10,000	1,000,000
							60	9,500	570,000
April	-	-	-	40	10,000	400,000	60	10,000	600,000
				60	9,500	570,000			
				100		970,000			1,570,000
May	150	9,800	1,470,000	-	-	-	60	10,000	600,000
							150	9,800	1,470,000
							210		2,070,000

c) STORES LEDGER CARD USING WAC (TERRAZZO)

DATE	Receipts			Issues			Balances		
	Quantity of sac of 50kgs	Cost per sac	Total Cost	Quantity of sac of 50kgs	Cost per sac	Total cost	Quantity of sac of 50kgs	Cost per sac FRW	Total Cost(
Balance at January	-	-	-	--	-	-	200	10,000	2,000,000
February	-	--	-	100	10,000	1,000,000	100	10,000	1,000,000
March	60	9,500	570,000	-	-	-	100	10,000	1,000,000
							60	9,500	570,000
							160		1,570,000
April	-	--	-	100	9,812.5	981,250	60	9,812.5	588,750
May	150	9,800	1,470,000	-	--	-	60	9,812.5	588,750
							150	9,800	1,470,000
							210		2,058,750



UNIT 6

LABOR MANAGEMENT

6.1 Key unit competence:

Calculate labor payment

6.2 Prerequisite (knowledge, skills, attitudes and values)

In previous units you have developed unit 3 called component of cost in organization, in which you have developed material, procurement process, labor, expenses and centers. This prior knowledge, skills or competences should help the learners to be able to develop the labor management, and it can help them to be able to calculate the labor cost and realize how they can determine wages using different methods.

6.3 Cross-cutting issues to be addressed:

Note: The examples below are just to guide you on how to address crosscutting issues throughout the unit but this does not mean that these are the only ones. You can address and give learners opportunities to discuss all the crosscutting issues where possible taking consideration of their environment or community around them.

- * **Gender education:** Emphasis throughout this unit has to be put on how females have the right of perform the same task as males, and tells them that both males and females have same chance to be employed and get the same wages when they perform the same task, which can be the source of equality and equity between both males and females in their local community. So as to promote better standard of living of their families and in the locality, by creation of business based employment opportunities and the country by paying taxes leading to socioeconomic development.
- * **Inclusive education:** In addition to all having equal opportunities to be employed, attention will be made on how we all regardless of our background have right to generate ideas that do not discriminate as

our needs are the same. Learners need to understand that business owners should not discriminate but promote inclusiveness of all.

- * **Peace and Values:** You need to emphasize on learners need to live in peace and harmony with others. Learners also need to develop positive attitude towards the society, customers, shareholders, environment, agriculture, and government, among others as the socio-economic development. They need also to know that the security is important for people to live in high standard of living.

6.4 Guidance on introductory activity

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the methods of calculating labor cost and bonus schemes, and the importance of recording labor information.

The introductory activity will also arouse learners' interests about what to expect in this unit as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners their groups, or pairs analyze the image in the introductory activity, then read the provided questions and provide answers.

Monitor group activities to ensure everyone is actively participating and heard; instructions clearly followed; and address any challenges/issues identified. Encourage learners to analyze the picture and think about it relationship with the asked questions about the labor management

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell learners that they will learn more about sources of income and expenditure information in the corresponding lessons.

Guide learners to share their findings on the activity, ensure learners of different needs and abilities are given opportunities to share or present their findings or answers.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Harmonize their findings or answers, and link the findings to the learning objective, help them draw conclusions/summary on team building steps or techniques. Guide them to make notes in reference to their learner's book.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Possible answers to introductory activity

1. It is about people working in an industry that produce bricks.
2. Each is doing the work which is differ from the one doing by another.
3. No, because they don't do the same task and the amount of salary depends on different factors.
4. They are supervising, and writing information that will help them to calculate the salary of employees about work.
5. Experience, number of units produced, degree, rate per hour, number of hours worked etc.
6. When he is working beyond normal working hours or when he is working during weekend days.
7. The company can pay him a high wage rate for those extra ours, or give to him a bonus.

List of lessons/sub-heading

	Sub-heading	Lesson title	Learning objectives (from the syllabus or set according to the lesson title)	Number of periods
1	Definition of terms used in labor management		Define different terms used in labor management	4p
2	Documents used in labor management		Identify different documents used in labor management	4p
3	Methods of computing wages	Time rate method	Prepare the payroll document	3p
		Piecework ticket		3p
		Presentation of payroll		3p
4	Bonus schemes	Halsey	Calculate the bonus according to different authors	2p
		Halsey Wear		2p
		Rowan		2P
5	Group incentive schemes.		Describe the group incentive scheme	4p
6	Allocation of Labor Cost		Distribute the labour cost to service	4p
End unit assessment				4p

LESSON 1: Definition of terms used in labor management

- a) Learning objective:** Define different terms used in labor management
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted: Learners books, internet and projector, text books, chalkboard, marker, pen, manila paper, image, resourceful person and any other trustworthy and reliable resources to enhance learning.
- c) Possible methods:** Square and share; small group discussion, brainstorm, research in the library, research on the internet.
- d) Prerequisites/Revision/Introduction**

In previous units you have developed unit 3 (component of cost in organization), in which you have developed material, procurement process, labor, expenses and centers. This prior knowledge, skills or competences should help the learners to be able to develop the definition of key terms used in labor management, and it can help them to be able to differentiate the way of using those terms in labor management.

e) Learning activities

▪ Guidance

NOTE: The students won't be able to discover all the words in the cross-cutting letter. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this lesson. Tell learners that they will learn more about key terms used in labor management in the corresponding lessons.

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the main key terms used in labor management, the way they are used in the labor management and how to differentiate them.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Guide learners to share their findings on the activity, ensure learners of different needs and abilities are given opportunities to share or present their findings or answers.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

▪ **Answers**

With cross reference to textbook

Activity answers 6.1

a) Eagle	g) Bonus	n) Idle capacity
b) Labor cost	h) Overtime	o) Gross salary
c) Last	i) Pay slip	p) Net salary
d) wages	j) Idle time	q) Basic salary
e) Allowance	k) Allowance	r) Home
f) Direct	l) Direct labor	s) Indirect labor
	m) Pay	

a) Labor cost	f) Direct labor	j) Gross salary
b) Wages	g) Idle time	k) Net salary
c) Bonus	h) Allowance	l) Basic salary
d) Overtime	i) Idle capacity	m) Indirect labor
e) Pay slip		

Application activity answers 6.1.

- 1. Labor cost** is the price paid for using human resources. The compensation paid to employees who engage in production related activities represents factory labor cost.
- 2. A wage** is a payment usually of money for labor or services usually according to contract and on an hourly, daily, or piecework basis whereas

A salary is a fixed amount of money or compensation paid to an employee by an employer in return for work performed. Salary is commonly paid in fixed interval, for example, monthly payments.

3.

1. D
2. E
3. F
4. B
5. C
6. A
7. H
8. G

LESSON 2: Documents used in labor management

- a) Learning objective:** Identify different documents used in labor management
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted: Learners books, internet and projector, text books, calculator, resourceful person and any other trustworthy and reliable resources to enhance learning.
- c) Possible methods:** Pair and share; small group discussion, brainstorm, research on the internet.
- d) Prerequisites/Revision/Introduction**

In lesson 1 of this unity you have developed the terms used in labor management, in which you have analyzed some of key concepts used in labor management like salary, wages, pay slip, allowance, overtime etc. This prior knowledge, skills or competences should help the students to be able to develop the documents used in labor management, to calculate wages and salaries, and it can help them to be able to know how to use those documents when calculating wages and salaries.

e) Learning activities

▪ Guidance

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the documents used in labor management, and the document used to prepare the payroll.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners their groups, or pairs analyze the image in the introductory activity, then read the provided questions and provide answers.

Monitor group activities to ensure everyone is actively participating and heard; instructions clearly followed; and address any challenges/issues identified. Encourage learners to analyze the picture and think about it relationship with the asked questions about the labor management

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell learners that they will learn more about sources of income and expenditure information in the corresponding lessons.

Guide learners to share their findings on the activity, ensure learners of different needs and abilities are given opportunities to share or present their findings or answers.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Harmonize their findings or answers, and link the findings to the learning objective, help them draw conclusions/summary on team building steps or techniques. Guide them to make notes in reference to their learner's book.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answers 6.3

1. The picture is about a person sitting with documents on the table.
2. The names of workers and their salary.
3. Those documents are related to labor management.

Application activity answers 6.3

1. E
2. D
3. C
4. B
5. A
6. G
7. F

LESSON 3: Methods of computing wages

a) Learning objective: Prepare the payroll document

b) Teaching resources: Basic materials for a class/ lesson to be conducted: Learners books, internet and projector, text books, calculator, resourceful person and any other trustworthy and reliable resources to enhance learning.

c) Possible methods: Pair and share; small group discussion, brainstorm, research on the internet.

d) Prerequisites/Revision/Introduction

In the previous lesson of this unity (documents used in labor management) you have developed the documents used in labor management, in which you have developed documents used to prepare the payroll. This prior knowledge, skills or competences should help the students to be able to develop the documents used to compute basic wages, gross wages, and it can help them to be able to compute the different deductions to get the net wages.

e) Learning activities

▪ Guidance

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the methods used to compute wages, and to prepare the payroll.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners their groups, or pairs analyze the image in the introductory activity, then read the provided questions and provide answers.

Monitor group activities to ensure everyone is actively participating and heard; instructions clearly followed; and address any challenges/issues identified. Encourage learners to analyze the picture and think about it relationship with the asked questions about the labor management

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell learners that they will learn more about sources of income and expenditure information in the corresponding lessons.

Guide learners to share their findings on the activity, ensure learners of different needs and abilities are given opportunities to share or present their findings or answers.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Harmonize their findings or answers, and link the findings to the learning objective, help them draw conclusions/summary on team building steps or techniques. Guide them to make notes in reference to their learner's book.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answers 6.4

1. The picture is about people doing different activities.
2. The difference is about the type of activity done by those two employees.
3. No, because for the employee number one the salary will be calculated per day, but for the second one the salary will be calculated based on the number of fabricated bricks.
4. Two first employees are working during the day, another one is working the night, and the last one is working on Sunday.
5. Overtime
6. The company can pay them a high salary comparing to other employees.

Answers to application activity 6.4

1. **Time rate method:** Under this method, workers are paid basing on the time spent on the job that may be an hour, a day, a week or a month. Mostly, the workers are paid according to number of hours worked during a particular week or month.

Piece working payment: Under this method, employees are paid according to the units produced, articles or per job completed. This method is used only if the work can be divided into uniform pieces as is often possible for factory jobs.

2. **Basic wage** = $180 \times \text{Frw}10\,000 = \text{Frw}1\,800\,000$

$$A = 80 \times \text{Frw}10\,000 = \text{Frw}800\,000$$

$$B = 60 \times \text{Frw}10\,000 = \text{Frw}600\,000$$

$$C = 40 \times \text{Frw}10\,000 = \text{Frw}400\,000$$

3.

	X (Company A)	Y (Company B)
Number of hours worked	8	8
Hourly wage rate (Frws)	1 200	1 500
Therefore, daily Earnings (Frws)	9 600	12 000

4. 100 units at Frw 500 per unit= $100 \times \text{Frw}500 = \text{Frw}5\ 000$

100 units at Frw 600 per unit= $100 \times \text{Frw}600 = \text{Frw}6\ 000$

50 units at Frw 700 per unit= $50 \times \text{Frw}700 = \text{Frw}3\ 500$

Total wages = $\text{Frw}5\ 000 + \text{Frw}6\ 000 + \text{Frw}3\ 500 = \text{Frw}14\ 500$

LESSON 4: Bonus schemes

- a) Learning objective:** Calculate the bonus according to different authors
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted: Learners books, internet and projector, text books, calculator, pen, chalkboard, chalks, resourceful person and any other trustworthy and reliable resources to enhance learning.
- c) Possible methods:** Pair and share; small group discussion, brainstorm, research on the internet.
- d) Prerequisites/Revision/Introduction**

In the previous lesson of this unity (Methods of computing wages) you have developed the methods of computing wages, in which you have developed different methods used to compute wages and payroll preparation. This prior knowledge, skills or competences should help the students to be able to develop premium bonuses schemes used to compute overtime according to the overtime worked and to the hours saved, and it can help them to be able to compute premium bonuses according to different authors.

e) Learning activities

▪ Guidance

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the methods used to compute premium bonuses schemes according to the overtime worked and to the hours saved.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners their groups, or pairs analyze the image in the introductory activity, then read the provided questions and provide answers.

Monitor group activities to ensure everyone is actively participating and heard; instructions clearly followed; and address any challenges/issues identified. Encourage learners to analyze the picture and think about it relationship with the asked questions about the labor management

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell learners that they will learn more about sources of income and expenditure information in the corresponding lessons.

Guide learners to share their findings on the activity, ensure learners of different needs and abilities are given opportunities to share or present their findings or answers.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and

not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Harmonize their findings or answers, and link the findings to the learning objective, help them draw conclusions/summary on team building steps or techniques. Guide them to make notes in reference to their learner's book.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answers 6.5

1. The picture is about employees who produce school bags.
2. The difference is about the number of hours they have used to produce 10 bags.
3. Yes, each employee must produce 10 bags in 15 hours.
4. Yes, each employee should be paid according to the school bags produced.
5. The company may give them a bonus.

Answers to application activity 6.5

Units completed= 480

Time allowed per unit= 8 minutes

Time allowed for 480 units= $480 \times 8 \text{ hours} / 60 = 64 \text{ hours}$

Time taken= 52 hours

Time saved= 12 hours

Basic wage= $52 \times \text{Frw}1\ 800 = \text{Frw}93\ 600$

a) Halsey scheme

Bonus= $50\% \times \text{T.S.} \times \text{wage rate} = 50\% \times 12 \times \text{Frw}1\ 800 = \text{Frw}10\ 800$

Total wages= Basic wage+Bonus = $\text{Frw}93\ 600 + 10\ 800 = \text{Frw}104\ 400$

b) Halsey Weir scheme

Bonus= $\frac{1}{3} \times T.S. \times \text{wage rate} = \frac{1}{3} \times 12 \times \text{Frw}1\ 800 = \text{Frw}7\ 200$

Total wages= Basic wage+Bonus = Frw 93 600+ Frw72 000= Frw100 800

c) Rowan scheme

Bonus= $\frac{T.T}{T.A} \times T.S \times \text{wage rate} = \frac{52}{64} \times 12 \times \text{Frw}1800 = \text{Frw}17\ 550$

Total wages= Basic wage+Bonus = Frw93 600+17 750= Frw111 150

LESSON 5: Group incentive schemes

a) Learning objective: Describe the group incentive scheme

b) Teaching resources: Basic materials for a class/ lesson to be conducted: Learners books, internet and projector, text books, resourceful person and any other trustworthy and reliable resources to enhance learning.

c) Possible methods: Pair and share; small group discussion, brainstorm, research on the internet.

d) Prerequisites/Revision/Introduction

In the previous lesson of this unity (bonuses scheme) you have developed the premium bonuses scheme, in which you have developed different methods used to compute premium bonuses according to different authors. This prior knowledge, skills or competences should help the students to be able to develop group incentive schemes, and to understand the main Purpose of group incentive schemes.

e) Learning activities

▪ Guidance

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the group incentive schemes, and to know its main Purposes.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the

introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners their groups, or pairs analyze the image in the introductory activity, then read the provided questions and provide answers.

Monitor group activities to ensure everyone is actively participating and heard; instructions clearly followed; and address any challenges/issues identified. Encourage learners to analyze the picture and think about its relationship with the asked questions about the labor management

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell learners that they will learn more about sources of income and expenditure information in the corresponding lessons.

Guide learners to share their findings on the activity, ensure learners of different needs and abilities are given opportunities to share or present their findings or answers.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless if it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Harmonize their findings or answers, and link the findings to the learning objective, help them draw conclusions/summary on team building steps or techniques. Guide them to make notes in reference to their learner's book.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answers 6.6

1. It is about employees who work together.
2. To uplift their company.
3. Yes, because the picture show that at the end they got a reward that is shared between them.
4. They can share the profit or they can be considered as shareholders of the company.

Application activity answers 6.6

1. The main Purpose of group incentive schemes is to induce workers to participate effectively to increase the production of any organization.
2. Share of profit and co-ownership.
3. Profit sharing is payment to employees of a portion of the company's trading profit.

Co-ownership relates to a scheme under which employees own shares in the company.

4. The main principles of labor incentive schemes are:
 - These must be fair to the employee and employer
 - These must be stable
 - The standard of performance must be reasonable
 - There must be no limits of earnings
 - There must be proper measurement of employee's effort
5. Advantages of labor incentive schemes
 - The rate of production is increased
 - These are beneficial for employees and employers
 - These help to reduce labor turnover

Disadvantages of incentive schemes

- These involve extra work
- There is possibility of exploitation
- The disputes may become source of friction

LESSON 6: Allocation of labor cost

- a) Learning objective:** Distribute the labor cost to service
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted: Learners books, internet and projector, text books, calculator, resourceful person and any other trustworthy and reliable resources to enhance learning.
- c) Possible methods:** Pair and share; small group discussion, brainstorm, research on the internet.
- d) Prerequisites/Revision/Introduction**

In the previous lessons of this unity you have developed documents used in labor management, in which you have developed different methods used to compute wages, premium bonuses according to different authors. This prior knowledge, skills or competences should help the students to be able to develop the allocation of the labor cost, and to ascertain the total costs of jobs or products.

e) Learning activities

- **Guidance**

Explain the purpose of the introductory activity of the lesson. This activity is intended to provide interest and motivation for learners to be able to know the allocation of labor cost, and to ascertain the total costs of jobs or products.

The introductory activity will also arouse learners' interests about what to expect in this lesson as they answer the questions that follow in the activity. Learners can build on previous knowledge, skills, values and attitudes to help you assess the learner's prior knowledge and help link with the new content.

Exploit and use appropriate learning methods that can foster collaborative learning for (example small groups or pairs, square). Provide learners with the introductory activity in the learner's book, and give instructions to the activity to be done. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities.

During this activity ensure that learners have understood the instructions, prompt and probe them through question and answer approach to make sure they are active and their curiosity in learning and discovery is aroused.

Learners their groups, or pairs analyze the image in the introductory activity, then read the provided questions and provide answers.

Monitor group activities to ensure everyone is actively participating and heard; instructions clearly followed; and address any challenges/issues identified.

Encourage learners to analyze the picture and think about its relationship with the asked questions about labor management.

The students won't be able to answer all the questions at this stage. The most important thing is that you want to challenge learners to be expectant and to use their previous knowledge and background to self-discover during teaching and learning of this unit. Tell learners that they will learn more about sources of income and expenditure information in the corresponding lessons.

Guide learners to share their findings on the activity, ensure learners of different needs and abilities are given opportunities to share or present their findings or answers.

Learners present their findings, results, answers through an appropriate method such as pair-share, small group presentations on the introductory activity. Encourage different learners from the groups to share the group's work to avoid just a few learners dominating. Also encourage other learners to listen and not disturb when other teams are sharing unless it is a question. Encourage learners to appreciate each other's work especially during the presentation.

Harmonize their findings or answers, and link the findings to the learning objective, help them draw conclusions/summary on team building steps or techniques. Guide them to make notes in reference to their learner's book.

Appreciate the team's presentations and remind them that this activity was not meant to come to the very right answers but to help them become aware of what to expect in the unit. Answers to the activity will be got as the unit progresses. You can support learner's answers by referring to possible answers to the introductory activity below:

Activity answers 6.7

1. There is a circle that contains a sum of money, it is divided into four (4) parties.
2. The people and images in the circle represent employees and jobs performed by those employees.
3. It represents the total labor cost.
4. It is divided into 4 parties according to the number of jobs done.

Application activity answers 6.7

Total wage of K. Patrick = Frw 20 000 × 360 = Frw 7 200 000

Proportion of time for these three jobs

Jobs	A	B	C	TOTAL
Number of hours	160	120	80	360
OR	8	6	4	18

It means that the labor cost must be apportioned among these jobs at these proportions. It is shown as under.

Job A	Job B	Job C
Frw 7 200 000 × 8/18 =	Frw 7 200 000 × 6/18 =	Frw 7 200 000 × 4/9 =
Frw 3 200 000	Frw 2 400 000	Frw 4, 000 000

6.5 Summary of the unit

This unit is composed of six (6) lessons based on the following:

Definition of key terms used in labor management:

- Labor
- Salary
- Wages
- Allowance
- Overtime
- Idle time
- Idle capacity
- Basic salary
- Gross salary
- Net salary

Documents used in labor management:

- Clock card
- Piecework ticket
- Employee personal cards
- Contract
- payroll

Methods of computing labor cost:

- Time rate method
- Piecework ticket method

Premium bonus scheme:

According to

- Halsey
- Halsey Weir
- Rowan

Group incentive schemes

- Profit sharing
- Co-ownership

Allocation of Labor Cost

6.4 Additional information for teachers

The information provided in the students' text book is enough comparing to their level but does not restrict you as tutor to do further research from other resources for example internet or other related text books.

6.5 End unit assessment (answers)

1. Objectives of labor cost accounting are :

- Determination of labor costs in the cost of product or service
- Reporting labor costs for planning and control
- Reporting labor costs for decision making
- Setting standards of cost for the purpose of control and provision of relevant data for planning of manpower requirements
- To maintain the efficiency in the process of manufacturing any product.

2. In order to minimize the idle time, proper preventive steps are listed below :

- Proper and systematic plan for all the works in hand in such a way that the employees complete them in sequential order and do not waste time in waiting for getting the work.

- Proper and adequate instructions should be given to the employees on time so that to employees do not waste time for non-availability of instructions.
- Raw materials should be made available to the employees, and regular repairs and maintenance of plant and machinery should be undertaken to avoid the loss of productive hours on account non-availability of raw materials and break down of plant and machinery.

3. Earnings= (number of units produced x wage rate per unit)

Earnings of A= (10 x Frw1 200) = Frw 12 000

B= (12 x Frw1 200) = Frw14 400

C= (8 x Frw1 200) = Frw 9 600

4. Total wage of SIMON= 180hours x 1 000= Frw 180 000

Proportion of time for three jobs:

Jobs	A	B	C	Total
hours	80	60	40	180
OR	4	3	2	9

It means that the labor cost must be apportioned among these jobs at these proportions. It is shown as:

Job A

Frw180 000 x 4/9= Frw80 000

Job B

Frw180 000 x 3/9= Frw60 000

Job C

Frw180 000 x 2/9= Frw40 000

Note: 4/9 th was devoted for job A, 3/9 th for job B, and 2/9 th for job C.

Particulars	If the job is completed in	
	8 hours (in Frw)	6 hours (in Frw)
Halsey scheme	16,000	12,000
Wage (hours worked x hourly rate) (8 x Frw 2 000) and (6 x Frw2 000)	2,000	4,000
Bonus= (hours saved x hourly rate x 50%) (2 x Frw 2 000 x 50%) and (4 x 2 000 x 50%)		
Total wages	18 000	16 000
Halsey Weir scheme	16 000	12 000
Wage (hours worked x hourly rate) (8 x Frw 2 000) and (6 x Frw2 000)	1 333.2	2 666.4
Bonus= (hours saved x hourly rate x 33.33%) (2 x Frw 2 000 x 33.33%) and (4 x Frw2 000 x 33.33%)		
Total wages	17 333.2	14 666.4
Rowan scheme	16 000	12 000
Wage (hours worked x hourly rate) (8 x Frw 2 000) and (6 x Frw2 000)	1 333.2	2 666.4
Bonus= (time taken/time allowed x hourly rate) (8/10 x 2 x Frw2 000) and (6/10 x 4 x Frw2 000)		
Total wages	19 200	16 800

6.6 Additional activities (Questions and answers)

Remedial activities

1. Circle the correct answer

All of the following are the formulas to calculate premium bonus scheme except:

- a) Bonus = $\frac{1}{2}$ (Time saved \times wage rate)
- b) Bonus = $\frac{\text{Time done}}{\text{Time allowed}} \times \text{Time saved} \times \text{wage rate}$
- c) Bonus = $\frac{2}{3}$ (Time saved \times wage rate)
- d) Bonus = $\frac{1}{3}$ (Time saved \times wage rate)
- e) A and C are correct answers
- f) B and C are correct answers
- g) No one of the above

Answer: f

2. Give five (5) terms used in labor management

Answer:

- Labor
- Labor cost
- Wages
- Salary
- Idle time
- Idle capacity
- Overtime
- Allowance
- Gross salary
- Net salary
- Bonus

3. List the documents used in labor management

Answer:

- Contract
- Remittance slip

- Pay slip
- Payroll

4. What are the premium bonus scheme are there?

Answer:

- a) Halsey scheme
- b) Halsey Weir scheme
- c) Rowan scheme

5. What are the main elements of labor cost?

Answer:

Labor cost consists of:

- Basic pay i.e. daily, weekly or monthly wages.
 - Labor related costs, e.g. holiday pay, fringe benefits, overtime premium
6. Differentiate direct labor from indirect labor.

Answer:

Direct labor: is defined as labor that is directly involved in the production of finished product, that can be easily traced to the product and that represents a major labor cost of producing that product.

Indirect labor: is factory labor not directly traced to a product, laborers whose productions include product designers, job supervisors, and product inspectors. Indirect labor is considered as part of factory overhead cost.

Consolidation activities

1. Explain the advantages and disadvantages of piece rate method.

Answer:

Advantages of piece work payment (Piece Rate Method)

- It provides incentives to more efficient workers. They are paid according to work done so they get more income.
- It does not requires close supervision of employees.
- It provides the employer an easy way of determining labor cost per unit of a product.

Disadvantages of piece work payment (Piece Rate Method)

- The workers can produce inferior or poor quality products in order to produce greater quantity in short time.
 - This method cannot be applied to those jobs which are not easy to divide in small pieces.
 - This method does not ensure a stable monthly income of works.
2. Explain the abnormal causes of idle time.

Answer:

- Break-down of machinery on account of inefficiency of repairs and maintenance staff
 - Power failure
 - Shortage of raw materials on account of inefficiency of the purchase and /or store department
 - Non-availability of proper instructions
 - Waiting for tools,
 - Strikes, lockouts, etc.
3. A worker is paid Frw 500 per unit and he has produced 28 units in 7 hours. Calculate his total wage under output based scheme.

Answer: Basic wages= 28 x Frw 500= Frw 14 000

4. We assume MUHIRE is paid Frw500 per unit up to 100 units; Frw600 per unit for 101 to 200 units and Frw700 per unit produced in excess of 200 units. Find out his wage for that period if he produced 250 units.

Answer:

$$\begin{aligned}\text{Total wages of MUHIRE} &= (100 \times \text{Frw}500) + (100 \times \text{Frw}600) + (50 \times \text{Frw}700) \\ &= \text{Frw}50\ 000 + \text{Frw}60\ 000 + \text{Frw}3\ 500 \\ &= \text{Frw}113\ 500\end{aligned}$$

5. An employee has worked 40 regular hours subjected to a regular pay rate of Frw2 000/hour and 5hours of overtime at overtime premium rate of Frw3 000/hour.

Required: Calculate the total wage of this employee

Answer:

Regular pay = Regular pay rate × Total regular hours

$$40\text{hrs} \times \text{Frw}2\,000/\text{h} = \text{Frw}80\,000$$

Overtime premium pay = Overtime rate × Overtime hours

$$5\text{hrs} \times \text{Frw}3\,000/\text{h} = \text{Frw}15\,000$$

Total wages = regular pay + Overtime premium pay

$$\text{Frw}80\,000 + \text{Frw}15\,000 = \text{Frw}95\,000$$

Extended activities

- The following details are made available in respect of employees X, Y and Z for a particular week.

	X	Y	Z
Normal wages	4	5	6
Completed units of production	6 000	3 000	4 800
Time allowed (hours per 100 units)	0.8	1.5	1
Actual time taken (hours)	42	40	48

Required:

Work out for each employee:

- The amount of bonus earned
- The total amount of wages received
- The total wages cost per 100 units of output

Answer:

Particular	X	Y	Z
Number of units produced	6 000	3 000	4 800
Time allowed for actual production (hours)	48	45	48
Less : hours taken	42	40	48
Hours saved	6	5	0
Bonus hours	5.25	4.444	0
Amount of bonus earned	Frw 21.00	Frw22.22	Frw0.00

Basic wage (hours worked*hourly rate)	168.00	200.00	288.00
Total earnings :	189.00	222.22	288.00
Total wages cost per 100 units of output	Frw 3.15	Frw 7.41	Frw 6.00

Workings

a) Time allowed for actual production (hours

$$X = 0.8 \text{ hours}/100\text{units} \times 6\,000 \text{ units} = 48 \text{ hours}$$

$$Y = 1.5 \text{ hours}/100 \text{ units} \times 3\,000 \text{ units} = 45 \text{ hours}$$

$$Z = 1 \text{ hours}/100 \text{ units} \times 4\,800\text{unit} = 48 \text{ hours}$$

b) Bonus hours = time taken/time allowed x time saved

$$X = 42\text{hours}/48\text{hours} \times 6\text{hours} = 5.25\text{hours}$$

$$Y = 40\text{hours}/45\text{hours} \times 5\text{hours} = 4.444\text{hours}$$

$$Z = 48\text{hours}/48\text{hours} \times 0\text{hours} = 0 \text{ hour}$$

c) Amount of bonus earned = (Bonus hours x hourly wage rate)

$$X = (5.25\text{hours} \times \text{Frw}4) = \text{Frw}21$$

$$Y = (4.444\text{hours} \times \text{Frw}5) = \text{Frw}22.22$$

$$Z = (0\text{hours} \times \text{Frw}6) = \text{Frw}0$$

d) Basic wage (hours worked x hourly rate)

$$X = (42\text{hours} \times \text{Frw}4) = \text{Frw}168$$

$$Y = (40\text{hours} \times \text{Frw}5) = \text{Frw}200$$

$$= (48\text{hours} \times \text{Frw}6) = \text{Frw}288$$

e) Total earnings = basic wages + bonus earned

$$X = \text{Frw} 168 + \text{Frw}21 = \text{Frw}189$$

$$Y = \text{Frw}200 + \text{Frw}22.22 = \text{Frw}222.22$$

$$Z = \text{Frw}288 + \text{Frw}0 = \text{Frw}288$$

f) Total wages cost per 100 units of output

$$X = \text{Frw}168/6000 \times 100\text{units} = \text{Frw}3.15$$

$$Y = \text{Frw}222.22/3000 \times 100\text{units} = \text{Frw}7.41$$

$$Z = \text{Frw}288/4800 \times 100\text{units} = \text{Frw}6$$

3. Robert produced 600 units in a week but 40 units were rejected. Time allowed per unit is 6 minutes. No payment is made beyond the time allowed but the bonus is paid on accepted units only. No penalty is imposed on the rejected units. Robert produced the 600 units in 48 hours. His wage rate per hour is Frw150 000. Calculate his total wage on the basis of Halsey, Halsey weir and Rowan.

Answer:

Units accepted = $(600 - 40)$ units = 560 units

Time allowed = $560 \text{ units} \times 6 \text{ minutes/unit} = 3360/60 = 56 \text{ hours}$

Time taken = 48 hours

Time saved = $56 - 48 = 8 \text{ hours}$

Time rate = $\text{Frw}150\,000/10 = \text{Frw}15\,000$

Basic wages = $48 \text{ hrs} \times 15\,000/\text{hour} = \text{Frw}720\,000$

1. Bonus under Halsey = $50\% \times 8 \times 15\,000 = \text{Frw}60\,000$

Total wages under Halsey = $\text{Frw}720\,000 + \text{Frw}60\,000 = \text{Frw}780\,000$

2. Bonus under Halsey weir = $1/3 \times 8 \times \text{Frw}15\,000 = \text{Frw}40\,000$

Total wages under Halsey Weir = $\text{Frw}720\,000 + \text{Frw}40\,000 = \text{Frw}760\,000$

3. Bonus under Rowan = $48/56 \times 8 \times 15\,000 = \text{Frw}103\,000$

Total wages under Rowan = $\text{Frw}720\,000 + \text{Frw}103\,000 = \text{Frw}823\,000$



UNIT 7

COST CLASSIFICATION AND COMPUTATION

7.1 Key unit competence: Classify and compute the cost

7.2 Prerequisite:

The nature of businesses transaction to accounting system, Identify source of income and expenditure information , Component of cost in organization ,Coding data methods, Material and inventory management in organization. The methods of calculating labor payment.

7.3 Cross-cutting issues to be addressed:

- * **Gender education:** Remind students that both males and females have similar opportunities, rights and obligations in the workplace, and therefore need to be treated fairly and equally when dealing with contracts or resolving conflicts. People's opinion of gender roles should not deny or hinder one's right or responsibilities to meet his or her contractual obligations while teaching contracts in business operations.
- * **Environment and sustainability:** During Inventory management and Manufacturing company, students need to acknowledge on the Environment and sustainability
- * **Inclusive education:** All students need to realize that universal laws do not discriminate as they do apply to all regardless of social, economic, political, physical background. Emphasis should be put on how we all have the same rights. During business organization unit, Student may discuss and appreciate need to respect and advocate for employer's and worker's rights and responsibilities at a workplace.
- * **Peace and Values:** Right before the lesson begins; there are quite a lot of opportunities for teachers to promote peace and values. Being punctual for activities (time management), involvement in various activities (teamwork), keeping their school environment clean (responsibility), greeting one another are among such opportunities (empathy).

- * **Financial Education:** Financial management and institutions, student need to appreciate the need for managing their finances and proper ways of managing their finances such as opening a bank account among others students, may know the similarities between Financial accounting, Cost accounting and Management accounting.

7.4 Guidance on introductory activity

Students in groups study that photo and try to identify the different activities it shown , materials labor , function , fixed and variable cost., direct and indirect cost .

Introductory Activity Answer



List of lessons/sub-heading

	Sub-heading	Lesson title	Learning objectives (from the syllabus or set according to the lesson title)	Number of periods

1	The concept "cost".	Definition and elements of cost	Explain the term "cost" and its elements.	2p
		Classification of cost	Categorize the cost according to different factors	4p
2	Overhead	Definition and classification of overhead	Define and classify the overhead	4P
3	Computation of cost	Cost statement sheet	Compute the cost and present the cost statement	2P
		Calculation of cost per unit		2P
		Computation of overheads		4P
4	Allotment and absorption of overheads	Allocation of overheads	Distribute the overheads into cost center	4p
		Apportionment of overheads		4p
	Calculation of absorption rate.		Calculate the absorption rate	3p
	End unit assessment			3p
Total number of periods				35p

LESSON 1: The concept "cost".

a) Learning objective

Explain the term "cost" and its elements.

Categorize the cost according to different factors

b) Teaching resources

Basic materials for a class/ lesson to be conducted, Students books and any other trustworthy and reliable resources to enhance learning, printed copies , flip chart, markers, machine, internet and printer.

c) Prerequisites/Revision/Introduction: Unit 1: Nature of businesses transaction to accounting system, Unit 2: Source of income and expenditure information, Unit 3: Component of cost in organization, Unit 4: Coding data methods, Unit 5: Material and inventory management in organization, Unit 6: Labor management i.e (The first six units in this class).

d) Learning activities 7.1

- Have students in small groups
- Ask them to brainstorm on the questions in student book
- Invite students present in plenary
- Provide constructive feedback
- Link the students' ideas to the new lesson

Activity Answer 7.1

1. Types of cost due to traceability factor
 - **Direct cost:** is the cost which can be identified for the production of some specific goods. Raw material and direct labor costs are direct costs because these can be charged and identified to the production of some specific goods manufactured.
 - **Indirect cost:** is cost that cannot be conveniently and economically identified with cost objective.
2. The direct costs to the specified product are raw material, direct labor and direct overheads.
3. The total cost of producing the table is the summation of all cost (materials, labor, overheads (factory, administration...)).

Application activity 7.1

- Ask student teachers to do the activity and you may give them time to think on the activity so that they can do it neatly.
- You may request them to work collaboratively in pairs.

Application Activity Answer 7.1 a.

1. Definition:
 - a) Cost: is a resource sacrificed or forgone to achieve a specific objective.
 - b) Expenses: cost expired
 - c) Prime cost: all direct costs
 - d) Total cost: is the sum of all the items of cost which have been incurred, irrespective of whether they are paid or not, to produce and/or sell the product or to generate and render service to a customer.
2. The elements of cost are:
 - Raw material . Labor . Overheads

Application Activity Answer 7.1.b.

1. Definitions
 - a) Cost unit: measurement of unit or quantity produced in the organization.
 - b) Unit cost: amount of money spent for one unit of product
2. Prime cost means all direct cost.

Element of prime cost, direct material, direct labor, direct expenses.

3. Direct cost is a cost that can be identified in the production of a specific product.

Indirect cost is a cost that cannot be identified in a specific product.

LESSON 2 : Overheads

a) Learning objective: Define and classify the overhead

b) Teaching resources: Basic materials for a class/ lesson to be conducted, students books and any other trustworthy and reliable resources to enhance learning, Printed copies, flip chart, markers, machine, internet and printer.

c) Prerequisites/Revision/Introduction: Unit 1 : Nature of businesses transaction to accounting system , Unit 2: Source of income and expenditure information, Unit 3: Component of cost in organization, Unit 4: Coding data methods, Unit5: Material and inventory management in organization, Unit 6: Labor management i.e (The first six units in this class).

d) Learning activities 7.2

- Have students in small groups
- Ask them to brainstorm on the questions in student book
- Invite students present in plenary
- Provide constructive feedback
- Link the students' ideas to the new lesson

Activity answer 7.2

To maintain an increase of profit, the business would maintain the number of customers and permanent overhead control.

Application activity 7.2

- Help student teachers to form group and discuss about the activity
- Each group should have time to present and the rest of class may ask questions or supplement to the presentation.
- Help student to reach the correct conclusion after a disagreement

Application Activity Answer 7.2

1. Definition :

Variable cost: is a cost that changes at the same time changes of output.

Fixed cost: is the cost that remains the same at the different levels of output.

Semi-variable cost: is the cost that part is fixed and other parts are variable.

2. Difference

- Production cost = prime cost + production overheads.
- Cost of production = production cost + administrative overheads

3. Definition

Works-on-cost: is the production overheads

Works cost: is the production cost = [prime cost + production overheads]

LESSON 3: Computation of cost

- a) Learning objective:** Compute the cost and present the cost statement
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted, Students books and any other trustworthy and reliable resources to enhance learning, Printed copies , flip chart, markers, Machine, internet and printer.
- c) Prerequisites/Revision/Introduction:** Unit 1: Nature of businesses transaction to accounting system, Unit 2: Source of income and expenditure information, Unit 3: Component of cost in organization, Unit 4: Coding data methods, Unit5: Material and inventory management in organization, Unit 6: Labor management.
- d) Learning activities Activity 7.3**
 - Invite student teachers to read individually the scenario and work in pairs to share with the classmate.

- Have some pairs make presentations
- Ask student teachers to link the environmental and hereditary factors with the development of each individual's behaviour.
- Guide towards the lesson(you can use additional simulating questions)
- Link the students' ideas to the new lesson

Activity Answer 7.3

Total variable cost: Frw 2 500*8 = Frw 20 000

Fixed cost : Frw 15 000

Total labor cost : Frw 1 800*8 = Frw 14 400

Total cost of production = Frw20 000+Frw15 000+Frw14 400
= **Frw 49 400**

One table will be produced at: Frw 49 400/8 = Frw 6 175

Application activity 7.3

- Request student to form group and discuss
- Help them to understand the question
- Student teachers may think other reasons for studying personality development which are not listed in the textbook.
- Whenever it is possible and materials are available, you can allow them make a further research in library or on internet.
- Each group presents its finding and help the whole class to make conclusion.

Application Answers 7.3 a

COST STATEMENT

Raw material.....	80,000	
Direct labor.....	35,000	
Prime cost.....		115,000
Add factory overheads		
Factory rent.....	5,000	
Factory power.....	3,000	
Indirect wages.....	2,000	10,000
Factory cost		125,000
Add administration cost		
Sundry office expenses.....	1,500	
Administration expenses.....	4,000	5,500
Add selling and distribution cost		
Sundry selling expenses.....	1,000	
Salesman salary.....	4,500	
Advertisement.....	3,000	8,500
TOTAL COST OF SALES.....		139,000
Sales revenue = cost + profit		

$$=139,000 + \frac{25 \times 139,000}{100} = 173,750$$

Application Activity answer 7.3.b

Opening stock of R.M	40,000	
Add: Purchases.....	250,000	
Carriage in wards.....	10,000	
Less returns of raw material....	(10,000)	250,000
Cost of raw material available for sales	290,000	
Less closing stock of raw material.....	(35,000)	
Cost of raw material consumed	255,000	
Factory wages.....	80,000	
Prime cost		335,000
 Add Factory overheads		
Factory rent.....	10,000	
Factory power.....	5,000	
Supervisor salary.....	30,000	45,000
Factory cost or production cost		380,000
 Add opening stock of w.i.p	12, 000	
Less closing stock of w.i.p	(17,000)	(5,000)
Net factory or production cost		375,000

LESSON 4: Allotment and absorption of overheads

- a) Learning objective:** Distribute the overheads into cost center, Calculate the absorption rate
- b) Teaching resources:** Basic materials for a class/ lesson to be conducted, Students books and any other trustworthy and reliable resources to enhance learning, Printed copies , flip chart, markers, Machine, internet and printer.
- c) Prerequisites/Revision/Introduction:** Unit 1: Nature of businesses transaction to accounting system , Unit 2: Source of income and expenditure information, Unit 3: Component of cost in organization, Unit 4: Coding data methods, Unit5: Material and inventory management in organization, Unit 6 Labor management.(i.e in this class)

d) Learning activities Activity 7.4

- Help student to form group and discuss questions
- Help them also to access other source of information (e.g. internet, library) to make research)
- Give them time to make presentations
- Classmates may comment and ask questions
- Guide them whenever they get stuck and help them to come up with a sound conclusion
- Link the students' ideas to the new lesson

Activity Answer 7.4

The manager of AGAHINGA Plc must first know the types of costs to engage in production. He or she must know the overheads engaged for better administration and production process. The total overheads must be distributed among the units produced in order to know the cost of one unit of juice.

Application activities answers 7.4

- Students return back in their respective groups they used during the activity
- Give them time to work and focus on the activity
- Let each group present its final work
- Others group may comment, supplement and ask questions
- Help them to reach a sound and clear conclusion

Exercise answer

Overhead Analysis Sheet

Overhead	Bases	Amount	Units	Rate/units	Dep.A	Dep.B	Dep.C	Dep.D
Rent	Area	80,000	4,000sq.m	20rwf/sq.m	30,000	24,000	16,000	10,000
Repair to plant	Value of plant	50,000	1,000,000rwf	0.05rwf/rwf	25,000	15,000	10,000	
Depreciation of plant	Value of plant	40,000	1,000,000rwf	0.04rwf/rwf	20,000	12,000	8,000	
Light and heat	Area	20,000	4,000sq.m	5rwf/sq.m	7,500	6,000	4,000	2,500
Supervision	No of employees	60,000	100 employees	600rwf/employ	21,000	15,000	15,000	9,000
Repairs to buildings	Area	30,000	4,000sq.m	7.5rwf/sq.m	11,250	9,000	6,000	3,750
TOTAL		200,000			114,750	81,000	59,000	25,250

Application Activity Answer 7.4

	Departments				
	A	B	C	X	Y
Overhead	150,000	270,000	190,000	30,000	50,000
O.H. of 'X' apportioned	12,000	6,000	9,000	(30,000)	3,000
O.H. of 'Y' apportioned	26,500	10,600	10,600	5,300	(53,000)
O.H. of 'X' apportioned	2,120	1,060	1,590	(5,300)	530
O.H. of 'Y' apportioned	265	106	106	53	(530)
O.H. of 'X' apportioned	21	11	16	(53)	5
O.H. of 'Y' apportioned	3	1	1	--	(5)
	190,909	287,778	211,313	0	0

Application Answer 7.5

Units of output methods: $OAR(UOR) = \frac{\text{overheads}}{\text{units of output}} = \frac{1,000,000}{500} = 2,000\text{rwf / unit}$

Machine Hours Method: $OAR(MHR) = \frac{\text{overheads}}{\text{Machine hours}} = \frac{1,000,000}{1,600} = 625\text{rwf per mach}$

Direct Labor Hours Methods: $OAR(LHR) = \frac{\text{overheads}}{\text{Direct labor}} = \frac{1,000,000}{2,000} = 500 / \text{labhours}$

Direct Materials Percentage Method: $OAR = \frac{\text{overheads}}{\text{Direct Wages}} * 100$
 $= \frac{1,000,000}{3,000,000} * 100 = 33.333\%$

Direct Wages Percentage Method: $OAR = \frac{\text{overheads}}{\text{Direct Wages}} * 100$
 $= \frac{1,000,000}{1,000,000} * 100 = 100\% \text{ of direct wage}$

Prime Cost Percentage Method: $OAR = \frac{\text{overheads}}{\text{Prime cost}} * 100 = \frac{1,000,000}{4,000,000} * 100 = 25\%$

7.5 End unit assessment (answers)

Overhead	Basis	Amount	Units	Rate per Unit	Shop No 1	Shop No 2	Shop No 3	Total room	Stores	Clerical services
Indirect material	Allocation	154 000	-----	-----	40 000	60 000	20 000	12 000	16 000	6 000
Indirect wages	Allocation	228 000	-----	.....	42 000	58 000	54 000	37 000	15 000	22 000
Rent and Rate	Area	100 000	5000 sq.m	20	20 000	15 000	30 000	10 000	15 000	10 000
Insurance	Book value	20 000	2,000 000	0.01	5 000	9 000	2 000	3 000	500	500
Depreciation	Book value	300 000	2,000,000	0.15	75 000	135 000	30 000	45 000	7 500	7 500
Power	H.P	90 000	100	900	45 000	36 000	-----	9 000	-----	-----
Light and Heat	Area	40 000	5,000sq.m	8	8 000	6 000	12 000	4 000	6 000	4 000
Service department overheads apportioned over production department.			Ratios		235 000	319 000	148 000	120 000	60 000	50 000
Tool room	Technical estimate	30-50-20		36 000	60 000	24 000	(120 000)			
Stores	Idem		50-30-20		30 000	18 000	12 000		(60 000)	
Clerical services	Idem		30-40-30		15 000	20 000	15 000			(50 000)
		932 000			316 000	417 000	199 000			

7.6 Summary of the unit

- Elements of cost
- Classification of cost
- Definition and classification of overhead
- Cost statement sheet
- Calculation of cost per unit
- Computation of overheads
- Allocation of overheads

7.7 Additional information to teacher

When we classify cost initially we do so with the purpose of identifying them with function or area or department of the business that they relate to, such as production or administration function, the assembly or finishing area or the human resource or marketing department.

When we separate out the business into functions or area or departments in this way, we can call each of them a cost centre.

Remedial activities

1. Select the best answer

Prime cost is:

- a) All cost incurred in manufacturing a products
 - b) The total of direct cost
 - c) The material cost of a products
 - d) Cost of operating a department
2. Which of the following is most likely to be treated as an indirect cost by hair saloon?
 - a) salary of hair stylist
 - b) wages of cleaner
 - c) salary of manager in saloon
 - d) A and B are true
 - e) B and C are true
 - f) all are false
 3. Which of the following would be classed as a selling and distribution cost?
 - a) Salaries of craftsmen making the instruments
 - b) Advertising the instruments in the city tourist information shop

- c) Wages of the bookkeeper
- d) Interest charged on business overdraft

Remedial activities answer

- 1. B
- 2. E
- 3. B

Consolidation activities

- 1. A business employs 20 direct production operatives and 10 indirect staff in its manufacturing department. The normal operating hours for employees is 38hours per week and all staff are paid FRW5, 000 per hour. Overtime working is to satisfy general production requirements and hours are paid at basic rate plus 50%.

During a particular week all employees worked for 44hours.

What amount would be charged to production overhead?

FRW'000

- a) 2,650
 - b) 2,350
 - c) 450
 - d) 300
- 2. ABC Company LTD, manufactured and sold 1,000 sewing machines in 1999. Following are the particulars obtained from the records of the company.

Cost of raw materials	FRW 80,000	manufacturing expenses	FRW 50,000
Wages paid	120,000	salary (office)	60,000
Rent	10,000	selling expenses	30,00
General expenses	20,000	sales	400,000

The company plans to manufacture 1,200 sewing machine in the year 2000. You are required to submit a statement (Estimate Cost Sheet) showing the price at which the machines should be sold to show a profit of 10% on sales.

The following information is given.

1. The price of material rises by 20% on previous year's level
2. Wages will rise by 5%
3. Total manufacturing expenses per unit decrease by 10%
4. Selling expenses per units decreasing by 10%
5. Other expenses will be unaffected by the rise in output.

Consolidation answer question one:

A.	Basic pay	overtime premium	Total
	FRW'000	FRW'000	FRW'000
Direct labor		300(W1)	300
Indirect labor	2,200(W2)	150(W3)	2,350
	2,200,450	2,650	

WORKINGS:

1. Overtime premium – direct labor

$$20 \times 6\text{hours} \times \text{FRW}2,500 \text{ per hour} = \text{FRW } 300,000$$

2. Basic pay – indirect labor

$$10 \times 44\text{hours} \times \text{FRW } 5,000 \text{ per hour} = \text{FRW } 2,200,000$$

3. Overtime premium – indirect labor

$$10 \times 6\text{hours} \times \text{FRW}2,500 \text{ per hours} = \text{FRW } 150,000$$

As the base for preparing the estimated Cost Sheet for 2000, it is necessary to prepare the cost sheet for 1999 and to compute unit costs (as presented below).

Cost sheet of ABC Company limited for the year ended 1999.

Particular	FRW amount	
	Total for 1,000 machines	Per machine
Cost of materials	80,000	80
Wages paid	120,000	120
Prime cost	2,000,000	200
Manufacturing expenses	50,000	50
Works cost	250,000	250
Add: administrative expenses		
Rent	10,000	10
General expenses	20,000	20
Salary	60,000	60
Office cost	340,000	340
Selling expenses	30,000	30
Total expenses	370,000	370
Sales revenue	400,000	400
Profit	30,000	30

Cost sheet (estimated) of ABC Company limited for the year 2000.

Particular	FRW amount	
	Per Machine	For 1,200 Machines
Cost of materials (FRW 80+20%)	96	115,200
Wages paid (120 + 5%)	126	151,200
Prime cost	222	266,400
Manufacturing expenses (50,000+10%)	55	66,000
Production	277	332,400
Add: administrative expenses (all the three items put to gether)	75	90,000
Cost of production	352	422,400
Selling expenses (30-10%)	27	32,400

Total cost of sales	379	354,800
Add: desired profit(10% on sales or 10/90 of cost sales)	42.111	50,532
Profit	337.77	405,334

Total for 1999 was FRS 90,000 (10,000+ 20,000+ 60,000). These expenses, in total, are unaffected by both the inflation and increase in output level

Extended activities

A business planned to produce 5,000 units of product x (in 0.65 hours each) and set a time budgeted of 3,250 hours. The actual output for the month was 5,316 units, which was actually achieved in 3,570 hours.

What was the production volume ratio (to two decimal placed)?

- a) 96.79%
- b) 106.32%
- c) 91.04%
- d) 09.85%

Extended activities Answer

$$B \quad \text{Production volume ratio} = \frac{\text{Expected hours to make actual output}}{\text{Hours budgeted}} \times 100\%$$

$$\frac{3,455.40 \text{ hours}}{3,250 \text{ hours}} \times 100\%$$

$$= \mathbf{106.32\%} \text{ (to 2 decimal places)}$$

Workings:

$$\begin{aligned} \text{Expected time to produce 5,316 units} &= 0.65 \text{ hours} \times 5,316 \text{ units} \\ &= \mathbf{3,455.40 \text{ hours}} \end{aligned}$$

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