

**FOUNDATIONS OF EDUCATION
FOR TTCs**

TUTOR'S GUIDE

YEAR ONE

Options: ECLPE, SME, SSE&LE

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FOREWORD

Dear tutors,

Rwanda Education Board is pleased to present Foundations of Education tutor's guide for Year one. It was designed based on the Year one Student Book to serve as a guide to teaching and learning of Foundations of Education subject in TTCs. The Rwandan education philosophy is to ensure that young people at every level of education achieve their full potential in terms of relevant knowledge, skills and appropriate attitudes that prepare them to be well integrated in society and exploit employment opportunities.

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 the learning process. Many factors influence what student teachers 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 available. Special attention was paid to the activities that facilitate the learning process in which learners can develop ideas and make new discoveries during concrete activities carried out individually or with peers.

With your help, student teachers will gain professional skills, attitudes and values that are required for every teacher as educator, a guide, an organizer, a facilitator, innovator, and researcher, reflective practitioner who is able to implement the CBC in pre-primary and primary education.

This is in contrast to traditional learning theories which view learning mainly as a process of acquiring knowledge from the more knowledgeable who is mostly the teacher. In competence-based curriculum, learning is considered as a process of active building and developing of knowledge and understanding, skills, values and attitudes by the learner, where concepts are mainly introduced by an activity, situation or scenario that helps the learner to construct knowledge, develop skills and acquire positive attitudes and values.

As a Tutor, your role is to:

- Plan your lessons and prepare appropriate teaching materials.
- Organize group discussions for learners considering the importance of social constructivism suggesting that learning occurs more effectively when the learner works collaboratively with more knowledgeable and experienced people.

- Engage learners through active learning methods such as inquiry methods, group discussions, research, investigative activities and group and individual work activities.
- Provide supervised opportunities for learners 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 learners' contributions in the class activities.
- Guide learners towards the harmonization of their findings.
- Explain different concepts for clear understanding of the content.
- Encourage individual, peer and group evaluation of the work done in the classroom and use appropriate competence-based assessment approaches and methods.
- Create more learning and assessment activities in supplement of those provided in the student book.

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

The part 1: Explains the structure of this book and gives you methodological guidance;

The part 2: Gives a sample lesson plan as reference for your lesson planning process;

The part 3: Provides guidance on teaching for each lesson.

Even though this tutor's guide contains the answers for all activities given in the student- teacher's book, you are requested to work through each question and activity before judging student's findings.

I wish to sincerely appreciate all people who contributed towards the development of this tutor's guide, particularly REB staff who organized the whole process from its inception. Special gratitude goes to the lecturers and teachers, staff from Development Partners who diligently worked for the successful completion of this guide. Any comment or contribution would be welcome for the improvement of this Teacher's guide for the next edition.

Dr. NDAYAMBAJE Irénée

Director General of Rwanda Education Board

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PART I: GENERAL INTRODUCTION

1.0 About the Tutor's guide

This book is a tutor's guide for Foundations of Education, Year One in TTC. It is designed to accompany Year one student's book and intends to help tutors in the implementation of the revised TTC curriculum.

As the name says, it is a guide that tutors can refer to **when preparing their lessons**. Tutor's may prefer to adopt the guidance provided but they are also expected to be more creative and consider their specific classes' contexts and prepare accordingly.

1.1.The structure of the guide

This section presents the overall structure, the unit and sub-heading structure to help teachers to understand the different sections of this guide and what they will find in each section.

Overall structure

The whole guide has three main parts as follows:

- **Part I: General Introduction**

This part provides general guidance on how to develop the generic competences, how to integrate cross cutting issues, how to cater for learners with special educational needs, active methods and techniques of teaching Foundations of Education and guidance on assessment.

- **Part II: Sample lesson plan**

This part provides a sample lesson plan, developed and designed to help the teacher develop their own lesson plans.

- **Part III:Unit development**

This is the core part of the guide. Each unit is developed following the structure below. The guide ends with references.

Structure of a unit

Each unit is made of the following sections:

- **Unit title**
- **Key unit competence**

▪ **Prerequisites**

This section indicates knowledge, skills and attitudes required for the success of the unit. The competence-based approach calls for connections between units/topics within a subject and interconnections between different subjects. The tutor will find an indication of those prerequisites and guidance on how to establish connections.

▪ **Cross-cutting issues to be addressed**

This section suggests cross cutting issues that can be integrated depending on the unit content. It provides guidance on how to come up with the integration of the issue. Note that the issue indicated is a suggestion; tutors are free to take another cross-cutting issue taking into consideration the learning environment.

▪ **Guidance on the introductory activity :**

Each unit starts with an introductory activity in the learner's book. This section of the teacher's guide provides guidance on how to conduct this activity and related answers. Note that learners may not be able to find the right solution but they are invited to predict possible solutions or answers. Solutions are provided by learners gradually through discovery activities organized at the beginning of lessons or during the lesson.

▪ **List of lessons/sub-heading**

This section presents in a table suggestion on the list of lessons, lesson objectives copied or adapted from the syllabus and duration for each lesson. Each lesson is then developed.

▪ **End of each unit**

At the end of each unit the teacher's guide provides the following sections:

- Summary of the unit which provides the key points of content developed in the student's book.
- Additional information which provides additional content compared to the student's book for the tutor to have a deeper understanding of the topic.
- End unit assessment which provides the answers to questions of end unit assessment in the textbook.
- Additional activities: remedial, consolidation and extended activities). The purpose of these activities is to accommodate each learner (slow, average and gifted) based on end unit assessment results.

Structure of a lesson / sub heading

Each lesson/sub-heading is made of the following sections:

- **Lesson title**

- **Learning objective**

- **Teaching resources**

This section suggests the teaching aids or other resources needed in line with the activities to achieve the learning objectives. Tutors are encouraged to replace the suggested teaching aids by the available ones in their respective schools and based on learning environment.

- **Prerequisites/Revision/Introduction:**

This section gives a clear guidance to the tutor on how to start the lesson.

- **Learning activities**

This section provides a short description of the methodology and any important aspect to consider. It provides also answers to learning activities with cross reference to text book:

- **Application activities**

This provides questions and answers for application activities.

1.2. Methodological guidance

1.2.1. Developing competences

To sustain achievements in its Education, Rwanda introduced the General Education Competence-Based Curriculum (CBC). This Competence Based Curriculum was launched in April 2015 and implemented since 2016. It has been designed to be responsive to the needs of learners, society and the labour market. With a holistic learner-centered approach, it demands major changes in teaching methodology and the use of a wider range of assessment techniques focusing more on formative or on-going continuous assessment. This has implications for teacher education and the necessary provision of support and guidance provided to Colleges to ensure effective implementation.

The teacher is the most important player in improving the quality of education and a key factor in determining the success of the pre-primary and primary learners. It is therefore necessary to equip student teachers with competences that will enable them to effectively implement the Competence-Based Curriculum in pre-primary and primary school.

How to develop competences

Competences are acquired over time through the cumulative effect of a competence approach to learning. It should be noted that competences are rarely developed in isolation. They are interconnected and developed simultaneously.

Active involvement in learning is critical to the success of the competence based curriculum. Student teachers need to be engaged in challenging, practical, contextualized and complex learning situations through which application of learning is constantly developed. Through

active techniques students are required to think critically, carry out research, solve problems, be creative and innovative, communicate and co-operate.

These active techniques may include but not limited to the following: role play, group work, question and answers, field visits, project work, case study, brainstorming, discussions, research work, games and many others. Student teachers should be involved in balanced activities so that the competences are developed in the cognitive, psychomotor and affective domains.

In addition to specific subject competences, learners also develop generic competences which are transferable throughout a range of situations. Below are examples of how generic competences can be developed in Foundations of Education.

▪ Critical Thinking

These are activities that require students to think critically about subject content. Groups can be organized to work in different ways e.g. taking turns, listening, making decisions, allocating tasks or disagreeing constructively.

- Collect data locally through designing surveys, questionnaires, interview formats then analyse data, draw conclusions and present findings
- Observe, Record, Interpret – e.g. Mark out areas in the school and get different groups to record insect, animal, bird life and then to try to explain why different habitats have different species Experiment

- Research and Discuss
- Compare and Contrast Exercises
- Debate (see communication)
- Identify a Problem and design a methodology to collect the information needed to solve the problem
- Make teaching using locally available materials
- Using reasoning games and tests
- **Research and problem solving**
 - Use the Internet or library
 - Create a school library
 - Collect data through observation and recording
 - Collect data through surveys, questionnaires and different kinds of interviews
 - Develop sampling rules for data collection
 - Create a teaching aid to explain a concept
- **Creativity and Innovation**
 - Design a Poster
 - Write and design a booklet
 - Make a model
 - Create an experiment to prove a point
 - Invent new ways of doing traditional things
 - Develop a graph to illustrate information
 - Create a flow chart to show the main stages in a process
 - Design a data collection survey/questionnaire
 - Identify a problem which requires data collection to solve
 - Conduct experiments with objectives, methodology, observations, results, conclusions
 - Make hypotheses and identify ways to test them
 - Identify local problems and devise ways to resolve them
 - Create a teaching aid to explain a concept

- **Communication Skills**

- Describe an event or situation
- Present ideas - verbally, in writing, graphically, digitally
- Set out pros and cons
- Argue a case – verbally, in writing, graphically (compare and contrast), digitally
- Observe, record, interpret
- Write letters for different purposes.

- **Cooperation, personal and interpersonal management and life skills**

- Pair work
- Small group work
- Large group work
- Data collection from the community
- Collect community photographs and interview residents to make a class/school history of the local community
- Note: The tutors' Guide should improve support in the organisation and management of groups

- **Lifelong Learning**

- Take initiative to update knowledge and skills with minimum external support.
- Cope with the evolution of knowledge and technology advances for personal fulfilment
- Seek out acquaintances more knowledgeable in areas that need personal improvement and development
- Exploit all opportunities available to improve on knowledge and skills.

1.2.2 Addressing cross cutting issues.

Among the changes in 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. Some cross cutting issues may seem specific to a particular unit but the tutor needs to address all of them whenever an opportunity arises.

In addition, student-teachers should always be given an opportunity during the learning process to address these cross cutting issues both within and out of the classroom.

1.2.3. Attention to Special Educational Needs specific to each subject

When we think about inclusive education, often we just think about getting children into school, i.e. making sure they are physically present in school. However, we also need to ensure that children are participating in lessons and school life and that they are achieving academically and socially as a result of coming to school. So we need to think about presence, participation and achievement.

Some people may think that it is difficult to address the needs of a diverse range of children. However, by working as a team within your school, with support from families and local communities, and by making small changes to your teaching methods, you will be able to meet the needs of all children – including those with disabilities. The student-teachers should be prepared to address special educational needs by copying the best practices from their tutors. Hereafter are some guidance that tutors can apply while addressing special educational needs:

Tutors need to:

- Remember that student-teachers 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).
- Always demonstrate the objective of the activity; show student-teachers what they expect them to do
- Vary their pace of teaching to meet the needs of each Student-Teacher. Some Student-Teachers process information and learn more slowly than others.
- Use clear consistent language – 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-Teacher 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 Student-Teacher. Both Student-Teachers will benefit from this strategy.

- Have a multi-sensory approach to your activities.

Below are 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-Teacher is unique with different needs that should be handled differently.

Strategies to help Student-Teachers with physical disabilities or mobility difficulties:

- Adapt activities so that Student-Teachers who have difficulty moving, can participate.
- Provide adapted furniture to assist– e.g. the height of a table may need to be changed to make it easier for a student teacher to reach it or fit their legs.
- Encourage peer support – friends can help friends.

Strategies to help Student-Teachers with hearing disabilities or communication difficulties

- Always get the Student-Teacher’s attention before you begin to speak.
- Encourage the Student-Teacher 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 Student-Teachers with visual disabilities

- Help Student-Teachers to use their other senses to play 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.
- Make sure the Student-Teacher has a group of friends who are helpful

Adaptation of assessment strategies

Each unit in the Tutors’ guide provides additional activities to help Student-Teachers achieve the key unit competence. Results from assessment inform the tutors which Student-Teacher needs remedial, consolidation or

extension activities. These activities are designed to cater for the needs of all categories of Student-Teachers; slow, average and gifted Student-Teachers respectively.

1.2.4. Guidance on assessment

Assessment is an integral part of teaching and learning process. The main purpose of assessment is for improvement. Assessment for learning/**Continuous/ formative assessment** intends to improve Student-Teachers' learning and tutor'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 ongoing process that arises out of interaction during teaching and learning between. It includes lesson evaluation and end of sub unit assessment. This formative assessment should play a big role in teaching and learning process. The tutor should encourage individual, peer and group evaluation of the work done in the classroom and uses appropriate competence-based assessment approaches and methods. The practical teaching skills will be assessed during regular activities such as micro-teaching, weekly teaching practices and school attachment.

Summative assessment:

The assessment can serve as summative and formative depending to its purpose. The end unit assessment will be considered summative when it is done at the end of unit. -

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 or end of year is considered as summative assessment so that the tutor, Colleges and parents are informed of the achievement of educational objectives and think of improvement strategies where applicable. There is also end of level/ cycle assessment in form of national examinations.

1.2.5 Students' learning styles and strategies to conduct teaching and learning process

There are different teaching styles and techniques that should be catered for. The selection of teaching method should be done with the greatest care and some of the factors to be considered that are: the uniqueness of subjects;

the type of lessons; the particular learning objectives to be achieved; the allocated time to achieve the objective; available instructional materials; the physical/sitting arrangement of the classroom, individual students' needs, abilities and learning styles. There are different learning styles depending on learners. The tutor should use a wide range of techniques and tools to cater for different specificity of learners.

1.2.6. Teaching methods and techniques that promote active learning

The different student learning styles mentioned above can be catered for, if the tutors use active learning whereby Student-Teachers are really engaged in the learning process.

What is Active learning?

Active learning is a pedagogical approach that engages students in doing things and thinking about the things they are doing. In active learning, learners are encouraged to bring their own experience and knowledge into the learning process.

The role of the tutor in active learning

- The tutor engages Student-Teacher through active learning methods such as inquiry methods, group discussions, research, investigative activities and group or 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 learners to develop different competences by giving tasks which enhance critical thinking, problem solving, research, creativity and innovation, communication and cooperation.
- Tutor supports and facilitates the learning process by valuing Student-Teachers' contributions in the class activities.

The role of Student-Teachers in active learning

Student-Teachers are key 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. A Student-Teacher engaged in active learning:

- Communicates and shares relevant information with other learners 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 their 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 learners are involved in the learning process. Below are those main part and their small steps:

1. Introduction

Introduction is a part where the tutor makes connection between the current and previous lesson through appropriate technique. The tutor opens short discussions to encourage Student-Teachers to think about the previous learning experience and connect it with the current instructional objective. The tutor 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 learners' findings, exploitation, synthesis/summary and exercises/application activities, explained below:

- **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 instigate collaborative learning, to discover knowledge to be learned)

Step 2

- The teacher let the students work individually or 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 boost those who are still behind (but without communicating to them the knowledge).
- **Presentation of learners' productions**
 - In this episode, the teacher invites representatives of groups (if the work was done in groups) to presents the students' productions/ findings.
 - After three/four or an acceptable number of presentations, the teacher decides to engage the class into exploitation of the students' productions.
- **Exploitation of learner's productions**
 - The teacher asks the 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.
- **Summary/conclusion/ and examples**
 - The **teacher** summarises the learned knowledge and gives examples which illustrate the learned content.
- **Exercises/Application activities**
 - Exercises of applying processes and products/objects related to learned unit/sub-unit
- **Exercises in real life contexts**
 - Teacher guides learners 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 tutor asks some questions to assess achievement of instructional objective. During assessment activity, Student-Teachers work individually on the task/activity. The tutor avoids intervening directly. In fact, results from this assessment inform the tutors on next steps for the whole class and individuals. In some cases, the tutors can end with a homework assignment.

PART II: SAMPLE LESSON PLAN

School Name: **TTC**

Tutor's Name:

Term	Date:	Subject	Class	Unit No	Lesson Number	Duration	Class size
One	.../.../...	FoE	Year One SME/ LE/ SSE/ ECLPE	1	4	40 min	30
Types of special Educational needs to be catered for in this lesson and number of learners in each category			One student teacher with Visual impairment(short sighted)				
Unit title		General introduction to education					
Key Unit Competence		Analyze the components and linkages between elements of the national education system.					
Title of the lesson		Forms of education					
Intructional Objective		Given a list of learning environments, student teachers will be able to classify them in formal, non-formal or informal education correctly in 5 minutes reserved for assessment.					
Plan for this lesson(Location)		In classroom					
Learning materials		Flip chart, manila paper, stories, flash cards,					
References		FoE Student's book, Tutor's guide, Internet					

Timing for each step	Brief description of teaching and learning activities		Generic competences and cross-cutting to be addressed + short explanation
	Tutor's activities	Student teachers' activities	
	In small groups Student teachers read and analyse a scenario provided on manila paper. They find out the corresponding forms of education and present their work in plenary session. The Tutor guides the student teachers during the activity.		

<p>1. Introduction</p> <p>5minutes</p>	<p>Invite the student teachers to stand up.</p> <p>Ask a question about aims of education.</p> <p>Use the ball and throw it randomly to one student teacher and ask him/her to say one aim of education and explain it.</p> <p>This game continues until all aims are stated and explained.</p>	<p>Partipate in a game and answer the question about aim of education, once they get the ball.</p>	<p>Communication:will be developed through answering questions orally .</p>
<p>2.Development of the lesson</p> <p>30 minutes</p> <p>a) Discovery activity</p>	<p>Help student teachers to form gender balanced groups (try to balance boys and girls).</p> <p>Distribute manila papers containing different scenarios and request student teachers to analyse the scenarios about forms of education (written in large print letters.)</p>	<p>In 5 groups, student teachers read, analyse the scenario and find out the form of education illustrated in the given scenario* (scenarios provided at the end of this lesson plan)</p> <p>Guiding questions:</p> <p>1)What are the characteristics of a form of education accounted in the story</p> <p>2) How do those forms of education differ?</p>	<p>Critical thinking Student teachers read critically to dicover the form of education based on characteristics described in the scenario</p> <p>Communication and cooperation: through discussing in groups.</p> <p>Gender education: when girls and boys work together in groups and are given equal opportunities in paricipation and leadership.</p>

	<p>Request student teachers to discuss the characteristics of each form education they have on the manila paper.</p> <p>Move around and check every body's participation and intervene where it is necessary (help the visually impaired student teacher as needed).</p>		<p>Inclusive education: through helping the student with SEN to learn effectively.</p>
<p>b)Presentation of learner's production</p>	<p>Give time to each group to present their findings.</p> <p>Give the student teacher who has visual impairment the front seat.</p> <p>Use large print letters on the chalk board</p> <p>Note the mistakes or any misconception from group presentations.</p>	<p>Present the work</p> <p>While the group presenter is presenting and describing characteristics on form of education, others may give supplement and ask questions for better understanding.</p>	<p>Communication skills through presentating the work and dicussions that follow.</p> <p>Peace and values education through sharing resources and respect of every one's ideas.</p>

<p>c)Exploitation</p>	<p>Correct any misconceptions from learner’s presentations</p> <p>Lead discussions on particular forms of education.</p>	<p>Ask questions where they do not understand</p>	
<p>c) Summary/ conclusion/</p>	<p>Help student teachers to summarise the content.</p> <p>Guide them to find characteristics for each form of education and add other information related to the lesson.</p>	<p>Summarize the content in guided by the Tutor: There are 3 forms of education:</p> <p>Formal education: systematic, organised and structured. It follows a curriculum.</p> <p>Non formal education: organized learning activity outside the structure of formal education.</p> <p>Informal education: happens outside the classroom, through community, not organised</p>	<p>Communication and cooperation: when making summary together.</p>
	<p>Help student teachers to understand the assignment and write in a large print for a visually impaired student teachers and facilitate him where necessary.</p>	<p>Do assessment (Individually)</p> <p>Group the following learning environments in formal, non-formal and informal education: park, museum, library, computer lab, primary</p>	<p>Creativity and innovation: this happens through making summary of the content in their own words</p> <p>Problem solving and critical thinking through deep thinking about the assessment question and solving challenges they may encounter.</p>

Assessment 5 minutes		<i>classroom, playground, school club, study visit, university, carpenter's workshop, science lab, home, teacher training in English.</i>							
		Answer using the table below:							
		<table border="1"> <tr> <td>Formal</td> <td>Non formal</td> <td>Informal</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	Formal	Non formal	Informal				
Formal	Non formal	Informal							
Homework	Explain the homework.	Homework: Make additional research on how informal and non formal education is provided in your families and different communities you belong to.	Lifelong learning through conducting a research in community						
Teacher's self evaluation	<p>The lesson has been taught in a good and motivating way and student teachers were highly motivated.</p> <p>Area of improvement: teaching materials were not enough and next time there will be a need to involve student teachers to make their own materials using local materials</p>								

*** Scenario that are written on manila papers**

Scenario 1:

Zacharie is a university student, he has learnt much about how to repair electronic machines and apparatus as his area of studies. He will graduate in civil engineering from UR College of science and be awarded bachelor's degree.

Scenario 2:

Kabango is the first born of Kamugisha. He always accompanies his father where he works as a shoes maker at Gatsibo leather processing factory and today many of his clients appreciate the shoes made by his son KABANGO.

Scenario 3:

After reading an article in newspaper about “save our soils” and finding ways to stop erosion”, MUTABAZI applied it in real life. Today he is a good farmer and all his neighbours come to visit his practice of how he stopped soil erosion.

Scenario 4:

All senior six leavers attend Itorero ry'Igihugu and get certificate. During this training they get to know Rwandan values, custom, prohibit and all that are concerned with our culture. In his speech, the chairperson of Nation Itorero Commission (NIC) told youth that they are the one to preserve the Rwandan values and national identity and pass them to the coming generation effectively.

Scenario 5

During Umugoroba w'Ababyeyi, Mukakimenyi advised young families that they should try to regularly communicate as a couple to solve family problems before taking their secrets out of the family. This came after the family of Bagiramenshi fought and their issues is now being investigated by RIB which seems embarrassing and not good for Bwiza village.

PART III: UNIT DEVELOPMENT

● UNIT 1:

GENERAL INTRODUCTION TO EDUCATION

1.1. Key unit competence

Analyse the components and linkages between elements of the national education system.

1.2. Prerequisites

As the student teachers have gone through different levels of education, they already know that Rwandan education system follows the structure of 3 years for pre-primary, 6 years for primary (primary education), 3 years for lower secondary education, 3 years for upper secondary education, and 3 to 4 years for tertiary education (University and college education). Along with the aforementioned educational system structure, there is vocational education which does not require the completion of any other educational level than primary education. With respect to the previous knowledge acquired in their senior 2 and 3 (S2 & S3), students were taught some units upon which the current learning program was developed. For example, in S2 unit 2 they learnt impact on German and Belgian colonization on education development and the shift from informal or traditional education to formal education with introduction of schools. In S3 unit 2 they have learnt the consequences of the 1994 Genocide against the Tutsi which highly affected Rwandan education. Throughout those educational changes, issues related to philosophical, historical, social and psychological Foundations of Education were either directly or indirectly addressed.

1.3. Cross-cutting issues to be addressed

Cross cutting issues are introduced in the course to open the mind of the students and elucidate their understanding of the course from various context and perspectives. Cross-cutting issues which have been considered to be of vital importance for this subjects are those which have the closer connection with educational changes that happened in this country. Consequently, cross-cutting issues such as genocide studies, peace and values education, inclusive education and environmental management were included in this subject.

Genocide Studies

This cross-cutting issue will be addressed when studying political changes and their effects on Rwanda's history of education. It is with that connection that the tutor is advised to deeply highlight the root causes of educational changes that were introduced in Rwandan education system. He/she will as well place emphasis on importance of education as a tool the government has to rebuild Rwandan society.

Peace and Values Education

This will be much interestingly addressed while helping student teachers to understand social foundations in the light with educational development. By understanding this, students teachers will comprehend how social and cultural values are linked with the school curriculum as the main determinants of the nation's identity.

Gender and Inclusive Education:

In several countries and Rwanda alike, gender equality in education has been a controversial issue. The inclusion of these issues in the subject of foundations of education will help student teachers to understand both philosophical and psychological foundations. The understanding of such foundations enables students teachers to think of diverse students that they will have in the same classroom, how they think and how to address diverse needs.

Environmental and Sustainability:

Environmental issues have been given little attentions in schools curriculum since a long time ago, however as far as health conditions and conducive learning environment are the determinants of students success, environmental management will ever remain an educational concern. The knowledge of the importance of environment in teaching and learning experience will enable student teachers to understand how to get students readiness before the lesson is taught by engaging their hearts, mind and hands.

1.4. Guidance on introductory activity

- Ask student teachers to carefully observe the graphic individually using their textbook.
- Gives time to each of student teacher to think about the five questions. The student teacher answers each question on its own sheet of paper.

- In small group, they rotate to read different answer by highlighting similar and different answers.
- The student teachers can answer to the questions giving the following ideas:

Possible answers:

- **Question 1:** The schooling journey: Pre-primary, Primary and Secondary
- **Question 2:** Student teachers sat for National exams in P6 and S3
- **Question 3:** National exams are important because results from national exams shows at which level the students have achieved expected competences required for further studies in the next cycle. Those results are therefore used to orient students in different learning areas.
- **Question 4:** Primary subjects provided basic knowledge and skills that served as prerequisites for ordinary level. Learning cycles are interlinked: Lack of pre-primary background leads to poor performance and drop out at primary school. Poor performance in primary has a negative impact on Ordinary level performance

Example: if SET content is not mastered this will understanding of Biology, Chemistry and Physics

- **Question 5:** Student teachers can give different answers as it is about expectations and they don't have yet enough information about TTC. It will be an opportunity to inform them about subjects in TTCs based on theirs answers.

In TTCs, student teachers can expect having general subjects as a continuation of ordinary level and professional courses such as Teaching methodology, Foundations of education, Teaching practice,

1.5. List of lessons

#	Lesson title	Learning objectives	Number of periods
1	Introduction to Foundations of Education subject	Understand the importance of Foundations of Education for the teaching profession	2
2	Key concepts in education	Define the concepts of education	2
3	Aim of education	Explain the purpose of education	1
4	Forms of education	Explain the forms of education	1
5	Historical Developments in Rwanda's Education System	Analyse the challenges facing Rwandan pre and primary education and propose solutions	4
5	Structure of Rwandan education system	Describe the education system of Rwanda and its historical developments	1
	Assessment		1
	Total Periods		12

Lesson 1: Introduction to Foundations of Education subject

a. Learning objective

Understand the importance of Foundations of Education for the teaching profession.

b. Teaching resources

Year one timetable, student's book and FoE syllabus.

c. Prerequisites/Revision/Introduction.

Student teachers will be led to identify subjects through questions allowing them to connect previous acquired knowledge with the current subject. Although, they perceive this subject as new, the meaning of its key words requires the common sense reflection.. Due to curiosity and lifelong learning

skills acquired, students teachers may have asked their elders the kinds of subjects taught in TTC and it is obvious that foundations of education as a course which marks the difference between TTC and other schools may have listed among the first

d. Learning activities

Activity 1.1

- Provide copies of year one timetable to the small groups of student teachers and let them observe it as they answer the following questions written on the chalkboard:

How many times it does appear on the time table?

How many more or less periods that the subject has than other subjects?

- After the comparison and analysis of the time table, ask the student teachers to brainstorm about the following question:
 - Did somebody tell you something about FOE? What did he/she share with you?
 - What new knowledge do you expect from FOE lessons than what he/she shared with you?
- Find key elements of answers in Student book (1.1.Introduction to Foundations of Education)

e. Application activity 1.1

Sample friendly letter.

Dear friend Ernest,

I hope this letter will find you healthy. I remember many of the things we shared last year, particularly when we were choosing the school in which to further our studies and the areas of specialization after the completion of our lower secondary education level.. Do you remember that TTC was our last choice? We hated it.

I write this letter in order to let you know the happiness I got just the first day I was introduced to the lesson of “Foundations of Education”. It was on Tuesday the 07th 2019, when the teacher asked us to feel like we were to become teachers everywhere in this world. He kept asking our expectations. I remembered when I was a child I liked to stand in front of people pretending to share something. Now, foundations of education will equip me with

competences to know different behaviours of people and how to teach them. Ernest do you remember that I love young children? The good news is that I will know them, teach them and follow them.

I have a lot of stories to tell you. Let me stop by here and I will tell you more and more in the holidays of April.

Your best Friend Denise!

Lesson 2: Key concepts in education

a. Learning objective: Define the concepts of education

b. Teaching resources

Copies of the paragraphs written in the student book 1.2, flash cards where the meanings of terms are written, scotch, chalks and chalk board.

c. Prerequisites/Revision/Introduction

The student teachers have a lot of information about the terms related to education. For example, when saying the term school, the learners will quickly understand that the word “school is frequently used at home. In every academic environment the terms like teacher, learners, curriculum and others are used as well.

d. Learning activities

Activity 1.2

Question 1

Form small group of 3 or 4 student teachers, and give them materials to read.

Ask them to write in their exercise note, the terms related to education and brainstorm other terms that they think can be linked to education.

Encourage the student teachers to share the term and write the correct ones on the chalkboard.

Possible answers: Based on the meaning the following terms have relationship with education: learning, teaching, instruction, school, academics, vocational training, didactics, curriculum and pedagogy.

If these terms were not identified by the student teachers, the tutor will add the missing one. In small groups, he/she will give each group a flash card to read and understand the meaning of the term.

He/she will move around to help, encourage and explain where the group fails to understand.

He/she will give time for group presentation and make clarifications.

He/she will tell each group to hang/display the flash card on the classroom wall.

e) **Application activity 1.2**

The correct answer of the application activity is :

a-----5	c-----2	e-----4
b-----3	d-----6	f-----1

Lesson 3: Aim and purpose of education

a. Learning objective:

Explain the purpose of education

b. Teaching resources

Pictures of different people in different work domains found in the student book (activity 1.3), chalks, chalk board, flash cards.

c. Prerequisites/Revision/Introduction.

As student teachers were told the reasons why they have to learn a particular lesson throughout different levels of education, they know educational leaver's profiles of their last ordinary level. More specifically they know the meaning of education during the previous lesson.

d. Learning activities

Guidance and answers to Activity 1.3

The tutor will ask student teacher to open their book, observe the pictures on the activity 1.3.

Question 1: What kinds of work or job are represented on the picture?

This activity can be done individually or in groups.

Give them time to name the jobs and write the answer on the chalkboard:**Jobs represented in pictures:** A teacher, a tailor, a cook, medical doctor (Physician), a shopkeeper, a Driver

Question 2: What is needed for a person to perform the activity illustrated on the picture?.

In small groups, each group will discuss one picture.

The tutor will allow the groups to present their findings and he/she will note the important points on the chalkboard. He/she will do the same on the third question as written on the flash card (Why is it important to have a job?).

Answer: All of the works and jobs require the person to have knowledge, skills and attitudes/ values. Those competences are acquired and given in the process known as “**education**”.

Ask student teachers to read one general aim of education in their textbook. After reading, the tutor will invite them to come in front of the classroom so that each student teacher finds a partner who has read the same aim.

Before ending the lesson, the tutor will encourage the student teachers to read all of the sentences talking about educational aims and purpose.

e. Application activity 1.3

The student teacher can answer individually the question in this way.

General aim	Aims of Rwandan education
Prepare people with skills to join the workforce and contribute to the economy	Provide students with adequate skills at all levels of general education as well as technical and vocational skills;
	Offer consistent courses and educational quality at all levels;
	Promote science, technology and research in order to equip Rwandans with capacity to speed up national development;

Lesson 4: Forms of education

a. Learning objective:

Explain the forms of education

b. Teaching resources

Pictures of different educational setting found in the student book (activity 1.4), small papers, flash cards, chalks, chalkboard.

c. Prerequisites/Revision/Introduction.

The student teachers know that they have personally acquired many things. They understand that education should not only take place at school. They know what kind of learning that takes place at home and what takes place at school.

d. Learning activities

Activity 1.4

Question 1

- In small groups, ask student teachers to observe the pictures in their textbook activity 1.4.
- Give each group a copy of questions to answer as they observe the pictures.
- **Possible answers to question 1:** Context illustrated in each picture.
 - **Picture 1:** It is about a teacher in classroom with young learners that seems to be in pre-primary. They are learning numeracy.
 - **Picture 2:** It is about a family at home: a mother is listening to the radio, the father using the telephone, children are watching the television.
 - **Picture 3:** A parent at home explaining home materials related concepts
 - **Picture 4:** A group of learners with their teacher in a cultural center (may be a museum) paying attention to the explanations provided by an expert in that center.
 - **Picture 5:** Children in a library. It might be a library open to all in the community as children do not wear uniform.

Question 2

- Let learners provide answers to the second question
- **Possible answer to question 2:**
- People in the illustrated contexts have in common “learning”, Education: learning is taking place in different contexts: at school, at home, in the library, museum.
- Explain the 3 forms of education: formal education, non-formal and informal education. During your explanation, match the form of education with pictures in the student book, give examples, ensure that students understand the relationship and difference between the 3 forms of education and are able to give examples.
- Tell them that informal education happens outside the classroom, through community-based organizations, museums, libraries, mass media and at home while non-formal refers to any organized learning activity outside the structure of formal educational system that is consciously aimed at meeting specific learning needs of particular groups of children, youths or adults in the community.

e. Application activity 1.4

Answers to Application 1.4

After filling the T-chart, the student teachers can produce the following:

Formal Education	Informal Education
1. primary classroom	1. park
2. computer lab	2. museum
3. university	3. carpenter’s workshop
4. science lab	4. home
	5. church

Lesson 5: Historical Developments in Rwanda's Education System

a. Learning objective:

Analyse the challenges facing Rwandan pre-primary and primary education and propose solutions

b. Teaching resources

Student books, flip chart, chalks and chalkboard

c. Prerequisites/Revision/Introduction.

The student teachers already know the history of Rwanda and have enough information related the historical background of Rwanda's education system. For example, in S2 unit 2 they learnt German and Belgian colonization and the introductions of school in Rwandan culture. In S3 unit 2 they have learnt the consequences of the 1994 Genocide Against the Tutsi which highly affected Rwandan education.

d. Learning activities

Activity 1.5

- Draw the KWL chart and explain that K stands for "**I know**", W stands for "**I want to know**" and L stands for "**I have Learnt**".
- Ask student teachers to brainstorm the main historical moments of Rwandan education system. Agree on the fact that there are three main periods namely pre-colonial, colonial and post-colonial. Ask student teachers to fill in the first and the second column of KWL chart as they answer about historical background of Rwandan education system during the listed periods.
- Ask student teachers to form small groups and ask them to turn the picture in the student's book depicting historical education periods. Give them time to analyse the picture and highlight the characteristics of education in a given period. Give them flip charts and ask them to write outcomes of their discussions.
- Request each group to choose one person who will take the lead to explain to other group members. Allow groups to rotate and receive the explanations given by the lead person. At the end, invite lead persons from each group to meet and share between themselves.

- After each presentation on one of Rwanda's Education period, provide clear and more consolidated explanations to compliment student teachers' presentations. Remember to encourage them to ask you for any clarification where it is needed.

e. Application Activity 1.5

Display the flip charts on different tables and invite every student teacher to complete the last column of KWL chart. Every student teacher writes his or her own ideas.

Lesson 6: Current structure of Rwanda's Education system

a. Learning objective:

To explain the education system of Rwanda and its historical developments.

b. Teaching resources

Student books, flip charts, chalkboards, chalks, text to read (*The Structure Of The Rwandan Education System*)

c. Prerequisites/Revision/Introduction.

Ask student teachers questions related to the years they spent for each of the educational levels they completed (Pre-primary school, primary school and ordinary level.. They now know how long it will take them to finish TTC . Finally, they also understand that they can continue their studies after leaving TTC as they can opt to do vocational training.

d. Learning activities

Activity 1.6

- Ask student teachers to fill the empty boxes in the table with levels corresponding to ages Before going to the next , let all student teachers agree to whether the level filled in the boxes is correct.
- **Answer:** If there is no repetition during the schooling journey, the answer can be as follows:

Age	3 years	5 years	8 years	9 years	11 years	12 years	14 years	15 years	18 years	22 years
Class	Nursery 1	Nursery 2	P2	P3	P5	P6	S2	S3	S6	University

- Write this sentence on the chalkboard, invite students to read it and help them to understand it: “In Rwanda the education system is composed of four main levels: Pre-primary, Primary, Secondary, and Higher Education”.
- Ask student teachers to form small groups and give them the following text to read.

The structure of The Rwandan education system

In Rwanda, the education system is composed of four main levels: Pre-primary, Primary, Secondary, and Higher Education, with a significant TVET stream at both secondary and higher education levels. In addition, there is non-formal education, or Adult Basic Education (ABE) as it is now more commonly referred to. Compulsory education spans the nine years from age 7 to age 15, covering primary and lower secondary education curriculum, and is commonly known as Nine Years Basic Education (9YBE).

Pre-primary Education is organized in nursery schools and for a period of three years for children between the age of 4 and 6.

Primary Education lasts for six years with the official school age at this level being 7 to 12 years. This stage focuses on core literacy and numeracy skills, as well as preparation for secondary studies. Primary education ends with national examinations which determine eligibility for proceeding to Lower Secondary school.

Secondary Education also lasts for six years with the official age of 13 to 18 years of age. It is subdivided into lower secondary (the first three years) and upper secondary (the last three years), both culminating in national examinations which respectively determine eligibility for upper secondary, and secondary graduation or entry to higher education. At upper secondary level, students choose between continuing in general secondary schools, enrolling in a Technical Secondary School (TSS) or in a Teacher Training Colleges (TTC) to be trained as primary school teachers.

Technical and Vocational Education and Training (TVET) provides young people and the unemployed with the skills to gain productive employment and also provides those already in employment with an opportunity to upgrade their skills, including entrepreneurs and those wishing to work for themselves. TVET is delivered through the Technical Secondary Schools (TSSs), Vocational Training Centres (VTCs) and Integrated Polytechnic Regional Centres (IPRCs).

At tertiary level, students can pursue their studies in a range of academic directions or opt to enter an array of technical or vocational fields. Undergraduate degrees currently require four years to complete, though the option of reducing this to three years in order to harmonise with the rest of the region is being explored. “Education Sector Strategic Plan 2013/14 – 2017/18”

Invite each group to describe the characteristics of every Rwandan educational level, mainly the duration, descriptions, mission and process to join it. Ask each group to summarize what they read on the flip chart and later call them to present or share outcomes of their group work.

Notice:

- Each group must have a writer, reporter and group leader.
- No group will repeat what other group will have presented.
- After presentation, the group displays their work on the class wall.
- After all groups have presented their work, summarize the key content to give a consolidated view of the lesson.

e. Application activity 1.6

Application activity 1.6

Ask student teachers to explain the structure of the education system of Rwanda. They should focus on the number of years, aims, language of instruction for each level. They will explain this as follows:

Pre-primary is organized into nursery schools for a period of three years for children between the ages of 3 and 6 years as a preparatory phase for entrance to primary schooling. This education aims to encourage the socialisation of children and to stimulate their learning potential by allowing them to engage and play with other children and to practice physical, rhythmic and manual activities. In pre-primary education, the learning space provides early childhood education largely through play and this is accompanied by very close care and support from caregivers or teachers. This is an avenue for their early development of social, emotional, cognitive and language skills.

Primary Education lasts for six years with the official school age at this level being 7 to 12 years. The focus of this level is core literacy and numeracy skills. Additionally, it prepares learners for secondary studies. Completion of primary education is marked by administration of national examinations to determine learners’ eligibility for proceeding to Lower Secondary school.

- Student teachers will explain the importance of technical and vocational education and training as that of providing young people and the unemployed with the skills to gain productive employment and an opportunity to upgrade skills for those already in employment. They will need to show state that TVET is delivered through the Technical Secondary Schools (TSSs), Vocational Training Centres (VTCs) and Integrated Polytechnic Regional Centres (IPRCs).
- Student teachers will explain that tertiary education involves a range of academic options including technical or vocational fields. At this level, undergraduate degrees currently require four years to complete.

1.6. Summary of the unit

It is the first time that student teachers enter the TTC classes. Foundations of Education is new to them so this unit “General introduction to education” will help to understand what foundations of education means and what is expected to be learned from it. Furthermore, different concepts of education were explained. This includes aims and purpose of education, forms of education, structure of Rwandan education and the historical background that has characterized education of Rwanda to date.

1.7. Additional information for tutors

More about the KWL chart technique

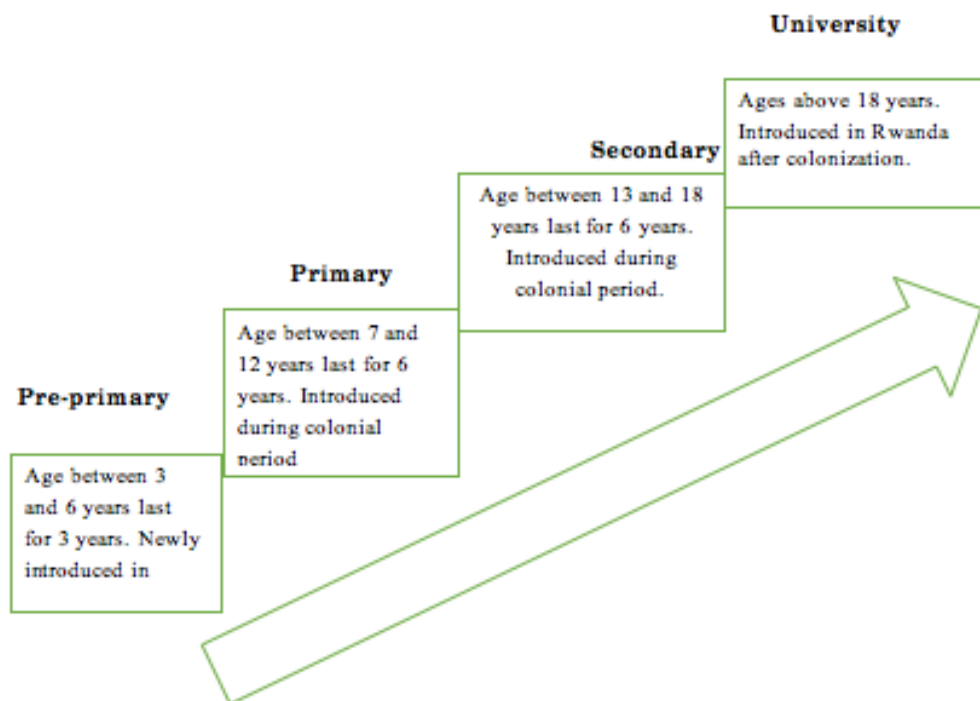
KWL Chart: Draw a chart with 3 columns. **K** stands for “**Know**” and under this heading students list what they already know about a given topic. **W** stands for “**Want to know**” and under this heading, students list questions they have and things they hope to find out about the topic. These two sections are to be filled at the beginning of a training or module as an introduction. The final column **L** stands for “**Learned**”. This is filled at the conclusion of the topic/sub-topic and is where students note down what they have gained in the end.

Learning stations (also called ‘corners’ or ‘activity centres’) are specific areas in a classroom where learners rotate from station to station to complete an educational task using different approaches. A debriefing session follows after discussing what has been learned at the different learning stations.

As a tutor, you will to consider the following:

- Define the different approaches and tasks for each station.
- Explain the different tasks and timing for each learning station.
- Assign learners in manageable groups and move around the stations to assist the learners.
- Facilitate participatory debriefing sessions.

1.8. End unit assessment



1.9. Additional activities

1.9.1. Remedial activities

1. Explain the meaning of the following key concepts:
 - **Schooling:** It is a formal education where students are taught in a classroom about subjects based on a curriculum. Teachers direct their lesson plans around the core of the curriculum for the students to be successful according to society

- **Education:** It is a systematic process through which a child or an adult acquires knowledge, experience, skills and sound attitude throughout life
- **Didactics:** *It is a field of pedagogy that deals with theories, ideas, principles and instructions directed at successful conduction of educational process.*
- **Pedagogy:** It is the discipline or a science that deals with the theory and practice of teaching.
- **Competence-based learning:** It is a learning by which a learner is engaged in active and participatory learning activities. It helps learners to use appropriate combination of knowledge, skills, attitudes and values to accomplish a particular task successfully.
- **Non-formal education:** Is a form of education which is provided outside the formal education system. It is less structured compared to formal education.
- **Basic education:** It is an evolving program of instruction that is intended to provide students with knowledge, skills, attitudes and values necessary to become responsible and respectful global citizens, to contribute to their economic well-being and that of the community.

1.9.2. Consolidation activities

Student teacher writes a short hand book about education in Rwanda.

1.9.3. Extended activities

Student teachers organize different school articles that show development of education and its contribution to the development and challenges of the country.

UNIT 2:

INTRODUCTION TO PEDAGOGY

2.1. Key unit competence

Apply pedagogical concepts and principles in simulated classroom situations.

2.2. Prerequisites

Student teachers understand different learning experiences. They can identify the qualities of an excellent teacher and effective teaching strategies. They exhibit pedagogical principles and practices in their interactions. This will facilitate the tutor during introduction of different concepts of this unit.

2.3. Cross-cutting issues to be addressed

Gender, Inclusive Education, Peace and Values Education, and environmental management. You will address these cross cutting issues during classroom activities. You will organize various activities by bearing in mind that Gender and inclusive education are respected. You will ensure to promote a culture of peace and values through group activities or individual work. You will also promote cleanliness and neatness of the learning and teaching environment to constitute a positive learning environment.

2.4. Guidance on introductory activity

Ask student teachers to form small groups of three or four. Ask them to select words that have a close relationship to the term 'Education.

You will then look at the work of each group to check if the groups have come up with common terms as follows: *pedagogy, teaching methods, didactics, pedagogics, coaching, conditioning, nurturing, guidance, enlightenment, instruction, cooperative learning, learner centred approach.*

Ask the same small groups to do a research about the meaning of the terms listed above. Make sure that internet is available in the smart classroom or computer lab. If the internet based research is not accessible, a normal library can be used so that the student teachers find the meaning of the key terms through the normal library facilities.

Encourage them to conduct research instead of using only their textbooks to gain more explanation and better understanding of key terms.

Ask student teachers to compare and establish the relationship between the key terms. Have some student teachers present and finally tell them that the unit will help them to differentiate and identify relationship between Education, pedagogy and other related terms.

2.5. List of lessons

#	Lesson title	Learning objectives	Number of periods
1	Didactic triangle concepts	Explain the didactic triangle and the didactic communication	2
2	Pedagogical principles	Distinguish pedagogical principles	3
3	General teaching methodology versus specific subject teaching methodology	Compare and contrast general teaching methodology versus specific subject teaching methodology	2
	Assessment		1

Lesson 1: Didactic triangle concepts

a. Learning objective:

Explain the didactic triangle and didactic communication

b. Teaching resources

Copy of a didactic triangle sheet, flash cards, flipcharts, markers, chalks, chalkboard, student book.

c. Prerequisites/Revision/Introduction.

The student teacher has a substantial background information about 'the term triangle' from pre-primary school up to senior three as a geometric shape. The term didactics was defined in unit 1 'general introduction to education' so this will make it easy to understand this lesson 1.

d. Learning activities

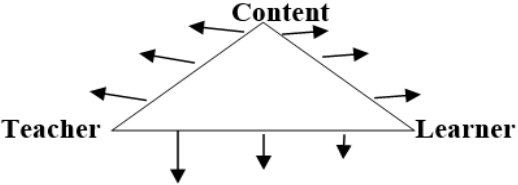
Activity 2.1

- Ask the student teachers to brainstorm what they know about the term 'triangle'. Record on the chalkboard the key ideas they provide; like 3 sides, 3 angles, 3 faces.....
- Ask student teachers to draw different triangles. Briefly describe didactic triangle by telling the student teachers that it represents the relationship between 3 main elements namely the teacher, learners and content.
- Ask student teachers to form small groups and give each group a copy of a didactic triangle sheet (figure 1) to each group. Ask the group to write 3 action verbs as indicated in the activity 2.1.

Figure 1: Didactic Triangle Sheet

Observe the following triangle and write at least three action verbs that link:

- Content and teacher
- Content and learner
- Teacher and learner



Answer to activity 2.1.: Example of the action verbs

- Content and teacher: plan, deliver, organize, prepare, develop ...
- Content and learner: acquire, research, use, analyse, assess, critic
- Teacher and learner: teach, facilitate, guide, help, discuss, engage

Using triangles illustrating different pedagogical processes, explain the process to learn, to train, and to teach.

Guide a discussion to help learners to understand the complementarity between the 3 pedagogical processes.

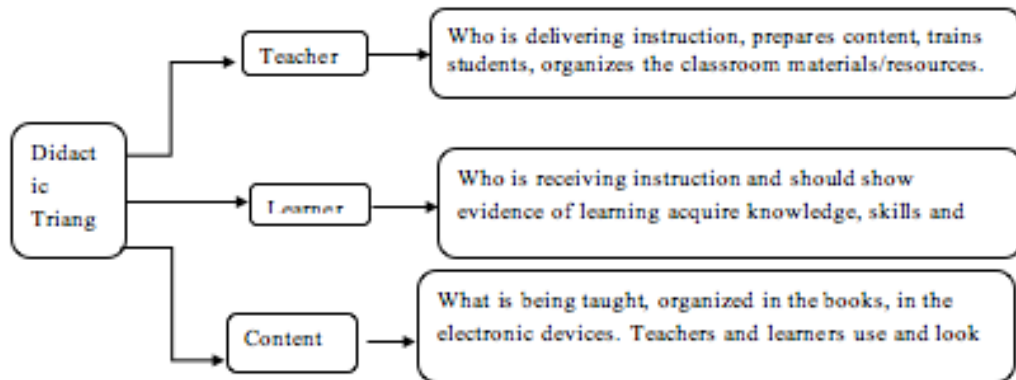
Explain also the concept of didactic transposition.

e. Application activity 2.1

Distribute the flip chart or manilla paper to each small group, ask each group to complete the graphic organizer according to the example in application

activity 2.1.

Example of a filled graphic organizer application 2.1



Lesson 2: Pedagogical principles

a. Learning objective:

Explain the different pedagogical principles

b. Teaching resources

Manila paper, markers, chalkboard, chalk, student teacher's book, small copies of the application

c. Prerequisites/Revision/Introduction.

In different subjects student teachers have met the concept of principles either theoretically or in practical terms. For instance, in history and citizenship senior one, unit 10 human rights, citizen duties and responsibilities in the student book page 35, the students have deeply studied the principles of human rights. With their different beliefs, they may even defend the principles that guide a particular faith or religion.

The above examples will give basis for student teachers to understand that teaching and learning have their own principles summarized in what is called pedagogical or didactic principles.

d. Learning activities

Activity 2.2

- Ask each student teacher to answer the following question 'what were the practices of your favourite teacher in S3?' Use Think-Write-Pair-Share strategy while reading to them to answer the above question.

- **Answer to Activity 2.2**

The student teachers may give responses like, the senior 3 teacher was the best because he/she:

- Used warm up and energizer
 - Used gestures while teaching.
 - Gave bonus point if correctly answer to the question
 - Gave us task. We were not bored
 - Used real materials
 - Made his/her lesson easier to all because of using familiar concepts to explain complex ones.
 - Gave both individual activities and group work.
- Write pedagogical principles on manila paper placing each principle on its own manila paper. Display them in the classroom separately to allow free movement of the student teachers.
- Explain the pedagogical principles to help learners to differentiate them and discover their importance in learning process.

e. Application activity 2.2

- Ask student to work on application activity 2.2 that requires matching the principle with its appropriate definition or description using arrows.

Correct answer for application activity 2.2

Activity	The teaching must take place gradually, the teacher must be ready to make readjustments, revisions, summaries, repetitions, ...
Motivation	It means that a person learns better if he/she is completely involved in an action.
Concretisation	Effective teaching always starts with something tangible, existing, concrete, that is, the teaching focuses on a real context.
Co-operation	This refers to an education system that allows the learner to learn on his/her own, at his/her pace and possibly using diversified ways.
Progression	This is method of teaching which uses the teamwork; all the learners work together and take part in the implementation of a classroom.
Individualisation	It is "a set of desires which will push a person to achieve a task or to satisfy a need"
Transfer	It refers to the implementation of classroom "acquisitions" in a new situation. It is an "influence", an "impact" on the subsequent learning.

Lesson 3: General teaching methodology versus specific subject teaching methodology

a. Learning objective:

Compare and contrast General teaching methodology versus specific teaching methodology

b. Teaching resources

Manila paper, markers, chalkboard, chalk, student teacher's book,

c. Prerequisites

Student teachers need to be aware of the different teaching approaches used for different subjects. They need background knowledge based on how they studied or how they were taught the different pre-primary and primary subjects. They will also need to be aware of the overarching methods that may be used across all subjects and the nature of the different subjects themselves. They need to be familiar with pedagogical principles. This background will help student teachers to understand the difference between specific subject teaching methodologies from general teaching methodology.

d. Learning activities

Activity 2.3

- Ask student teachers to form small groups and let them identify the subjects they expect to teach according to their course option.
Provide manila paper where they can record their findings. Encourage them to imagine and suggest reasons the methods should vary from one subject to another.
- Draw a table of two columns on the chalkboard (one column (A) is general methods of teaching another column (B) is specific subject teaching methods). Ask the student teachers to tell you in which column they can fill their findings. Let them fill their findings in the column (B) of specific subject teaching methods.
- Ask student teachers to read the content about general methods of teaching. Invite individual student teachers to write in the column (A) an idea which talks about general methods of teaching.

General teaching methodology:

- General teaching methodology deals with the general principles and standards that guide the teaching-learning process toward educational goals.
- Studies the elements common to education in any situation
- Provides descriptive models, explanations and interpretations applicable to general education, to any subject and in any stage or educational environment
- Analyse the main trends in education
- Applies to any individual no matter the area or subject.

e. Application activity 2.3

Distribute the questionnaire of the application activity 2.3 in the table below and ask student teachers to answer the questions individually.

Answers to application activity 2.3

Student teachers will answer the questions below by circling the correct response.

1. The teaching and learning of General Didactics implies that the teacher will teach...

Correct response is b.: **Compiled themes that are applicable to all the study fields of teachers and teach them how to teach.**

2. Specific Subject Didactics means that:

Correct response is c: **There is a specific way of teaching a specific subject**

3. A didactic situation consists of interaction between....

Correct response is b.: **Usually an adult and a child**

2.6. Summary of the unit

Unit two “introduction to pedagogy” is relatively short. It aims at helping young student teachers to start being aware about the important terms that will be frequently used more specifically in the following units from unit 3 to unit 9. Lessons like didactic triangle, pedagogical principles and comparison between general didactics and specific subject teaching methods will play a big role while implementing TMP syllabi.

2.7. Additional Information for tutors to share with student teachers

The following information will help tutors teach this unit effectively.

How to use “Think-Pair-Share” technique?

Students are given a question or topic to think about. They take some time to think independently first (with or without writing down notes). Next they pair with a partner or small group to discuss the thoughts they’ve come up with. Finally, the whole group comes back together to highlight key points raised during their discussions.

2.8. End unit assessment

Ask each student teacher to reflect upon his or her recent lessons taught by any of his/her tutors. Let the student teacher use a textbook to check the principles applied in those lessons.

Help student teachers to form small groups and reflect on the activities done by different tutors. During this group work they will identify didactic principles used and role-play them in order to demonstrate the identified didactic principles.

Example:

TMP tutor comes in the classroom with concrete materials (**concretization**), he or she calls the student teachers by their names, he varies tones, he shows the importance of TMP for a prospective teacher (**motivation**). He or she gave various tasks, all students are busy working (**activity**). In the class he encourages group works (**cooperation**) without forgetting to pay special attention to individual challenges (**individualization**), he/she prepared different activities starting with simple to understand ones and then advancing to more complex ones (**progression**). All student teachers are encouraged to feel confident as this will help them feel free in front of their learners when they join the teaching practice (**transfer**).

2.9. Additional activities

2.9.1 Remedial activities

Define the following concepts:

- Motivation
- Activity

- Concretisation
- Progression:
- Individualisation
- Co-operation
- Interdependence
- Cooperation skills
- Transfer

Answer: Refer to the student's book

2.9.1. Consolidation activities

Identify the principles applied by your tutors during the week and make a simple report at the end of the week.

2.9.2. Extended activities

Task student teachers to identified strength and learning impact these principles have on learning.

possible answers:

With these principles, the student teacher can be:

- Interested to learn.
- Actively involved.
- Able to demonstrate positive attitudes towards learning.

UNIT 3:

PEDAGOGICAL APPROACHES

3.1. Key unit competences

Practice active pedagogical approaches in simulated classroom situations.

3.2. Prerequisites

The skills from Unit 2 “**introduction to pedagogy**” and different units in TMP will facilitate learning pedagogical approach.

3.3. Cross-cutting issues

- **Environment and sustainability:** is addressed while preparing play based learning in a positive learning environment
- **Gender education:** while involving both girls and boys in classroom activities in a Gender responsive manner.
- **Peace and value education:** while encouraging learners to work in harmony and supporting each other.
- **Inclusive education:** will be developed because all student teachers will be involved without any kind of discrimination.

3.4. Guidance on introductory activity

- Put student teachers in groups and invite them to read the scenario in the student teacher’s book as the one below, discuss and then respond to related questions. Let student teachers present their answers to the questions.
- After discussions, student- teachers should come up with the following answers:

Suggested answers

The suitable approach for teaching Divine, the teacher will use discussion, outdoor activities and group work because Divine gets motivated through cooperative and collaborative learning.

On the other hand, the suitable approach for teaching Carine is play-based learning because it is through playful lessons that Carine learns better. This might include structured games, creative play like drama and debate.

For Shyaka to learn well, the teacher is required to teach through activities that have interconnectedness together. The teacher can also use free play and free individual interaction with learning material.

3.5. List of lesson/sub heading

#	Lesson title	Learning objectives	Number of periods
1	Teacher-centered vs. Learner-centred approach	To explain the difference between learner centred and teacher centred approach	2
2	Problem-based learning	Develop activities ideas to implement problem based learning	2
3	Play based learning	Explain the importance of integrating play with instruction	3
4	Thematic learning	Make a thematic planning web	3
	Assessment		1

Lesson :1. Teacher-centered vs. Learner-centred approach

a. Learning objective

To explain the difference between learner-centred and teacher-centred approach.

b. Teaching resources:

- Learner-centered pedagogy in practice booklet by VVOB and URCE,
- Teacher Training Manual: Roll out of the Competence-Based Curriculum, 2015 by REB

c. Prerequisite:

The skills from unit 2 “Introduction to pedagogy” and TMP will help student teachers learn better this unit 3. Classroom routines of the classroom about learner-centered approach.

d. Learning activity

Guidance and answers on Activity 3.1#1 :

- Ask student teachers to form groups,
- Ask them to observe the picture A and B and describe the two contexts:
- **Picture A illustrates a teacher-centred lesson** whereby the ICT teacher is explaining using some illustrations on the chalkboard. Students are quiet and seem following the teacher.
- **Picture B illustrates a learner-centred lesson.** Students are working using laptops. The teacher is present but does not interfere in the activity.

Guidance and answers on Activity 3.1#2 :

- Ask student teachers to read the statements and matching picture A and B with statements

Answer:

Picture 1 corresponds to: the statement “students are provided with enough content to make them knowledgeable.

Picture 2 corresponds to the statement “Learners are central of the learning process”

- From their answers, let student teachers explain the two statements and reflect on the best way. Guide them to conclude that “The best way to teach learners is to place learners at the centre of learning where everything is done taking into account their situation”
- Take time to explain teacher and learner-centred approach to help student teachers to differentiate the two approaches: characteristics, advantages. Disadvantages, role of the teacher and students.

e. Application activity 3.1

In groups, ask student teachers to write different words (word cloud) which are closely related with the teacher and learner centred. Move around to verify whether everybody is participating. Invite them to use a table of 2 columns:

Teacher-centred	Learner-centred
Lecture, expository, presentation, explanation, instruct , teacher talk, chalk and talk	Collaboration, cooperation, activity, participation, interaction, motivation, engagement

Lesson 2: Problem-based approach

a. Learning objective:

Develop activities ideas to implement problem based learning

b. Teaching resources:

REB Teacher Training Manual, Roll Out of the Competence Based Curriculum 2015.

c. Prerequisite:

Skills got from unit 2 “Introduction to pedagogy” will facilitate them to learn this unit. Classroom routines in teaching and learning activities.

d. Learning activities

Guidance and answers on Activity 3.2#1:

Give the task of searching information on “Problem-Based Learning” using a search engine (e.g. Google, Bing, Yahoo, etc.) and find different details explaining and/or providing examples about problem based learning and write down a summary in their exercise book. Encourage them to go beyond what they have in the textbooks.

Allow student teachers to present their findings and help them to make a more elaborated definition from the one in their textbooks.

Guidance and answers on Activity 3.2#2:

In groups, student teachers read the scenario in their textbooks and answer related questions.

Possible answers:

- The steps followed by Teacher Clement:
- Presentation of the problem through an experiment
- Discussion in groups to explain the phenomenon of evaporation
- Presentation by group representatives (all explanations are accepted)
- Experiment to validate and invalidate learner's explanations

Conclusion

This approach applies in other learning areas such as Maths and social studies but needs some adaptations because experiments are in sciences.

Explain the problem based approach related content referring to the scenario of Activity 3.2 #2. Focus on characteristics, steps of experimental learning used in some sciences lessons, importance and limitations of problem-based approach.

e. Application activity 3.2

Answers to Application activity 3.2

1. Steps of experimental approach: Refer to the Student Book on section 3.2.4.
2. Explain the task and let student teachers create a problem situation related to sexuality education for a SET lesson in P6.
3. Appreciation of the problem based learning:

Student teachers can give many ideas. Here above are some of them:

- Students have opportunity to develop competences such as: critical thinking, problem solving, cooperation,
- Knowledge is built based on prior knowledge by both students and teacher: learners misconceptions are worked on as a step in the learning process
- The learning is interesting because the problem is adapted to learner's socio-cultural context.
- Some contexts are exciting, challenging which engage learners in discussions

Lesson 3: Play- based learning

a. Learning objective:

Explain the importance of integrating play with instruction.

b. Teaching resources/ materials:

Internet, Right to Play book, Save the Children activity cards, materials for various games, flip charts, markers

c. Prerequisites

Skills acquired from Physical education subject of primary, Ordinary level and TTC

d. Learning activities

Guidance of activity 3.3

Ask student teachers to observe pictures in their textbook and answer to the related questions.

Possible answers to activity 3.3

1. The picture A illustrates pre-primary learners playing at different games: one group is matching dots and numbers, another group is constructing with blocs of different colours; in the third group children are drawing. Children in the three groups are busy, concentrated.

The picture B: learners in picture B: learners are playing football. They are happy and relax.

2. In picture A children are learning through play. They are gaining numeracy skills, fine motor skills and cooperation.

In picture B, learners are relaxing, developing gross motor skills and cooperation skills.

3. Student teachers may propose for example the plays like: “find a leader”, “Simon says”, “hide and seek”, explain how each game is played and show their importance in learning.

Appreciate the efforts of student teachers and provide constructive feedback.

After the discovery activity, explain the content related to play based approach using examples of plays provided by student teachers, through questioning.

e. Application activity 3.3

Suggested answer

1. Difference between play and game: Play is an unstructured activity while games are activities with a minimal set of rules, equipment and coaching. Play can be regarded as medium of instruction for young children who have not yet developed fully the language skills. Children engage instinctively in play.
2. Play gives opportunities to manipulate, experiment, develop skills in different areas: science, numeracy, literacy and social (for details refer to the student book point 3.3.3).

Lesson 4: Thematic learning approach

a. Learning objective:

Describe the benefits of using a thematic approach and make a thematic planning web

b. Teaching resources/Materials

Internet, Sample thematic web diagram, flip charts, markers, Right to Play book, Save the Children activity cards, flip charts, markers.

c. Prerequisites

TMP skills received in teaching activities

d. Learning activities

Learning activities 3.4

Guidance on teaching and learning activity

Activity 3.4#1

In computer lab/smart classroom, ask student teachers to search the meaning of **thematic approach**, then present their findings. Appreciate the students' finding and refer to the student book to provide further support and constructive feedback.

Suggested answer from research

The term thematic is derived from the word "theme". Learning in thematic refers to learning which is centered on themes. It involves creating a variety of educational activities planned around a central theme. For example, using a theme "my family" we can teach English, mathematics, social studies, fine art.

Activity 3.4#2

Student teachers read and interpret the chart illustrating thematic approach in their textbooks.

They may come with the following:

Different learning areas are turning around one theme which is Living things in Nursery Grade 3.

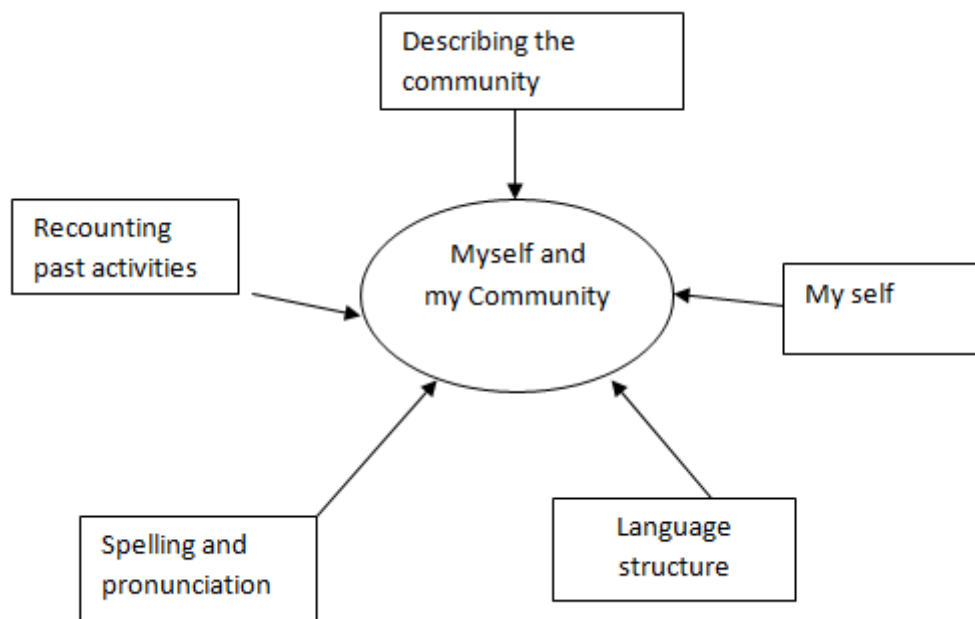
- **Discovery of the world:** outdoor walk to observe different plants, where do leaves come from?
- **Physical development and health:** Learning about foods from plants; doing action songs from plants,
- **In Numeracy,** the content is about counting 1-10 using plant related items; patterns using seeds, leaves, sticks.
- **Creative arts and culture:** Sketches of plants in local environment, drawings of different leaves or other parts of plants
- **Language and literacy:** Stories, poems around plants
- **Personal, social and emotional development:** what can we learn from looking after plants; peers working together to make a seed shaker.

Explain the content related to the thematic approach referring to the chart interpreted by student teachers.

e. Application activities

Suggested answers to application activity 3.4

1. Characteristics of thematic approach (refer to the student book)
2. The student who said that the thematic approach is applied in language subjects has a point. Below is an example from English subject.



Guide learners to find an example in French and Kinyarwanda Subjects.

3.6. Summary of the unit

In this unit we talked about teacher-centered versus learner-centered. The teacher-centered focuses on chalk and talk but learner-centered approach involves collaborative interaction with a teacher and learner.

This unit also talked about problem-based learning which enables learners to learn while engaging actively with meaningful problem. Learners are given opportunities to problem-solving in a collaborative setting. This approach is among the socio-constructivist movement whereby skills are built based on prior knowledge and experiences.

This unit talked again on play-based learning which is used for giving children opportunities to manipulate materials and to explore new avenues without risks.

Lastly, we talked about thematic approach which is centered on theme for enabling children acquire knowledge, skills, attitude, and values through a series of planned activities. From a theme, a teacher can teach different subjects.

3.7. Additional information for teacher

The best teaching and learning approach is one that your student-teachers respond to. A master teacher adjusts his or her approach in responding to his or her student-teacher ability to learn, the materials being presented.

3.8. End unit assessment

Answer to question 1: Explanation of the phenomenon of condensation following steps of experimental approach

a. Presentation of the problem situation

The teacher may present a glass of water containing ice, and let learners observe droplets of water on the outer walls of glass after a few minutes. He/she may also ask students to observe water droplets on the outer surface of window panes of the classroom or their homes early in the morning. In both cases, the teacher will invite students to discuss in groups on the origin of water on the glass or on the window panes.

b. Reflections, comparison with the perceptions of students

Learners discuss the problem in groups and raise some ideas on the origin of water on the glass or on the window.

c. Formulation of assumptions by learners

Learners will report the discussions of groups. The teacher accepts all the assumptions made by learners, and help them to properly formulate these assumptions. without changing their ideas. The teacher notes the assumptions on the chalk board to enable learners to make sure these assumptions are their own productions to validate or invalidate:

Maybe the water on the glass comes from water contained inside the glass

- Maybe the water seeps through the glass walls
- Maybe the water on the glass comes from rainwater
- Maybe the windows are not properly dried after washing
- Maybe the water comes from ice

d. Validation / invalidation of assumptions by experiment or other activities

After a careful observation of glasses (with no cracks and no droplets on the outer surface), the learners themselves will pour water without ice (not cold) in a glass and pour water and ice (cold) in another glass.

After a few minutes they will see no droplet on the outer wall of the first glass of water (not cold), and some droplets on the outer wall of the glass containing water and ice (cold water).

Thus, learners will discover that the water droplets on the outer surface of the glass results from the presence of ice or cold. So there is a relationship between the cold and the formation of water droplets.

The teacher helps students understand that water vapor present in the atmosphere can condense at lower temperatures to become water. It is therefore the water vapor around the cold glass which are condensed into water droplets on the glass.

The phenomenon is similar to water droplets on the windows of the classroom or home very early in the morning. As there is no sun during the night, it is colder than during the day. Thus, water vapour suspended in the atmosphere surrounding the house or class condenses with lower temperature and produce water on the windows.

e. Generalization and Synthesis

Again the teacher mentions the concept of condensation, and explains it on the basis of findings made through the experiences or experiments conducted in class. The learners will understand that water vapour suspended in the atmosphere condenses with decreasing temperature and water droplets cling on surfaces of various objects, or else if the condensation was performed on high altitudes, they fall on earth: the phenomenon of rain.

Answer to question 2:

Help student teachers to find the primary syllabus and choose a theme that applies to all primary subjects in primary. For ECLPE student teachers will make a thematic web planning for Pre-primary.

Answer to question 3:

Help student teachers to find the pre-primary or primary syllabus and choose a lesson and create a playful activity. Encourage them to create their own plays. They can be inspired by Save the Children Activity cards.

Answer to question 4: Role play the scenario about teaching days of the week through play

- Student teachers read the scenario in their textbooks.
- Ask a team of volunteers to role play the scenario and let the team prepare and be ready for presentation.

- After the role-playing, ask questions guiding student teachers to make appreciation of the technique (Play-based learning).

3.9. Additional activities

3.9.1. Remedial activities

As a home work student-teacher with learning difficulties spend more time reading and understanding the use of learnt approaches in teaching and learning activities. And give the summary.

3.9.2. Consolidation activities

Student-teachers should act out the use of different teaching learning approaches. To ensure their understand what is looks like in practice.

3.9.3. Extended activities

Provide student-teachers with an additional task of seaching more information about teaching and learning approaches and their uses.

● UNIT 4:

ACTIVE TEACHING METHODS AND TECHNIQUES

4.1. Key unit competence.

Apply different active teaching methods and techniques to be used in specific situations

4.2. Prerequisites

In unit 2 “Introduction to Pedagogy” (prerequisites about didactic triangle, pedagogical principles and general teaching methodology as well as specific ones).

Unit 3” Teaching and learning approaches” (prerequisites from learner centred pedagogy, problem based learning, play based learning and thematic approach).

Prerequisites from Pre-primary and Primary TMP.

4.3. Cross-cutting issues to be addressed

Gender education: teacher will involve both boys and girls in the lesson (when making groups), she/he should not separate boys from girls while doing class activities.

Inclusive education: all learners are welcome in the class activities irrespective their differences (socio-economic status, disabilities, religion, region, sex...)

Peace and values education: Teacher will inspire learners to work and live in harmony, to share materials and help one another

4.4. Guidance on introductory activity

Organise a lesson observation session at the Model school. Student teachers observe the lesson and invite them to write down what teacher and learners are doing. During observation the student teachers may fill in the table the following observations:

Activities of teacher during the lesson	Activities of the learners during the lesson
<ul style="list-style-type: none"> - Explaining - Showing the TLMs - Asking questions - Correcting students' activities - Warming up students - Putting students in groups - Demonstrating models - Etc 	<ul style="list-style-type: none"> - Listening to teacher - Answering teacher's questions - Asking questions/clarifications - Discussing/debating in groups - Writing summary - Doing group works/exercises - Perform demonstration - Etc

4.5. List of lessons

	Lesson title	Learning objectives	Number of periods
1	Teaching and learning Methods	Explain different active teaching and methods	2
2	Teaching and learning techniques based on direct interaction between teacher and learners	Practice teaching and learning techniques that focus on direct interaction between teacher and learners	4
3	Teaching and learning techniques that focus on inquiry and indirect interaction between teacher and learners	Practice teaching and learning techniques that focus on inquiry and indirect interaction between teacher and learners	6
4	Teaching and learning techniques that focus on cooperative learning	Practice teaching and learning techniques that focus on cooperative learning	4
5	Teaching and learning techniques that focus on presentation of information	Practice teaching and learning techniques that focus on presentation of information	2
	Assessment		2

Lesson 1: Teaching and learning Methods

a. Learning objectives

Explain different active teaching methods

b. Teaching resources

- Internet,
- Teacher training manual on CBC
- Manila papers
- Curriculum framework
- Roll out of the CBC 2015
- Help a Child resource file with videos and case studies
- Teacher guide for primary schools by REB/Right to Play

c. Prerequisites

- In unit 2 “Introduction to Pedagogy” (prerequisites about didactic triangle, pedagogical principles and general teaching methodology as well as specific ones).
- Unit 3” Teaching and learning approaches” (prerequisites from learner centred pedagogy, problem based learning, play based learning and thematic approach).
- Prerequisites from pre-primary and Primary TMP.
- Daily routines/daily life experience.
- Vocabulary acquired in English subject from primary till TTC.

d. Learning activities

Guidance on activity 4.1

- Invite student teachers to take their books, open them and complete the table with their feelings about how they are taught.
- Let them share their feelings through presentation.
- Consult PP TMP and Primary TMP syllabi to provide rich supplement constructive feedback.

Suggested answers in the table

Feelings when follow tutor's I instruction	Feelings when I work on an assignment/ homework or a project	Feelings when I collaborate with my classmates/through group
<ul style="list-style-type: none"> - Boredom - Low thinking - Less creativity - Passive - Ignored - Irresponsible 	<ul style="list-style-type: none"> - Active - Creativity - Ownership - Thinking - Motivated - Interested - Responsible - Engaged - Autonomous/ independent 	<ul style="list-style-type: none"> - Active - Motivated - Happy - Enjoyable - Interested - Thinking - Ownership - Responsible - Autonomous/ independent

e. Application activity 4.1

In pairs, give student teachers flipcharts and request them to open their books and do the application activity.

Refer to notes summary in the student book for further supplements and constructive feedback.

Suggested answers that student teachers may come up with

Method	Persuading ideas
Directed Instruction method	<ul style="list-style-type: none"> - Explanation - Giving instructions - Presentation of information - Demonstration - Less learners' engagement - Ect

Inquiry-based learning method	<ul style="list-style-type: none"> - Activity - Exploration - Discovery - Self-direction - Responsibility - Ownership - Ect
Cooperative Learning method	<ul style="list-style-type: none"> - Cooperation/collaboration - Group working - Discussion - Asking questions - Motivation - Active participation - Sharing/mutual learning - Ect

Lesson 2: Teaching and learning techniques based on direct interaction between teacher and learners

a. Learning objectives

Practice teaching and learning techniques that focus on direct interaction between teacher and learners

b. Teaching resources

- Internet,
- Teacher training manual on CBC
- Manila papers
- Curriculum framework
- Roll out of the CBC 2015
- Help a Child resource file with videos and case studies
- Teacher guide for primary schools by REB/Right to Play

c. Prerequisites/revision/introduction

- Unit 3” Pedagogical approaches” student teachers developed competences through play based learning, thematic learning and problem based learning.
- TMP of PP and primary

d. Learning activities

Guidance on activity 4.2.1

In groups invite student teachers to take their books, open them, check the list of various concepts and sort them according to the criteria filling in the table of three columns in their notebooks.

Request them to share their answers through presentation. Refer to student book to Supplement student teachers’ ideas and provide constructive feedback.

Suggested answers in the table

I know it	I have little information about it	I don't it
Storytelling, singing, and question and answer	Brainstorming, demonstration and presentation	Miming, expert pane and expository

e. Application activity 4.2.1

Ask student teachers to open their books and do the application questions in their notebooks. Refer to notes summary in the student book for further supplements and constructive feedback.

Suggested answers that student teachers may come up with

1. The reasons why the concepts discussed are called active methods and techniques:
 - They make learning interesting and discourage rote learning
 - They make learners active participants in the learning activities
 - They put learners at the centre of teaching and learning process
 - They facilitate learning /learners learn by doing
 - They develop a sense of responsibility and ownership in learners
 - They develop competences in learners

2. Active methods and techniques can be applied in the following situations:

- In group work (learners learn from one another; every body works)
- In discussion (learners share ideas; each learner generates ideas)
- In field trip (this promotes exploration and discovery in learners)
- In Case study (learners are involved in searching new information on their own)
- In project (learners learn through a project, they construct leaning independently)

Lesson 3: Teaching and learning techniques that focus on inquiry and indirect interaction between teacher and learners

a. Learning objective:

Practice teaching and learning techniques that focus on inquiry and indirect interaction between teacher and learners

b. Teaching resources

Student book, small papers or flash cards showing meaning of each technique, flip charts and markers different books of pre and primary school, box of small papers of techniques.

c. Prerequisites/Revision/Introduction

The student teachers have learnt actives teaching and learning methods and different active teaching and learning techniques. They have even experienced some of the strategies in their schooling process like practical work, experimentation in sciences, field visit in social studies

d. Learning activities

Activity 4.2.2

- Have student teachers in small groups and ask them to brainstorm the leaning activities that require them to work alone or in group even when the teacher is absent.
- They will highlight like: Homework, assignment, research, collecting information and materials, visiting resource people and physical features.

- Ask student teachers to read the active technique written on the flash card. Encourage them to read its meaning and find further information about it using internet or library.
- Ask student teachers to go through primary and pre-primary syllabi or student books and pick up from those books a sample of activity that reflects one of the technique of the day.
- Ask student teachers to role play technique of the day illustrating how to facilitate the chosen activity.

Example:

- After studying **assignment, discovery**, a group of student teacher can go through SET P1 syllabus and look the unit 6: Plants
- p1 learners are assigned task to look for a plant at home and observe parts of it and take it to school so as to present the research done.

e. Application activity 4.2.2

- Ask individual student teacher to pick up one technique from the box. Let him or her read again the meaning of it in the textbook.
- Give 3 minutes to find any learning activity/lesson from primary or pre-primary books through which the selected techniques can be applied for!
- Ask student teacher to find a partner whom they can share demonstration of how they can use the selected technique.

Lesson 4: Teaching and learning techniques that focus on cooperative learning

a. Learning objective

Practice teaching and learning techniques that focus on cooperative learning

b. Teaching resources

Student book, small papers or flash cards showing meaning of each technique, flip charts and markers different books of pre and primary school, box of small papers of techniques.

c. Prerequisites

The student teachers have learnt actives teaching and learning methods and different active teaching and learning techniques. They have even experienced some of the strategies in their schooling process like debate in languages, discussion, group work, ...

d. Learning activities

Activity 4.2.3

- Outside the classroom, together with the student teachers play the game.
- Tell student teacher to think-pair and share, the skills, knowledge and attitudes/values the young child can develop as he or she plays this game.
- Form two groups and have the student teachers debate on this statement” games are enough to teach learners everything”.
- Ask student teachers to read the active technique written on the flash card. Encourage them to read its meaning and find further information about it using internet or library.
- Ask student teachers to go through primary and pre-primary syllabi or student books and pick up from those books a sample of activity that can be actively taught using the technique of the day. The tutor will teach only two or three techniques per period.
- Ask student teachers to role play technique of the day illustrating how to facilitate the chosen activity as they refer to the example of game used in the introduction.

e. Application activity 4.2.3

- Ask individual student teacher to pick up one technique from the box.
- Let him or her read again the meaning of it in the textbook. Give 3 minutes to find any learning activity/lesson from primary or pre-primary books through which the selected techniques can be applied for!
- Ask student teacher to find a partner whom they can share demonstration of how they can use the selected technique.
- In the box, tutor has to put copies that are equivalent to the number of student teachers. No matter what if one technique is chosen by more than one student teacher.

Lesson 5: Teaching and learning techniques that focus on presentation/organizing

a. Learning objective

Practice teaching and learning techniques that focus on presentation/organizing

b. Teaching resources

Student book, small papers or flash cards showing meaning of each technique, flip charts and markers different books of pre and primary school, box of small papers of techniques.

c. Prerequisites

Since pre-primary level the students use matching, sort and classify in different learning situations. They have used KWL in the first unit” general introduction to education” and even graphic organizer in unit 2” general introduction to pedagogy”

d. Learning activities

Activity 4.2.4

- In small group, student teachers read the active technique written on the flash card. Encourage them to read its meaning and find further information about it using internet or library.
- Ask student teachers to go through primary and pre-primary syllabi or student books and pick up from those books a sample of activity that can be actively taught using the technique of the day.
- Ask student teachers to role play technique of the day illustrating how to facilitate the chosen activity as they refer to the example of game used in the introduction.

e. Application activity 4.2.4

Ask individual student teacher to pick up one technique from the box. Let him or her read again the meaning of it in the textbook. Give 3 minutes to find any learning activity/lesson from primary or pre-primary books through which the selected techniques can be applied for! Ask student teacher to find a partner whom they can share demonstration of how they can use the selected technique.

In the box, tutor has to put copies that are equivalent to the number of student teachers.

4.6. Summary of the unit

Unit four is very important to the student teachers for it prepares them to have various active methods and techniques that are needed in TMP lesson. Generally better understanding of this unit will help the student teacher to different ways of engaging learners in their learning process.

4.7. Additional Information for tutors

The tutors will not limit themselves to the list provided as far as research and new methods are being invented they may update the list. The focus should be made to those methods, techniques and strategies that enhance the application of learner-centred approach.

4.8. End unit assessment

Avail pre and primary syllabus depending on the option of the student teachers listed in the table below.

LE	SME	SSE	ECLPE
Primary English syllabus	Primary SET syllabus	Primary social and religious studies syllabus	Pre-primary syllabus
Primary Kinyarwanda syllabus	Primary mathematic syllabus Primary ICT syllabus	Primary fine art, music and sport syllabus	All lower primary syllabus.

Example of plan

Option	Subject	Unit	2 lessons	Strategies
ECLPE	Numeracy/ Pre-primary	Shapes	Draw shapes	Demonstration, observation, presentation, question and answer.
			Construction	
LE	English	Jobs and roles in home and community. Unit 5 P4	Naming jobs	Matching, role play, think-pair-share, role play, assignment.
			Talking about people's jobs	
SME	Mathematics	Length measurements. Unit 6 P4.	Distance and length	Observation, experimentation, practical work, demonstration.
			Units of length measurement	

SSE	Social & Religious Studies	Civics and governance. Unit 4. P5	Acceptable behaviour	Group discussion, presentation, practical work, field visit.
			National symbols	

When the student teacher has drafted this plan, ask him or her to simulate the strategies in small groups of 4 or 5 group members. Move around to check individual performance and lead them to take turns.

4.9. Additional activities

4.9.1. Remedial activities

Define the following concepts

- **Collaborative learning** is an educational method to teaching and learning that involves groups of students working together to solve a problem, complete a task, or create a product.
- **Collaborative learning** is a situation in which two or more people learn or attempt to learn something together. Unlike individual learning, people engaged in collaborative learning capitalize on one another's resources and skills.
- **Case study as learning technique:** is a story either based on real events, or from the construction of events which could reasonably take place. It involves issues or conflicts which need to be resolved. The information contained can be complex or simple.
- **Brainstorming:** a brainstorming is an educational technique in which a problem situation is presented to the learners in order that they might generate ideas and bring out theirs.

4.9.2. Consolidation activities

Prepare different lessons from the syllabus and assign student teachers to suggest and prepare appropriate teaching and learning techniques.

4.9.3. Extended activities

Task student teachers to simulate different teaching and learning techniques and highlight appropriateness and challenges of each technique.

UNIT 5:

COMPETENCE BASED CURRICULUM

5.1. Key unit competence

Assess with evidence the pre and primary competence based curriculum

5.2. Prerequisites

Skills about active teaching and learning techniques in unit 4,

Skills, attitudes and values from Itorero, utugoroba tw'abana and daily life experience.

5.3. Cross-cutting issues to be addressed:

- **Gender education:** teacher will involve both boys and girls in the lesson (when making groups), she/he should not separate boys from girls while doing class activities.
- **Inclusive education:** all learners are welcome in the class activities irrespective their differences (socio-economic status, disabilities, religion, region, sex...)
- **Peace and values education:** Teacher will inspire learners to work and live in harmony, to share materials and help one another

5.4. Guidance on introductory activity

Put student teachers in small groups, ask them to open their books, to read the scenario and answer related questions. The student teachers may come up with the following answers:

Answer:

As member of the panel to select the best candidate for the job of domestic worker, I will select Betty because he has not only knowledge and skills but also required attitudes and values for the job. She's the most competent.

5.5. List of lessons

	Lesson title	Learning objectives	Number of periods
1	Key concepts of CBC	Define the key concepts of the Rwandan CBC	2
2	Knowledge-based versus competence-based curriculum	Compare and contrast the knowledge-based curriculum with competence-based curriculum	1
3	Vision, aims, values and principles of Rwandan CBC	Identify vision, aims and values of the Rwandan CBC	2
4	Competences and crosscutting issues	Differentiate basic and generic competences in Rwandan CBC and describe cross-cutting issues	2
5	How to develop competences and integrate cross-cutting issues	Use different techniques to develop competences and address crosscutting issues in different subject lessons.	2
6	The role of the teacher and learner in developing competences	Describe the role of the teacher and learner in developing competences	2
	Assessment		1

Lesson 1: Key concepts of CBC

a. Learning objectives

Define the key concepts of the Rwandan CBC

b. Teaching resources

Internet, teacher training manual on CBC, Manila papers, Curriculum framework, Roll out of the CBC 2015, Sample CBC syllabi from different subjects and levels, Handout of competences and cross-cutting issues

c. Prerequisites/revision/introduction

Unit 3 “Pedagogical approaches” student teachers developed competences through play based learning, thematic learning and problem based learning. Vocabulary acquired in English subject

d. Learning activities

Activity 5.1

- Bring student teachers in computer lab/SMRT class and ask them to use research engine such as Google to find out the meaning of CBC, competence, criteria, learning outcomes, curriculum and student’s exit profile and make a concept map of related ideas/concepts. Invite student teachers to present their findings.
- Refer to students’ book unit 5, point 5.1 to supplement student teachers’ ideas and provide constructive feedback.

e. Application activity 5.1

Ask student teachers to open their books, unit 5 and do the application activity 5.1. They expected to come up with the following answers: Student teachers match numbers and letters instead of copying sentences.

1= j	5= f	9= b
2= i	6= k	10= c
3= d	7= a	11=h
4= e	8= g	

Lesson 2: Knowledge-based curriculum versus competence-based curriculum

a. Learning objectives

Compare and contrast the knowledge based curriculum with competence based curriculum

b. Teaching resources

Internet, Books, Teacher training manual of CBC, Manila papers, Curriculum framework, Roll out of the CBC 2015

c. Prerequisites/revision/introduction

- Daily life experience

- Unit 3 "Pedagogical approaches" student teachers developed competences through play based learning, thematic learning and problem based learning ...as learner centred approaches

d. Learning activities

Activity 5.2

Invite student teachers to open their books, read carefully the scenario and answer related questions.

Answers

Q1. The teacher who teaches competently is MUGABO because he develops competences in learners through group and individual activities and encourages them to make their own learning by research on internet and books.

Q2. The learners who will be competitive and productive in terms of problem solving are those who were taught by MUGABO because they were taught in the way that enabled them to be competent (they have knowledge, skills, attitudes and values that enable them to solve problems in daily life). The tutor supplements student teachers ideas and provides constructive feedback.

e. Application activity 5.2

Individually, ask student teachers to read carefully the statements in their books and complete the application activity on the papers.

Answers of the application activity 5.2

Student teachers may give the following answers:

1. Competence based
2. Knowledge based
3. Competence based
4. Competence based
5. Competence based
6. Knowledge based

Lesson 3: Vision, aims, values and principles of Rwandan CBC

a. Learning objectives

Identify vision, aims and values of the Rwandan CBC

b. Teaching resources

Internet, Teacher training manual of CBC, Curriculum framework, Roll out of the CBC 2015

Itorero related texts.

c. Prerequisites/revision/introduction

Daily life experience and *itorero* teachings

Social studies subject in primary

Vocabulary acquired in English subject

d. Learning activities

Activity 5.3

Bring student teachers in computer lab/smart classroom and library, invite them to search the vision, mission, aims, values and principles of Rwandan CBC and present their findings.

Answers

Suggested answers that student teachers may come up with: Refer to the student book Unit 5, point 5.3.

e. Application activity 5.3

- Individually, invite student teachers to propose the vision and aims of a school once they become head teachers.
- Move around to offer support where needed. Ask student teachers to display their works and let them move in turn for everybody to learn from classmates.
- Allow them share similarities and differences. Provide supplements and constructive feedback.

Possible answers

1. Vision: To make the school excellent internationally
2. Aims:

- To produce competent people
- To make the school well equipped
- To have competent teachers
- To make the school attractive
- To make the school well managed

Lesson 4: Competences and cross-cutting issues

a. Learning objectives

Differentiate between basic and generic competences and describe cross-cutting issues

b. Teaching resources

Teacher training manual of CBC, Manila papers, Curriculum framework, Roll out of the CBC 2015, Hand out of competences and cross-cutting issues, Internet, Books

c. Prerequisites/revision/introduction

In the unit 2”introduction to pedagogy”, points 2.1 and 2.2. In the unit 3, points 3.1, 3.2 and 3.3. The whole content of unit 4 about: ”Active teaching methods and techniques”.

d. Learning activity 5.4

Guidance

In small groups, invite student teachers to exchange on two questions in their books. Make sure everyone participates and let them present their results.

Answer of the question 1

To be a good teacher requires a good preparation when the student teacher is in pre-service training in TTC. A good teacher should be competent in teaching and be able to adequately care for all children of different ages and needs. In TTC the student teachers will progressively acquire professional skills, required attitudes and values from Foundations of education and Teaching Methods and Practice of different subjects taught in pre-primary and primary education. They will also needs to be subject experts for the subjects delivered in pre-primary or primary levels.

Answer of the question 2

The qualities that made some Nyange secondary school students heroes are: values like patriotism, love, empathy, unity, discipline, respect of others and human rights, culture of peace.

e. Application activity 5.4

Individually, ask student teachers to open their books and answer application questions.

Suggested answers on question 1

- Gender education
- Peace and values education
- Inclusive education

Suggested answers on question 2

- Critical thinking
- Communication
- Cooperation ,interpersonal management and life skills
- Research and problem solving

Suggested answers on question 3

- Literacy
- ICT and digital

Lesson 5: How to develop competences and integrate cross-cutting issues

a. Learning objectives

Use different techniques to develop competences

b. Teaching resources

Internet, Books, Teacher training manual of CBC, Manila papers, Curriculum framework, Roll out of the CBC 2015

c. Prerequisites/revision/introduction

In Unit 3”Pedagogical approaches” student teachers learnt the approaches of developing competences such as play based learning , thematic learning , problem based learning and learner centred approaches

d. Learning activities 5.5

Guidance

Ask student teacher to exchange on the ways they have been taught in their lower levels and how they are being taught. Let everyone present his/her experience. Appreciate and provide constructive feedback. Refer to the techniques they appreciated to start the new lesson.

Answers

Suggested solutions

- a. Problem solving and critical thinking can be developed through: experimentation, inquiry based learning, case study, research, project work, learning in corners, field work, brainstorming ...
- b. Creativity and innovation can be developed through: role play, debates, dramatization, ...

Use the content of unit 4 in student's book "**active teaching methods and techniques**" to supplement student teachers answers.

2. Provide pre-primary and primary syllabi and in groups help student teachers to find units related to the 8 cross-cutting issues.

e. Application activity 5.5

In groups, request student teachers to open their books and do the application activity 5.5.

They should use the syllabus, choose a learning activity and show how it can help to develop many generic competences and cross-cutting issues.

Possible answers

- Topic from Pre-primary syllabus "domestic animals"
- Activity: think about an animal in your home which is very big, has four legs, two eyes, two long horns, two ears and it gives milk.
- Generic competences learners will develop through this lesson are:
Critical thinking (children think deeply about the activity), problem solving (children solve all problems they encounter in the activity). Children also develop skills such as imagination, counting, relating things

- Cross cutting to be addressed:
 - Gender education(all learners both boys and girls learn together)
 - Inclusive education (Diversities among learners are catered for. None is left out due to any learning difficulties)
 - Peace and values education (learners will share ideas and materials with respect and in peaceful manner)...

Lesson 6: The role of the teacher and learner in developing

a. Learning objectives

Describe the role of the teacher and learner in developing competences

b. Teaching resources

Internet, Books, Teacher training manual of CBC, Manila papers, Curriculum framework, Roll out of the CBC 2015

c. Prerequisites/revision/introduction

In the unit 2 “introduction to pedagogy”, lesson 2.1 and 2.2. In the unit 3, lesson 3.1, 3.2, 3.3. In the all lessons of unit 4 “Active teaching methods and techniques”.

d. Learning activities

Activity 5.6

In small groups, ask student teachers to open their books and brainstorm on the activities of the teacher and the learners in the classroom. Move around to verify whether every student participate actively and intervene where necessary. Let student teachers present their work.

Suggested answers

Activities of the teacher in the classroom	Activities of the learners in the classroom
Planning (lessons, activities), Teaching, assessing, marking, managing classroom, completing documents on time....	Learning (doing exercises, home works, reading books, searching new/additional information...), ...

e. Application activity 5.6

In pairs, invite student teachers to create a situation in which students develop their own competences and describe the role of the teacher in that situation.

Situation:

In Kinyarwanda lesson, a teacher can choose the topic “*Umuganura* in the ancient Rwanda”. He/she gave one week for learners to prepare a presentation of how *umuganura* was celebrated. The teacher provided some resources/materials and guidance. After one week students role played their work in the presence of school community and some invited guests. The audience appreciated the way students presented their work.

In this situation, the role of the teacher is:

- Selection of the topic and clarify it
- Provision of resources/materials
- Providing guidance
- Providing appropriate time.

Tutor refers to the students’ books to check the role of the teacher and learners for rich supplements.

5.6. Summary of the unit

This unit 5 explains the key concepts of CBC (competence, knowledge, skills, attitudes, values and student’s exit profile). It shows the difference between knowledge based and competence based. It clarifies the vision, aims, values and principles of Rwandan CBC. It also describes the competences and cross-cutting issues and provides guidance on how developed competences and integrate cross-cutting issues. The unit ends up by highlighting the role of the teacher and learners to develop competences.

5.7. Additional Information for tutors

The CBC brought in some general changes:

- Each subject syllabus shows the broad subject competencies to be demonstrated at the end of the cycle, key competencies to be demonstrated yearly basis and unit/topic competencies during the learning.
- Each syllabus shows that learning is mainly by doing and activities are performed by learners either individually or in groups. The learning objectives are described in terms of knowledge, skills and attitude required and the subject content is very comparable to international standards.

- Number of weeks of study per year was increased from 36 to 39. A period is 40 minutes in primary and secondary levels.
- Different cross-cutting issues are integrated in the new curriculum in order to develop related attitudes and values.
- In assessment, in order to progressively build competences the main focus is on assessment for learning (formative assessment) rather than summative assessment (assessment of learning).

Some specific changes according to levels of education:

- In primary level: ICT has been introduced and integrated into Science and Technology and it focuses on how to exploit all tools for accessing, retrieving, storing and sharing information and how to use it as a tool for learning.
- Lowersecondary level: Introduction of vocational subjects like farming, creative arts and home economics, in addition to entrepreneurship and ICT as core subjects, These subjects will provide vocational skills that will enable the learners to integrate in real life experience and in the labor market in case they do not progress to the next level of education.
- Upper secondary: General studies in all combinations emphasize civic and political education that includes citizenship, national and cultural identity as well as effective communication.

5.8. End unit assessment

In groups, give syllabuses of pre and primary to student teachers and ask them to highlight the similarities/elements that justify them to be competence based.

Suggested answers:

- They highlight the competences to be developed
- They highlight the cross-cutting issues to be addressed
- They specify learning activities, teaching and learning materials and teaching techniques to go through
- They cater for learners with disabilities and other SEN
- They mention assessment criteria

5.9. Additional activities

5.9.1. Remedial activities

As homework, student teachers do the following questions:

1. By giving two examples, differentiate the basic competences from generic competences

Answer: Refer to the student's book

5.9.2. Consolidation activities

1. Propose the strategies by which a teacher can promote competences in children
2. Suppose children (in pre-primary) are acting out the following songs, suggest skills, competences that are promoted in children and cross cutting issues that can be addressed:
 - *Amazi yo mu icupa ko ari make (x2),*
 - *Ko atazamara inyota bikambabaza (x2),*
 - *Rimwe nkwihereze, kabiriri nkwihereze, gatatu nkwihereze, kane nkwihereze...*

Possible answers

1.
 - By identifying the competences to be promoted in children
 - By selecting the cross cutting issues to be addressed in the lesson
 - By using child centered approaches and techniques
 - By motivating learners
 - By preparing activities and tasks which allow learners to think and create
 - By providing challenging problems to solve
 - By making the class inclusive
2. The skills and competences that can be promoted are for example communication, literacy, counting, social skills, concentration, time management, critical thinking, problem solving, cooperation, relationship...while through this game some crosscutting like gender education, inclusive education, peace and values education will be addressed.

5.9.3. Extended activities

1. What do you think are benefits of CBC not only for students but also for the country?
2. Compare and contrast persons who studied KBC and those who followed CBC on labor market.

Possible answers

1.
 - The benefits of CBC for students:
 - Students are free to learn
 - Students are motivated
 - Students are active participants
 - Students become able to apply learnt knowledge
 - Students' needs are met
 - Individual differences are catered for...
 - The benefits of CBC for the country
 - The country will have productive citizens
 - It will have competent citizens
 - Living standards of citizens will improve
 - The country will have responsible citizens
 - It will have creative and innovative citizens
2. Those who studied in KBC are limited in thinking, applying, practicing, creating, explaining and defending theories acquired hence, less production at workplace while those who followed CBC are critical thinkers, creative, innovative, problem solvers, and decision makers and are able to apply, practice and defend and explain what they know. They will be wanted and productive at workplace

● UNIT 6:

SETTING LEARNING OBJECTIVES

6.1. Key unit competence

Formulate SMART instructional objectives for lessons in different subjects.

6.2. Prerequisites

The students are able to set objectives of what they want to achieve and plan activities to achieve those objectives according to the limited time. For example in the beginning of academic year for of the students, the main objective is to succeed well. They therefore plan accordingly to achieve that objective. They also have knowledge and skills from Entrepreneurship subject: in Senior One, unit 3 is about setting SMART entrepreneurial goals while Unit 7 in Senior 3 has focus on business plan.

6.3. Cross-cutting issues to be addressed

Gender: This will be achieved through discussion in pairs, group discussion, girls and boys working together in mutual respect and without any kind of sexual harassment.

Financial education: by effectively using materials, tools and equipment while teaching and learning setting learning objectives.

Inclusive education: this will be achieved through discussion in pairs, group discussion, and working together.

6.4. Guidance on introductory activity

Guidance

- Guide the learners into the introductory activity whose purpose is to test the learners' prior knowledge and skills of students that have relationship with the new topic.
- Let students read the introductory activity on unit six (6)
- Ensure that students have good understanding of the activity by using synonymous of key words Facilitate them to connect the activity with their daily life and experience so that they will be familiar with it.

- Let students work on related questions referring to the prerequisites from Entrepreneurship subjects as highlighted above.

Possible answers for this introductory activity:

1. Setting what you want to achieve (goals and objectives) before is very important for the following reasons:

Goals describe where an individual want to go; objectives define how to get there. Businesses that do not identify their long-term goals and do not create working objectives, will grow and develop more slowly comparing to those that set long-term goals and working objectives. Objectives are important to communicate and assign responsibilities of performance to the participants.

2. The elements that you should consider while planning what you want to achieve include the following:
 - The materials to be used.
 - The time limit.
 - Indicators of achievement.
 - The audience that will contribute to the achievement of goal.

6.5. List of lessons/sub-headings

#	Lesson title	Learning objectives	Number of periods
1	Importance of learning objectives	-Define learning objectives -Explain the importance of learning objectives in guiding the teaching and learning process	1
2	General objectives	Formulate a general learning objective in a given primary subject	1
3	Specific objectives	Set specific objectives based on key characteristics.	1
4	Operational/ instructional objective	Set an operational/ instructional objective based on the 5 characteristics	1

5	Levels of cognitive domain (Bloom's taxonomy)	Describe the levels of cognitive domain	2
6	Levels of affective domain (Krathwhol)	Describe the levels of affective domain	2
7	Levels of psychomotor domain (Dave)	Describe the levels of psychomotor domain.	2
8	Learning objectives and competences in CBC.	Explain the relationship between learning objectives and competences.	2
End unit assessment			1

Lesson 1: Importance of learning objectives

a. Learning objectives:

- Define learning objectives
- Explain the importance of learning objectives in guiding the teaching and learning process

b. Teaching resources

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, Manilla paper with examples of different types of aims and objectives, printed handouts with taxonomies (Bloom, Dave & Krathwhol), chart of bloom verbs, videos, flash cards.

c. Prerequisites/revision/introduction:

The tutor will introduce the lesson by guiding student teachers to first understand what learning objective means. Then after the tutor asks student teachers to remind him/her what they have discussed in the in the introductory activity of this unit.

d. Learning activities:

Activity 6.1:

- Let student teachers brainstorm on the activity 6.1
- Allow them to share views on activity in pairs.
- Invite some pairs to present their answers
- Make a comment on their answers in accordance with the objectives of the lesson.

Possible answers for Activity 6.1:

1. Everyone needs to set objectives of his/her activities because, it helps to work on a target with clear expectation and yet when you do not know where you are going you cannot get there therefore objectives tell us where to go and when to get there.
2. In our daily life we set objectives that by first identifying what we want to achieve, how to achieve it, when to achieve it and what are the requirements to achieve it. We normally know that we achieved our objectives by referring to the criteria for achieving them.
3. Refer to the content appearing in students' book for the sub-unit 6.1.

e. Application activity:

Possible answer for application activity 6.1:

1. Learning objectives are a testable or verifiable statements that describe what you intend your students to learn.
2. Setting learning objectives as the starting point before teaching a lesson is very important in for the following reasons:
 - Provide the teacher with guidelines for developing instructional materials and teaching methods (**lesson planning**)
 - Enable the teacher to design assessment for learning (**formative assessment**). and assessment of learning (**summative assessment**)
 - Give direction to the learners and assist them to make better efforts to attain their goals (**motivation**).
 - States specifically what a student should be able to do.
 - Tell students what is important: Without learning objectives, it is difficult for students to know what they are supposed to be learning.

- Enable good assessment development: The teachers should go through the learning objectives and make sure they assess what is prescribed in the learning objectives.
- Learning objectives encourage self-evaluation for teacher: Teachers do self-evaluation by reflecting on the degree at which the learning objectives have been achieved.

Lesson 2: General objectives

a. Learning objective:

Define general objectives and identify the characteristics of general objectives

b. Teaching resources:

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, examples of different types of aims and objectives, printed handouts with taxonomies (Bloom, Dave & Krathwhol), chart of bloom verbs, videos, flash cards.

c. Prerequisites/revision/introduction:

The tutor needs to start from the knowledge and skills that student teachers have from the entrepreneurship subject and what they gained from introductory activity and activity 6.1.

d. Learning activities

Activity 6.2.1:

- Invite the student teachers to read the activity
- Encourage them to share ideas on it.
- Invite them to present their views.
- Comment on their views and complement them to make sure that the concept of general objective is well understood. Provide more examples of general objective from different subjects.

Possible answers for activity 6,2,1:

1. There is no specific time to achieve the set objective because it is broad and cannot be achieved in a short period of time, it is to be achieved after a long period of time.
2. The verbs underlined are not clear as they are not specific.

e. Application activity 6.2.1

Possible answer:

Referring to objective “to **develop** clear, logical and coherent thought” and the required knowledge and skills for a student teacher to be able to **teach**: the characteristics of these objectives are the following:

- Use of verb that expresses a complex skill that requires a long period of time (Eg: first objective),
- Content lacking precision, without limits or vast.
- The third objective focuses on course or teacher rather than students

Lesson 3: Specific objectives

a. Learning objective

Set specific objectives based on key characteristics.

b. Teaching resources

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, examples of breakdown of general objective on a flip chart or manilla paper, printed chart of bloom verbs, flash cards.

c. Prerequisites/revision/introduction

The tutor should make revision on general objectives before teaching specific objectives.

d. Learning activities:

Activity 6.2.2

- Invite students to read the activity.
- Give clear explanation of the task depending on students 'options.
- Invite them to work in groups of four to do the activity: making a breakdown of general objective by answering the following question: what are the required skills to achieve the general objective? They select one general objective from those set during application activity 6.2.1.
- Invite some groups to present their work.

Possible answers for activity 6.2.2

Example for Science and Math Education option:

The prior knowledge and skills required for a student teacher to teach Math and sciences related lessons in primary are the following:

- Mastery of the primary subject content (Maths, SET, Kinyarwanda, English, French, Social studies)
- Make lesson plans for different primary subject lessons depending on options(Maths, SET, Kinyarwanda, English, French, Social studies)
- Make teaching and learning resources for different primary subject lessons (Maths, SET, Kinyarwanda, English, French, Social studies)
- Set relevant learning activities or tasks to develop competences
- Set relevant tasks for formative assessment
- Use assessment results to improve learner's performances
- Prepare and facilitate different sessions/lessons using well selected relevant active methods, techniques and strategies
- Use effective strategies for classroom management
- After the group presentations, provide feedback and clear explanations as needed.
- Using an example (on a chart) on how to set specific objectives from general one, show how logically specific objectives are generated from the breakdown of general objective.

General Objective:
Adequately Teach SET

Specific objective 1: Select active methods, techniques and strategies that are relevant to SET lessons

Specific objective 2: Identify teaching and learning resources for different SET lessons

Specific objective 3: Make teaching and learning resources for different SET

Specific objective 4: Make lesson plans for different SET

e. Application activity:

Guidance for application activity 6.2.2:

- Each student teacher has. Ensure that they are correctly set.
- Following the example on the chart, each student teacher set specific objectives from general objective set during application activity 6.2.1.

Lesson 4: Operational/instructional objectives

a. Learning objective

Set an operational/instructional objective based on the five (5) characteristics.

b. Teaching resources

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, chart of breakdown of general objective on a flip chart or manilla paper, examples of operational/instructional objectives, printed handouts with taxonomies (Bloom, Dave & Krathwhol), chart of bloom verbs, videos, flash cards.

c. Prerequisites/revision/introduction:

The tutor should make revision on general objective and specific objective before teaching operational objectives/instructional objectives. Learners should have good understanding of the link between general and specific objectives.

d. Learning activities:

Activity 6.2.3

- Let student teachers brainstorm the answer for the activity 6.2.3
- Invite them work in groups to do the activity
- Invite some groups to present.
- Make comment on their presentation in accordance with the objective of the lesson for the whole class.

Possible answers:

The set objectives in the activity 6.2.3 are different from general and specific objectives in terms:

- **Time needed to reach the objective:** they have specific and precise time for example in the objective 1 the precise time is 120 minutes and 10 minutes for objective 2.
- **The specificity level and limitation of the scope:** the content is limited, the required materials and the conditions are mentioned.

e. Application activity 6.2.3

Possible answer:

1. Without having any reference students should be able to use correctly the article a, an and the in the sentence within 5 minutes.
2. With clear examples the students should be able to use correctly and confidently demonstrative pronouns in the sentence within 5 minutes.
3. Without help the students should be able to use correctly and relevantly the preposition “a” in the sentence in one minute.

Lesson 5: Levels of cognitive domain (Bloom's taxonomy)

a. Learning objective:

Describe the levels of cognitive domain

b. Teaching resources

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, examples of different types of aims and objectives, printed handouts with taxonomies (Bloom, Dave & Krathwhol), chart of bloom verbs, videos, flash cards.

c. Prerequisites/revision/introduction

As taxonomy means classification, the tutor has to start from the knowledge and skills that student teachers have to classify in things from simple to the most complex.

d. Learning activities:

Activity 6.3.1

- Invite student teachers to read activity
- Allow them to work in pairs to do activity
- Invite some pairs to present what they did
- Make comment on their works with formative feedback

Possible answer:

The questions in activity 6.3.1 should be arranged as follows:

- Name the capital city of Rwanda,
- Summarize the text into two paragraphs,
- Create a poem about your school.

e. Application activityY 6.3.1

Possible answers:

Example of task that requires to involve all the level of cognitive development is below:

- **Remembering:** Name the types of food you eat in your family,
- **Understanding:** Classify them into categories based the types of food,

- **Applying:** Prepare a balanced diet for your family using the knowledge and skills you acquired from biology/SET in the sub-unit of balanced diet.
- **Analyzing:** Compare and contrast that food and that you usually eat in your family
- **Evaluating:** draw a conclusion about preparation of balanced diet.
- **Creating:** Create a chart on balance diet. The chart should show the components of a balanced diet and steps of preparation of balanced diet.

Lesson 6: Levels of affective domain (Krathwhol)

a. Learning objectives:

Describe the levels of affective domain.

b. Teaching and learning resources:

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, examples of different types of aims and objectives, printed handouts with taxonomies (Bloom, Dave & Krathwhol), chart of bloom verbs, videos, flash cards.

c. Prerequisites/revision introduction

Introduce the lesson by asking learners to describe the steps they go through to deal with emotions and feelings towards their classmates.

d. Learning activities:

Activity 6.3.2

- Invite student teachers to read the activity
- Encourage them to work in pairs to find answers for the activity.
- Invite some pairs to present their answers.
- Make a comment on their answers in consideration with the objective of the new lesson.

Possible answers:

Mugabo's classmate felt sorry because they listened that his uncle died.

As Mugabo's classmates, I would tell him condolences and show him that we are together.

Note: Remember that, there is no final answer for this activity it depends on self-understanding, therefore try to listen different individuals and then take conclusion based on the level of affective domain).

e. Application activity 6.3.2:

Answer: Refer to the student book content on sub-heading 6.3.2

Lesson 7: Levels of psychomotor domain

a. Learning objectives:

Describe the levels of psychomotor domain.

b. Teaching resources:

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, examples of different types of aims and objectives, printed handouts with taxonomies (Bloom, Dave & Krathwhol), chart of bloom verbs, videos, flash cards.

c. Prerequisites/ introduction/revision

Let learners describe the steps they go through to achieve the highest level of doing something that require body movement and skills effectively for example ask them to describe the steps of getting the maximum skills to ride a bicycle.

d. Learning activities

Activity 6.3.3

- Encourage the student teachers to read the activity and work together to in pairs to find the answers.
- Invite some pairs to share their answers for the whole class.
- Make a comment on their answers in consideration with the objective of the new lesson.

Possible answer:

1. The young boy is playing while the father is carving.
2. They are using psychomotor skills.
3. Other everyday activities that develop these kinds of abilities include running, weaving, knitting, drawing, cultivating, etc.

e. Application activity 6.3.3:

Possible answer:

Without violating the rules of soccer game the student teacher will be able to pass the ball accurately and speedily.

Lesson 8: Learning objectives and competences in CBC

a. Learning objectives

Explain the relationship between learning objectives and competences.

b. Teaching resources

Teacher Training Manual: Roll Out of the Competence Based Curriculum 2015, examples of different types of aims and objectives, printed handouts.

c. Prerequisites/ introduction/revision

Students have the prior knowledge and skills about the learning objectives and the learning domains, they also have knowledge about competences in CBC that tutor may consider while introducing this lesson.

d. Learning activity 6.4

- Guide student teachers to brainstorm the relationship between the competences appearing in the activity 6.4 and help them to understand one by one when you find that it is difficult for them to understand.
- Let them try the activity in pairs.
- Invite them present their answers and make comment on them in accordance with the objective of the new lesson.

Possible answer:

1. Broad competences of the learning cycle are achieved after the achievement of the key competences of different grades of the learning cycle. The key competences of each grade of learning circle are also achieved after the achievement of key unit competences of different units.
2. Learning objectives target specific knowledge, skills, attitudes and values that learners should gain within lessons to progressively build the key unit competences. These key unit competences lead to the achievement of key competences and in turn lead to broad competences.

e. Application activity:

Possible answers:

- They provide the teacher with guidelines for developing instructional materials and teaching methods.
- They give direction to the learners and assist them to make better efforts to attain their goals.
- They state specifically what a student should be able to do.
- They tell students what is important: without learning objectives, it is difficult for students to know what they are supposed to be learning.
- They enable the teacher to design assessment for learning.
- They are also use in assessment of learning in case the curriculum is objective-based.
- They ensure good assessment tools: the teachers should go through the learning objectives and make sure they assess what is prescribed in the learning objectives.
- Learning objectives encourage self-evaluation for teacher: Teachers do self-evaluation by reflecting on the degree at which the learning objectives have been achieved.

6.6. Summary of the unit

In this unit 6 learning objectives the tutor has to make focus on the types of learning objectives (general, specific and operational), the levels of learning domains (cognitive, affective and psychomotor domains), how to formulate learning objectives based on learning domains as well as the relationship between learning objectives and competences in CBC.

6.7. Additional information for teachers

As tutor do not be surprised when you find some authors who classify learning objectives based on the learning domains and name learning objectives as cognitive, psychomotor, and affective learning objectives.

6.8. End unit assessment

1. Learning objectives are statements that define the expected goal of a curriculum, course, lesson or activity in terms of demonstrable skills or knowledge that will be acquired by a student as a result of instruction. Learning objectives are also testable or verifiable statements that describe what you intend your students to learn.

2. Referring to the paramount importance of well formulated learning objective, if the teacher goes to teach without learning objective, he/she will not teach well, he will not be precise in teaching because without objective there is no specific target, he/she will teach in vague way and confuse learners, he will not be able to manage time and use resources effectively and finally the student teachers will realize that the tutor is not organized and yet this is not a good quality of teacher.
3. Confer to the student teacher's text book (sub-unit 6.2. types of learning objectives)
4. Confer to the student teacher's book (sub-unit 6.3. learning domains)
5. The tutor will consider operational objectives set by every student. More support will be provided as needed.
- 6.

List of objectives

1. To develop clear, logical and coherent thought.
2. Given a sheet of paper, pencil, a pair of compasses and a protractor the learner should be able to construct a right-angle triangle accurately in 10 minutes.
3. To communicate orally in English
4. To differentiate formal, information, and formal education
5. Given a ruler, a paper, a pencil and protractor, learners should be able to draw a square with 90 degrees of angles accurately in 8 minutes.
6. To master the basic concepts of math and use them correctly to solve problems encountered in everyday life
7. To explain the main parts of a lesson plan
8. To solve first degree reducible equations and inequalities
9. To identify features of relief.
10. By using computer, learners will be able to make a clear and attractive power point presentation with animations in 20 minutes.
11. To help learners to understand and recognize the importance of mathematics in everyday life.
12. To use correctly 'although' in the sentence

Answer

Group 1: General objectives	Group 2: Specific objectives	Group 3: Operational/ instructional objectives
Number :1, 3, 6, 11	Number 4, 7, 8, 9, 12	Number 2, 5, 10

Note: this activity can be done using flash cards. Student teachers are given flash cards with three groups of learning objectives. They sort them out according to general objectives, specific and instructional objectives. In this case you will need to increase the number of objectives.

6.9. Additional activities

6.9.1. Remedial activities

1. What is learning objectives?

Answer: confer to student's book on the sub-heading 6.1

2. a) How many levels of Bloom taxonomy (cognitive domain)?

Answer: The Bloom taxonomy has 6 levels

- b) Identify all the levels of cognitive domain of the revised Bloom taxonomy starting from the simplest to the most complex.

Answer: confer to the student 's textbook (sub-heading 6.3.1)

3. Arrange the levels of affective domain from the most complex to the simplest.

Answer: confer to the student's textbook (sub-heading 6.3.2)

4. Identify the levels of psychomotor domain from the simplest to the most complex

Answer: confer to the student's textbook (sub-heading 6.3.3)

6.9.2. Consolidation activities

1. In your own words write short notes on the following:
 - a. Learning objective
 - b. SMART objective
2. Set an activity for learners that requires them to use all levels of Bloom taxonomy
3. Give any three example of psychomotor activities that can involve all the levels of Dave taxonomy.

6.9.3. Extended activities

1. Discuss three types of learning objectives based on three learning domains according to Bloom and his colleagues.

Answer: confer to the student teacher book on the heading 9.6.1

2. Based on Competence-Based Curriculum, the teacher should ensure that learners develop knowledge, skills, attitudes and values, explain how these relate to the three learning domains.

Answer Competence based curriculum focuses to all learning domains as it ensures the combination of knowledge, skills, attitudes, and values the same to three learning domains because cognitive domain deals with knowledge, psychomotor deals with skills, and affective deals with attitudes and values.

3. As student teachers discuss the importance of setting learning objectives as the starting point when planning for a lesson

Answer: confer to the student teacher book on the heading 6.1

4. Put student teachers in groups, give them flash cards with three groups of learning objectives and let them read and sort according to general objectives, specific and instructional objectives
5. Let student teachers read handouts about cognitive, affective and psychomotor taxonomies and then compare and contrast them.
6. Put student teachers in groups, give them the flash cards with set objectives, let them read and sort learning objectives into knowledge, skills and attitude categories.

UNIT 7:

MAKING AND USING EDUCATIONAL MATERIALS

7.1. Key unit competence

Demonstrate activity and commitment when making and using teaching and learning educational materials

7.2. Prerequisite

For effective learning to take place, the following prerequisites will help student teachers: Creativities, imagination, innovation, drawing, writing, modelling learnt in creative art and co-curricular subjects at primary, ordinary level, and TTC levels,

ICT skills developed at primary and ordinary levels in ICT subject and in One Laptop per Child,

Reading and writing skills developed in language subject at primary and ordinary level,

Fine and gross motor skills, variety of plants, self-care skills, hygiene, exploration and discovery of environment, social skills, and importance of various objects in environment, self-protection, organization skills, self-management skills developed in everyday life experience.

7.3. Cross-cutting issues to be addressed

- **Gender education:** teacher will involve both boys and girls in the lesson (when making groups), she/he should not separate boys from girls while doing class activities.
- **Inclusive education:** all learners are welcome in the class activities irrespective their differences (socio-economic status, disabilities, religion, region, sex...)
- **Peace and values education:** Teacher will inspire learners to work and live in harmony, to share materials and help one another
- **Environment and sustainability:** teachers will encourage learners to protect environment while gathering and making teaching and learning materials.

- **Standardization culture:** teacher will encourage learners to make qualitative teaching and learning materials and use those which are not harmful.
- **Financial education:** teachers will encourage learners to make and use locally materials to avoid buying those which are expensive. This helps to save money.

7.4. Guidance on introductory activity

Ask student teachers if they explore their classroom, if they are aware of objects displayed on the walls of the classrooms, if they know where other objects (those which are not displayed) can be kept like boxes, cupboards, envelopes...and ask them what do they think are the reasons of having those objects in the classroom not only for teachers but also for the pupils. The student-teachers may give reasons like the following:

- **For the teacher:** Make teacher's lesson real and interesting, make the lesson understandable, facilitate lesson delivering, make lesson resource based, make the lesson enjoyable, etc
- **For the learners:** help the learners to interact with the materials, learners are motivated, learners use their senses, learners retain and remember information quickly, learners learn by doing, help learners to socialize, etc

7.5. List of lessons

	Lesson title	Learning objectives	Number of periods
1	Types of teaching and learning resources	Describe different types of teaching and learning resources	2
1	Importance of teaching and learning materials/resources	Explain the importance of teaching and learning resources	1
3	Qualities of teaching and learning resources	Evaluate teaching and learning resources based on their qualities	2
4	Where and how to get teaching and learning resources	Show enthusiasm and confidence in making and gathering materials from the local environment	2

5	Making teaching and learning resources	Make good teaching and learning resources with locally available materials	4
6	Management of teaching and learning resources	Apply appropriate techniques of displaying, storing and maintaining teaching and learning resources	2
	Assessment		1

Lesson 1: Types of teaching and learning materials

a. Learning objectives

Describe different types of teaching and learning resources

b. Teaching resources

Dictionaries, books, computers, manila papers, markers, papers, hand outs, rice sacks, pair of scissors, candles, water, bottle tops, cartons, banana leaves.

c. Prerequisites/Revision/Introduction

Vocabularies, reading, writing and grammar: developed from primary and ordinary level in language subject)

Experiences: got from daily activities at home, community and school such as observing mother making mats, pots..:

ICT skills: got from primary and ordinary level in the programme of One Lap Top per Child and smart classroom

Research skills: got from internet connected through computer labs, books

Creativity and innovation skills: got from primary and ordinary level in co-curricular activities, fine art and creative performance and PP TMP.

d. Learning activity

Activity 7.1

Teacher gives learners the task of moving around the school compound to collect/gather different objects that can be used in teaching and learning activities. Then, the tutor with learners classifies collected materials according to their different categories.

Possible answers

The learners will come up with the following materials: bottle tops, grasses, sand, leaves, soil, sticks, stones, flowers, plastic bottles, boxes, blocks, water, used papers... the teacher add other materials that learners did not come up with especially those that cannot be found in the school compound such radios, charts, maps, flash cards, flash discs, computers, digital cameras....

e. Application activity 7.1

In TRC, the teacher puts learners in groups and asks them to move around TRC, observe and group teaching and learning materials according to their nature and accessibility and then to their cost. After observation and discussion, teacher will check the classifications that learners came up with.

Possible answers

In pairs, the teacher asks learners to find out two examples of materials that can help learners develop the skills such as observation, manipulation and listening/hearing. After sharing views, learners will come up with the following answers:

Observation skill can be developed through: map, film, television, pictures...

Manipulation can be promoted through: mat making, clay, sand, trees,

Listening/hearing skill can be developed through listening to radio, story, poem, song, television. The teacher supplements the learners' answers with other materials.

Lesson 2: Importance of teaching and learning materials/ resources

a. Learning objectives

Explain the importance of teaching and learning

b. Teaching resources:

Books, computers, manila papers, markers, papers, hand outs, rice sacks, pair of scissors, candles, water, bottle tops, cartons, banana leaves.

c. Prerequisites/Revision/Introduction:

Knowledge about TLRs and TLMs, experience about TRC, ICT skills

Research skills: got from internet connected through computer labs, books

ICT skills: got from primary and ordinary level in the programme of One Lap Top per Child and smart classroom

d. Learning activity 7.2

In pairs, the teacher asks learners to read the scenario in learners' textbook and asks them to think whether activities could be carried out as it is done once there were no sticks or any other tool for concretisation.

Answer to activity 7.2

After reading and discussion, each pair will present what they came up with. Their presentations will include the following possible answers:

Yes, it is very important in P1 to teach using concrete materials such as sticks to support helped learners understanding about the operation of subtraction. These materials made them active while manipulating, they made learning interesting for learners, they made learners happy to use sticks in the classroom.

e. Application activity 7.2

Guidance

In groups, the teacher invites learners to read and discuss the Chinese proverb translated in English in learners' book and describe it in relation with the use of teaching and learning materials in classroom. After the discussions, learners may come up the following possible solutions:

Possible solutions

Teaching without TLMs involves teacher talk. The teacher teaches abstractly which leads to easy forgetting and boredom on the side of learners. When teacher teaches with TLMs, learners use more than one sense and this facilitates their retention and remembering. Learners are active, interesting and motivated. The TLMs help learners understand more the lesson, this enables them solve daily life problems. The teacher supplements the learners' answers.

Lesson 3: Qualities of teaching and learning resources.

a. Learning objective

Evaluate teaching and learning resources based on their qualities

b. Teaching resources

Books, computers, manila papers, markers, papers, hand outs, rice sacks, pair of scissors, candles, water, bottle tops, cartons, banana leaves.

c. Prerequisites/ revision/ introduction

Importance of teaching and learning resources from 7.1, Types of teaching and learning resources from lesson 7.2, creativity and innovation skills got fine art subject primary, ordinary level and TTC.

d. Learning activity 7.3

Guidance

The teacher forms the groups and tell them” reflect on the importance and the types of teaching and learning materials” and ask them to describe how the materials they may make would look like if they are teachers. The teacher gives them enough time to think, discuss and present their answers. The learners may present the following answers:

Answers

The teaching and learning materials should be clear for learners, big, visible, attractive, manipulative, enjoyable...

e. Application activity 7.3

Guidance for application activity

Individually, tutor asks student teachers to collect and select five materials in the school compound that each one fulfils all/some qualities of a good teaching and learning.

Answers for application activity

The student teachers will come up with the materials that are characterized by the following qualities:

Colours, attractiveness, visibility, easy use, familiar, accessible, cost effective, the teacher will check the learners’ works and give constructive feed-back as well as supplements.

Lesson 4: Where and how to get teaching and learning resources

a. Learning objectives

Show enthusiasm and confidence in making and gathering materials from the local environment

b. Teaching resources

Books, computers, manila papers, markers, papers, handouts, rice sacks, pair of scissors, candles, water, bottle tops, cartons, banana leaves.

c. Prerequisites/revision/introduction

To learn well this lesson, the student teachers will have readiness skills on the importance of teaching and learning resources from 7.1, types of teaching and learning resources from lesson 7.2, the qualities of teaching and learning resources, creativity and innovation skills got fine art subject primary, ordinary level and TTC.

d. Learning activities

Activity 7.4

In the groups, student teachers are required to read carefully the passage and brainstorm on related question.

Answers

After brainstorming, student teachers may come up with the following ideas:

Teacher Cyuzuzo is a good teacher because he/she is aware of the cheap ways of getting teaching and learning (from home, environment and factories). Tutor summarizes the ideas from student teachers and supplements.

e. Application activity 7.4

Guidance

In pairs, the tutor requests student teachers to open their books and read carefully the John's case and answer related questions.

Answers

After reading and analysing carefully the case of John, student teachers in their respect pairs will come up with the following answers:

1. We do not agree with John's decision of not teaching some units
2. The skills that John is missing are critical thinking, creativity, problem solving, initiative, responsibility, imagination, willingness, professionalism
3. John should bear in mind that apart from purchased materials, there are other ways of getting teaching and learning resources such as improvisation, gathering them from environment. The tutor provides constructive feed-back and supplements.

Lesson 5: Making teaching and learning resources

a. Learning objectives

Make good teaching and learning resources with locally available materials

b. Teaching resources

Student teachers will use banana leaves (ibirere by'ingabo), sticks, empty containers, boxes, flowers, grasses, clay, sand, maize cobs, water

c. Prerequisites/revision/introduction

Importance, types and the qualities of teaching and learning materials (previous lessons in this unit), creativity, imagination and innovation in creative art subject from primary, ordinary level and TTC.

d. Learning activity 7.5

Guidance

Tutor asks student teachers to move around the school compound and collect the teaching and learning materials according to their types and the subjects in their option. Each student teacher presents the materials he/she collected to the teacher and explains in which subject each material can fit.

Answers

Students teachers will collect various teaching and learning materials in the school compound, present them, and explain their types and in which subject each material can be used. The tutor checks if student teachers respected instructions while selecting the materials and provides constructive feed-back.

e. Application activity 7.5

Guidance

Individually, tutor will invite student teachers to use the previously collected objects and each one makes teaching and learning materials that can help in teaching different learning areas/ subjects in pre-primary and primary. one of the subjects taught in the class.

Answers

Every student teacher will make two teaching and learning materials that can facilitate in teaching one of the subjects taught in the classroom, describe in which subject they can be used and display them on the walls of the classroom.

After displaying all TLMs made all students move around the classroom to learn from each other's work. The tutor provides constructive feed-back and supplements.

Lesson 6: Management of teaching and learning resources

a. Learning objectives

Apply appropriate the techniques of displaying, storing and maintaining teaching and learning resources.

b. Teaching resources

Water, nails, strings, ropes, pieces of clothes, envelops, cupboards, shelves, tables, boxes, mats, empty containers

c. Prerequisites/revision/introduction

Importance, types and the qualities of teaching and learning materials, ways of getting teaching and learning resources (previous lessons in this unit), creativity, imagination and innovation in creative art subject from primary, ordinary level and TTC, life skills like self care skills.

d. Learning activity 7.6

Guidance

In groups, the tutor invites the student teachers to open their books and read carefully the case of teacher Chantal; he/she moves around to check whether each student teacher is participating in the discussion. Tutor gives them time to present what they discussed about.

Answers

After reading, discussing and analyzing the case of Chantal, student teachers presented the following information: Teacher Chantal has the following strengths: creativity, innovation, classroom management skills, production of TLRs, cooperation. However, she presents the weaknesses such as failing to use teaching and learning materials yet they available, depriving students to manipulate materials. Teacher is advised to use TLRs while delivering her lessons, let students manipulate materials because they facilitate learning.

e. Application activity 7.6

Guidance

1. In pairs, tutor asks student teachers to pair-share on the benefits of proper storing and maintaining teaching and learning materials. He/ she moves around to verify everybody's participation.

Answer

After pair-sharing information, student teachers present the following answers:

Well stored and maintained teaching and learning resources are not easily lost, are easily found when needed, are not damaged and are always clean. The tutor appreciates student teachers ideas and supplements.

2. In groups, the tutor requests student teachers to discuss the strategies of organizing, storing and care for teaching and learning resources in their classroom. The tutor moves around to make sure everyone takes part in the discussion.

Answer

After discussion in groups, student teachers may come up with the following possible solutions:

Teaching and learning materials can be displayed on walls, in shelves, can be hung by nails, learning corners... they can be stored in cupboards, envelopes, files... the tutor supplements the student teachers' answers and provides constructive feed-back.

7.6. Summary of the unit

Teaching and learning materials are those objects that teacher and learners use in the classroom to facilitate teaching and learning activities. They are classified according to the way of accessibility, nature/originality and cost. TLMs motivate learners, ease retention, concretize abstract concepts and discourage rote learning. To select a good teaching and learning material the criteria such as durability, availability, affordability, attractiveness, visibility among others should be observed. TLMs can be gathered from local environment, purchased, developed and improvised. Some of the TLMs should be displayed in the classroom at the height of learners while others are well kept and cared for to avoid them get lost and damaged. Teachers and are invited to be creative in terms of material production using locally available objects to contextualize teaching and learning.

7.7. Additional Information for tutors

This information can be helpful to tutors

Manufactured resources: are ready-made products and many are produced at the same time. They often produced in factories outside of Rwanda. They are made from durable and non-recyclable materials.

Locally resourced resources: they are made local to where you are living. They are produced using natural or free materials often reusing every day materials. These can easily be done by student-teachers and can greatly enhance the learning experience for the learners.

Toys: are materials/objects and equipment which children use in their play.

Reasons of displaying materials: to help in evaluation of learners' creativity, to develop curiosity among the learners which enhances learning, to facilitate access to children's work by others for recognition and respect of other children's ideas and to make learning enjoyable, to motivate and encourage learners' participation in activities.

Teaching and learning resources/materials are also referred to educational materials, teaching and learning aids, instructional materials, and educational media.

7.8. End unit assessment

Individually, tutor gives student teachers questions and asks them to find out answers.

1. Each student teacher makes three teaching and learning materials of his/her choice but respecting the criteria. Tutor moves around to check the work of everyone and asks the student teachers to display their final products.
2. Yes, teaching and learning resources are useful because they motivate learners, contribute to the creation of a conducive learning environment, stimulate and sustain interest in learning, make learning concrete, provide hands-on experience, discourage rote learning, make learning more effective among others. Tutor refers to the student's book for more answers.
3. For their longevity, teaching and learning materials should be well kept in cup boards, envelopes, shelves and other various appropriate containers, cared for by washing them and displayed in on classroom walls. The tutor checks student's book for further information.

4. While training the community members on the ways of developing teaching and learning materials, I will focus on the qualities of teaching and learning materials such as cost, variety, accessibility, appearance, cultural context, visibility, and age appropriate among others. The tutor consults the student' book for more information.
5. Teachers are called for improvisation because improvisation it helps in promoting the concept of creativity/innovation among learners and teachers, it enables many teachers to use available resources without having to rely on the few commercial ones, it helps to ensure that the reality of implementing the concept of maximum use of equipment and facilities is achieved, it assists in overcoming issues related to lack and inadequacy of resources. Tutor consults the student's book for further information.

7.9. Additional activities

7.9.1 Remedial activities

1. What issues should you consider when selecting instructional/educational materials?
2. What do you understand by 'improvisation, teaching and learning materials'?

Possible answer:

1. A key feature of effective teaching is the selection of instructional materials that meet the needs of students and fit the constraints of the teaching and learning environment. It is in this context that material for teaching and learning should be related to the content to be taught, ease to store and use by children, durable for longevity, promote sensory skills, big enough for visibility, attractive and available.
2. Improvisation: Teachers can use locally available (process of utilizing already existing) materials to teach or use them to make/develop the teaching aids. Teaching and learning resources: reference material that a teacher uses to understand the content to be taught (i.e. texts, essays, videos, software, teacher guides, syllabus, and student's book) and methodology to use, but are not directly used by teacher and with students

7.9.2. Consolidation activities

1. Indicate two materials that can be improvised in TRC and explain how they can be made.

Answer:

Brushes: brushes are materials that can be used in painting. Learners can collect sticks, sisal fibres and threads to make the brushes. An improvised brush can be made using the following procedures:

- Shape both ends of the stick to make them blunt and smooth
- Prepare sisal fibres and fix them on one end of the stick using thread
- Trim the sisal edge for evenness
- The brush is ready to use

Charcoal sticks: These can be made through the following procedures:

- Cut the sticks into the desired sizes
- Place the sticks into a tin container with wholes to let heat through
- Burn the tin containing the sticks
- Let the sticks smoulder
- After a while remove the container from the fire
- Place it inside to let it cool
- Remove the sticks from the container

2. Do you think that all manufactured materials are educational? Defend your position with some arguments.

Answer:

No, some manufactured materials are not educational such as weapons like guns, knives, bows, and arrows because they can cause accidents in young learners.

3. Do you think that all lessons in their respective subjects require teaching aids? Defend your position with some reasons.

Answer:

Yes, all lessons require teaching aids because (see the answer in student's book" importance of teaching and learning materials and ideas of learners").

7.9.3. Extended activities

1. A good teaching and learning material is considered as a second teacher. Discuss this statement with some arguments.
2. Propose the materials that can develop intellectual skills of children
3. Use local materials to design any toy and explain how this can develop intellectual and psychomotor skills of a child. Illustrate your designed toy on a drawing.

Possible answers for extended activities:

1. Educational materials are an integral component in any classroom. The many benefits of educational materials include helping learners improve reading comprehension skills, illustrating or reinforcing a skill or concept, differentiating instruction and relieving anxiety or boredom by presenting information in a new and exciting way. Educational materials also engage students' other senses since there are no limits in what materials can be utilized when supplementing a lesson.

As students are reading less and less on their own, teachers are finding reading comprehension skills very low among today's students. Educational materials are helping teachers to close the gap and hone the reading comprehension skills of their students. Using magazine and newspaper articles, prints ads and even comic books are viable educational materials that assist in helping students comprehend text.

Educational materials prove to be a formidable supplement for teachers when the reinforcement of a skill or concept is necessary. Not only do they allow students more time to practice, but they also present the information in a way which offers students a different way to engage with the material. Of course, this is important to reach the various learning types in the class.

As previously mentioned, it is important for teachers to reach all learners in a classroom. Therefore, the use of educational materials facilitates this objective by assisting teachers in differentiating instruction. Using educational materials such as graphs, charts, flashcards, videos, provides learners with visual stimulation and the opportunity to access the content from a different vantage point. This gives each learner the opportunity to interact with the content in a way which allows them to comprehend more easily.

Educational materials help to make the learning environment interesting and engaging. As we move toward a more digital society, kids are being exposed to technology and digital devices at a younger

age. Video games and iPods are now what are exciting to students, so when they come to school they have little patience for lecture style teaching. Students are seeking constant excitement and simply have no tolerance for boredom. Educational materials are improving the quality of education in today's schools while also providing students with the sense of excitement they desire.

Educational materials are becoming the norm in the classroom. As traditional classrooms with blackboard and chalk become a thing of the past, and smart classrooms become the norm, teaching aids are growing in popularity and advancement. Blackboards are being replaced with white and smart boards. TVs are being replaced with LCD projectors and screens. And educators are becoming more focused on students growing with technology and integrating it into the curriculum. Students are making podcasts, videos and even creating web quests All of which are sound teaching aids to incorporate into the classroom.

2. Some examples of the materials that can develop intellectual skills in children are the following.
 - Materials for construction like bricks, clay, stones, boxes, puzzles, construction games, construction sets...
 - Materials for sand play such as gourds, pumpkin skills, maize cobs, flat wooden sticks...
 - Materials for water play like shells, the objects that float or sink in water like papers, stones...
 - Materials for language like stories, songs, books, news papers, magazines, riddles, jokes, papers, pencils, cell phones, sequencing games..
 - Materials for mathematics such as shapes, colors, abacus, counters, money, games, rulers, calendar, counting sets...
 - Materials for science or discovery like watering canes, torches, plants, animals, chalk, charcoal, salt, compasses, tape recorders, microscopes, glass slides...
 - Materials for art, culture and technology such as brushes, paints, sculptures, modern visual art, musical instruments, community dance, wax crayons, glues...
3. This is the practical task, but local materials may include: banana fiber leaves, woods, stones, used papers...every student shall explain his/her material made.

UNIT 8:

LESSON PLANNING

8.1. Key unit competence

Create a quality lesson plan with clear objectives engaging techniques and variety of materials

8.2. Prerequisite

The following competences will enable student teachers learn this unit easily:

- Writing skills student teachers developed in language subject from primary and ordinary levels
- In unit 5, they have learnt how integrate generic competences and cross-cutting issues in the lesson
- In the unit 1 of Special Needs and Inclusive Education subject, they have learnt how to cater for learners with SEN
- In the unit6, they have learnt how to set instructional objectives
- In unit 7: Making and using TLMs, they have learnt teaching and learning resources to be planned in the lesson.

8.3. Cross-cutting issues to be addressed:

- **Gender education:** tutor will involve both student teachers (boys and girls) in the lesson (when making groups), she/he should not separate boys from girls while doing class activities.
- **Inclusive education:** all student teachers are welcome in the class activities irrespective their differences (socio-economic status, disabilities, religion, region, sex...)
- **Peace and values education:** Tutor will invite student teachers to work and live in harmony, to share materials and help one another when planning lessons.
- **Financial education:** teachers will encourage student teachers to plan none cost materials. This helps to save money.

8.4. Guidance for introductory activity

Refer to the introductory activity, in the student's book. Student teachers are asked to read and analyze carefully the scenario of teacher Habineza and find out the responses to related. Student teachers discuss and came up with the following possible responses:

Answer to question one: Teacher Habineza should plan his lessons because it helps to teach logically, respect school rules and regulations, lesson plan in mind is abstract(it should be put on paper, teaching documents help school administration in supervision. Tutor supplements student teachers' ideas and provides feedback.

Response to question two: In pairs, tutor asked student teachers to think about the document that teacher should prepare for every lesson. The student teachers may come up with a lesson plan.

8.5. List of lessons

	Lesson title	Learning objectives	Number of periods
1	Definition and importance of lesson planning	Describe the importance of lesson planning	1
2	Parts of a lesson plan	Explain the purpose of each part of a lesson plan	2
3	Key required documents for a lesson planning	Analyze and use the key required documents for making lesson a plan	1
4	Lesson plan format	Make a quality detailed lesson plan using REB format	6
	Assessment		1

Lesson 1: Definition and importance of lesson planning

a. Learning objectives

Describe the importance of lesson planning

b. Teaching resources

- Internet,
- Books
- Manila papers
- Markers and pens
- Flash cards

c. Prerequisites/Revision/Introduction:

Communication skills developed from primary and ordinary levels, planning skills developed from primary and ordinary levels and daily life experience

d. Learning activities

Guidance for the activity 8.1

Tutor refers to the activity 8.1 in the student's book. He/she asks student teachers to read carefully the scenario about the campaign to enhance the quality education in Rwandan primary and secondary schools and related questions. Tutor guides student teachers' ideas.

Answer to the question 1

After discussion, student teachers will come up with the following possible answers (see student's book, sub-heading 8.1)

Answer to the question 2

After sharing in pairs, student teachers find the following answers:

Teachers who plan their lessons are confident, familiar with the content, teach in logical order among others while the teachers who do not plan their lessons may have problems with administration, may forget important points of the lesson etc. The tutor refers to student's book sub-heading 8.1 for further information.

e. Application activity 8.1

The tutor asks student teachers individually, to do the application questions in the student's book.

Possible solutions they may come up with are the following:

Question 1

Experienced teachers should plan their lessons because teaching without lesson plan is like travelling without knowing where to go. Lesson plan is a guide of teaching and learning activities, experience is not enough and all contents cannot be mastered.

Question 2

The performance and competences of learners increase when teachers plan their lessons because skills, competences teachers his/her learners to develop are identified and developed gradually through activities and checks progressively their achievement. Learners whose teachers do not plan their lessons do not perform well because teachers do not plan for them the activities that enables learners develop competences and this results in failure. The tutor appreciates student teachers answers and supplements referring to the” importance of lesson planning in unit 8”).

Lesson 2: Parts of a lesson plan

a. Learning objectives

Explain the purpose of each part of a lesson plan

b. Teaching resources

- Internet,
- Books
- Manila papers
- Markers and pens
- Flash cards
- Papers

c. Prerequisites/Revision/Introduction:

Tutor and student teachers reflect on the meaning and the importance of lesson plan in the unit 8, lesson 8.1. Communication skills developed from primary and ordinary levels, planning skills developed from primary and ordinary levels and daily life experience.

d. Learning activities

Guidance for the activity 8.2

Tutor refers to the activity 8.2 in the student's book. He/she puts student teachers in groups and asks them to read carefully the scenario and answer related questions. Do not get surprised if student teachers provide irrelevant answers but guide them.

Answer to the question 1

After discussion in groups, student teachers will come up with the following possible solutions:

The order teacher Anne used to deliver her lesson is correct because she started from what learners already know (prerequisites) until the new lesson (from known to unknown, from simple to complex, easy to difficult...). The main steps/parts teacher Anne followed are revision on learnt numbers, new lesson of addition of numbers less than 10 where they did many operations and exercises (assessment). Tutor supplements student teachers answers and provides constructive feedback.

e. Application activity 8.2

The tutor asks student teachers individually to do the application questions in the student's book. The possible solutions they may come up with are the following:

For the first question, motivated learners ask and questions are active participants, are interested, they are responsible and curious.

For the second and third questions, tutor refer to the unit 8, lesson 8.2 to find answers.

Lesson 3: Key required documents for a lesson planning

a. Learning objectives

Analyze and use the key required documents for making lesson planning

b. Teaching resources

- Internet,
- Books
- Manila papers
- Markers and pens
- Flash cards

- syllabus
- A complete scheme of work or lesson distribution
- primary textbooks
- Pre-primary textbooks

c. Prerequisites/Revision/Introduction:

Tutor guides student teachers to review and reflect on the meaning, the importance and the parts of lesson plan. The skills gained from Pre-primary TMP unit 23 lesson one.

d. Learning activities

Guidance for the activity 8.3

Tutor refers to the activity 8.3 in the student’s book. He/she puts student teachers in groups and asks them to read carefully the question 8.3 and answer it. Student teachers will give various answers including incorrect ones but refer to unit 8, lesson 8.3 in the student’s book for supplements and constructive feedback.

e. Application activity 8.3

The tutor invites student teachers individually to open student’s books and complete the application question 8.3. The tutor consults the summary notes of the lesson 8.3 in the unit 8 for all possible answers to supplement students’ students’ ideas.\

Lesson 4: Making a lesson plan

a. Learning objectives

Make a quality detailed lesson plan using REB format

b. Teaching resources

- Notebooks
- Manila papers
- Markers and pens
- Pencils and crayons
- Sample lesson plans in different subjects

c. Prerequisites/Revision/Introduction:

Tutor guides student teachers to review and reflect on the meaning, the importance, requirements for making a lesson plan and the parts of lesson plan. The skills gained from Pre-primary TMP unit 23 lesson one (teacher's professional documents). Skills gained from FOE, unit 4(active teaching methods and techniques and unit 6(Setting learning objectives)

d. Learning activities

Guidance for the activity 8.4

The tutor invites student teachers to make a review on main parts of lesson plan. The tutor makes groups of five and distributes copies of lesson plan formats. He/she asks student teachers to find the main parts of a lesson plan format and the components of each part. The tutor allows student teachers to present their findings and then complement their answers by giving a clear description of the activities done in each part.

e. Application activity 8.4

The tutor invites student teachers individually to take their notebooks and create a detailed lesson plan that fulfils all the qualities of a good lesson plan. The tutor moves around to check everybody's progress and offer support where needed.

8.6. Summary of the unit

Lesson plan is the procedure of a lesson delivery to be followed by the teacher and learners. It is a daily preparation made by the teacher. A lesson plan enables the teacher to deliver the lesson in a logical sequence and enables him/her teach confidently. Any lesson plan has three main parts such as introduction, the lesson development and the lesson assessment. For effective lesson planning, teacher consults various key required documents like syllabus, scheme of work, timetable and textbooks.

8.7. Additional Information for teachers

Factors that may interfere with the successful implementation of a lesson plan:

- Poor preparation of the lesson plan
- Poor mastery of content to be taught
- Use of irrelevant teaching and learning materials
- Failure to vary teaching methods

- Inappropriate use of teaching aids
- Inappropriate use of teaching methods
- Poor time management
- Poor communication skills
- Poor teacher-learner relationship
- Teacher's inability to control the class
- Teacher's distracting mannerisms

8.8. End unit assessment

Individually, tutor asks student teachers to open their textbooks and invites them to do the two questions at the end unit 8(end unit assessment).

1. Lesson plan is considered as a cornerstone and backbone of any teaching and learning process due to the following reasons: see lesson 8.1, unit 8: definition and importance of lesson plan. Tutor supplements student teachers answers and provides constructive feedback.
2. In pairs, requests student teacher to choose one topic from the subjects of their option and make a detailed lesson plan that fulfils all the qualities of a good lesson plan. The pairs exchange lesson plans for peer cross checking. The tutor provides time with student teachers to comment. He/she supplements and gives constructive feedback.

8.9. Additional activities

8.9.1. Remedial activities

1. Give student teachers with difficulties in this lesson more time to observe lesson plan format and identify its elements.

Answer: school name, teacher's name, term, date, subject, class, unit number, lesson number, duration, class size, type of Special Educational Needs to be catered for in this lesson and number of learners in each category, unit title, key unit competence, title of the lesson, instructional objective, location, learning materials, reference, timing for each step, introduction, development of the lesson, conclusion, teacher's activities, teacher activities, generic competences and Cross cutting issues to be addressed, teacher activities, learner activities, teacher self-evaluation.

2. What are the characteristics of a good lesson plan?

Possible answer

- The good lesson plan should be related to the everyday life of the child.
- The lesson-plan should be child centered.
- It should contain well stated objectives.
- The lesson should indicate the teaching aids and illustration to be used
- It should indicate the participation of learners in class.
- It should contain activities that will indicate the success of objectives set.

8.9.2. Consolidation activities

1. Using a lesson plan format, prepare a good lesson plan from the subject of your choice in pre or primary school.
2. What are the factors to be considered when preparing a lesson plan?

Possible answer

- The topic from which the content of lesson is to be covered
- The time allocated for teaching the topic
- The ability of the learner
- The previous knowledge
- The best methods, techniques, and approaches
- The specific objectives which indicate what the learners are supposed to achieve
- The teaching and learning resources
- The most suitable assessment
- The teaching and learning activities

8.9.3. Extended activities

1. Teaching without a lesson plan is like travelling without knowing where to go. Discuss
2. Discuss the factors that may interfere with the successful implementation of a lesson plan.

Possible answer

- Poor preparation of the lesson plan
- Poor mastery of the content to be taught
- Use irrelevant teaching and learning aids
- Failure to vary teaching methods
- Inappropriate use of teaching aids
- Inappropriate use of teaching methods
- Poor time management
- Poor communication skills
- Teachers' distracting mannerism
- Teacher being emotionally and psychologically unprepared
- Poor teacher learner relationship
- Teacher's inability to control the class

UNIT 9:

LESSON OBSERVATION

9.1. Key unit competence

Assess a lesson taught by a fellow teacher, referring to specific criteria

9.2. Prerequisites

student teachers will have to use their senses especially seeing and hearing during observation of the model lesson and will also need to record the important information for further report therefore for better observation student teacher should be able to use their sense of seeing and hearing effectively, have recording skills and able to make report.

9.3. Cross-cutting issues to be addressed

Gender	- This will be achieved through discussion in pairs, group discussion, and working together
Financial education	- by effectively Using materials, tools and equipment while teaching and learning.
Inclusive education	- This will be achieved through discussion in pairs, group discussion, and working together without any kind of discrimination.
Comprehensive sexuality education	- this will be achieved when girls and boys works together without any kind of sexual harassment.
Peace and values education	- This will be achieved when students work together peacefully with a high level of morality, without fighting and insulting each other

9.4. Guidance on introductory activity

For the introductory activity in the unit 9, let student teachers observe carefully the picture and guide them so as they are able to answer clearly and correctly the answer.

Do not be surprised if some provide irrelevant answers it is because of their perception instead profit to tell them to look well because during observation they will also need the observation skills and being able to perceive information well. Be consistent to orient them until they come up with the idea of student teachers who are doing observation from a demonstration school.

Introductory activity

After guidance, the following are possible answers:

1. Student teacher can write the following observations:
 - I have seen teacher calling learners by their names
 - I have seen learners working in groups.
 - I have seen teacher dressing apron.
 - I have seen teacher marking learners.
2. Student teacher can say the following about the picture.
 - a. Teaching is teaching learners; Learners are raising their hands and TTC student teachers sit behind and observe teaching and learning process.
 - b. If I was one of these student teachers, I would be interested by the active involvement of the learners.

Yes, because lesson observation gives student teacher opportunities have an overview on teaching and learning process.

9.5. List of lessons

#	Lessons	objectives	period
1	Lesson observation format	Justify ratings or comments made on an observation form and explain elements to watch for within a lesson to measure its effectiveness.	3
2.	Constructive feedback	Explain effective ways of giving feedback.	1
3	Reflective practice	identify the steps of reflection according to a given model.	1
4	Importance of lesson observation	Explain the importance of lesson observation.	1

5	Elements to consider during classroom/ lesson observation	Explain key elements to consider during classroom/lesson observation	1
	assessment		1

Lesson 1: Lesson observation format

a. Learning objectives

Justify ratings or comments made on an observation form and explain elements to watch for within a lesson to measure its effectiveness.

b. Teaching resources

Handouts on reflective practice and constructive feedback, observation form

c. Prerequisites/revision/introduction

ask student teacher how they came to identify and describe the activity taking place on the picture in the introductory activity of this unit. The student teachers will use their ability to see and listen and interpret of information.

d. Learning activities

Let student teachers read the activity 9.1 and brainstorm on it. Make them feel free and calm to tell you what they consider to judge the effectiveness of lessons delivery, this way they will tell you more information that help them to be aware of the necessary elements to watch for during model lesson demonstration.

Suggested answers.

Some of the answers that student teachers will tell you include the following:

We prefer and appreciate the teachers who use the teaching and learning aids.

We prefer and appreciate the teachers who have mastery of the content

We prefer and appreciate the teacher who motivates us.

We prefer and appreciate the teachers who involve us in the lesson.

We prefer and appreciate the teacher who respond to our interests.

e. Application activity

Advise student teacher to revise the main elements with related details to focus on in the lesson observation format before providing the answers for application activity 6.1. follow how they are trying and guide them accordingly.

Suggested answer: confer to the student teacher book sub-heading 6.1

Lesson 2: Constructive feedback

a. Learning objectives

Explain effective ways of giving feedback.

b. Teaching and learning resources

Handouts on reflective practice and constructive feedback, observation form.

c. Prerequisites/revision/introduction

Base on the knowledge and skills that student teachers have to effective communication with others either responding to other's questions or listening from them orally.

d. Learning activities

Let student teachers read the activity carefully and try to understand what is explaining, then them reflect as if they are students of KARIBA John and identify what is wrong with the teacher. After ask them to advise the teacher how he should communicate with learners effectively.

Suggested answers

Teacher KARIBA John is not good teacher, he does not give effective feedback to students because he does not respond to the students' questions and when he asks questions, students try to answer but no one is well informed that the provided answer is right or wrong and why. If I am that teacher, I could give attention to the needs and interest of learners and respond to their all questions. I should be fair and sensitive also to the answers they give for the questions I ask them by providing clear reasons why the answer is wrong and why the answer is right.

e. Application activity: confer to the content in student teacher text-book sub-heading 9.2.

Lesson 3: reflective practice

- a. **Learning objectives:** identify the steps of reflection according to a given model.
- b. **Teaching resources:** Handouts on reflective practice and constructive feedback, observation form.
- c. **Prerequisites/revision/introduction:** the tutor should ask student teacher whether they ever think back to the process of their actions from the beginning to the end results or if they ever make reflection as self-evaluation.
- d. **Learning activities:** guide the student teachers to think about the time the teacher Louise take before and after teaching the lesson and identify whether it is useful to her or not if they say that it is useful ask them to tell you why.

Suggested answer:

To think about the lesson before and after teaching for Louise helps her to deliver the right content in effective way and improves day to day in her career.

- e. **Application activity:** advise student teacher to read the questions in this activity and take time for revision in the content appearing in sub-heading 9.3 in their textbook.

Suggested answer: confer to the student teacher text book sub-heading 9.3

Lesson 4: the importance of lesson observation

a. Learning objective

Explain the importance of lesson observation.

b. Teaching resources

Handouts on reflective practice and constructive feedback, observation form.

c. Prerequisites/revision/introduction

Based on the knowledge the student teaches gained from introductory activity of this unit and knowledge and skills they gained from the content of sub-unit 9.1, 9.2, and 9.3 ask them to describe the importance of lesson observation.

d. Learning activity

Remind students to recall the knowledge, skills and attitudes they gained from sub-unit 9.1, 9.2 and 9.3

Suggested answer: confer to the student teachers' textbook sub-heading 9.4

e. Application activity:

let student teacher read carefully the activity, then tell them to answer the question referring to the model lesson observation they made and the knowledge and skills they gained from the sub-heading 9.1

suggested answers:

Referring to the observation I made for the model lesson, the elements that I have to take into consideration so as to make it successful and appreciated by everyone who may come for observation includes pedagogical documents, methods and strategies which are relevant to the lesson, teaching materials relevant to the lesson, classroom management and organization, involvement of student in the lesson, and the like.

Lesson 5: Key elements to consider during classroom/lesson observation

a. Learning objective:

Explain Key elements to consider during classroom/lesson observation to measure its effectiveness.

b. Teaching resources:

Flash card, markers, chalkboard, print materials.

c. Prerequisites/revision/introduction:

Based on the knowledge the student teachers gained from introductory activity of this unit and knowledge and skills they gained from lesson one" lesson observation format" student teacher can easily understand elements to watch for within a lesson for its effectiveness.

d. Learning activity 9.5

Bring in the class copies where student –teachers can read the activity 9.5. Allow student-teachers to read and answer to the question in small groups.

Possible answers to Activity 9.5 are like the followings:

Students make those judgements because:

- They see teacher's behavior
- They see how classroom is organized
- They have attended the class and they feel able to perform a test or not.

e. Application activity 9.5

Let student teacher carefully read the activity, then tell them to answer to the question of application activity 9.5.

Possible answers are like those written in the student book under the sub-heading 9.5

9.6. Summary of the unit

In this unit the tutor should focus on these main points which include lesson observation format and the related elements to watch for, constructive feedback, types of reflective teaching, steps for reflection and the importance of reflection.

9.7. Additional information for the Tutor

Types for reflective teaching for teachers are the same for types of reflective learning for learners. The steps of effective reflection for the teacher are the same for the students.

9.8. End unit assessment

To find the answers for the questions in end unit assessment for the unit 9 confer to the textbook of student teacher.

9.9. Additional activities

9.9.1 Remedial activities

Provide remedial activities to the students who have problems, but not any activity but activities which focus on what should facilitate students to understand better.

Example:

1. Ask student teachers to identify the main elements appearing on the observation format to focus on while observing a model lesson.

Answer:

- Classroom Management
- Assessment of Learning

- Dressing code
 - Active Engagement in Activities for learners
 - Use of Materials
 - Discipline
 - Demonstration of Understanding
 - Professional Documents
 - Facilitation of Activities for teachers
 - Classroom Set-Up & Use of Materials
2. Ask student teachers to describe the steps of reflection after observation

Answer:

▪ **Step 1: Look back at a situation or experience**

Look back at something that happened or some thought you find yourself focusing on and describe it briefly.

▪ **Step 2: Think in depth about your experience or thought**

Think in depth about why your experience happened or why your thought is so important to you. What hunches, ideas, guesses, interpretations come to mind as you analyze your experience? (Probably the most important piece.)

▪ **Step 3: Describe what you learned about yourself or your role.**

Write what you've learned about yourself, your role, or the situation.

▪ **Step 4: Plan what you will do next**

Describe what you're going to do next/ your action plan, next steps. This may be resolving to do something differently the next time; it may be adopting a new attitude or changed thinking; it may be needing to puzzle further.

9.9.2 Consolidation activities

Divide the student teachers into four groups, first should stand play a role of tutor and take student teachers at demonstration school for observation, second group should play the role of student teachers and who will be observing at demonstration school, third group should play the role of teacher at demonstration school who will prepare a model lesson and the fourth group should play the role of students at demonstration school who will behave exactly like children in pre-primary or primary and make a role play together.

9.9.3 Extended activities.

Think of the activity that can help students to construct their own knowledge and have deep learning not superficial learning for example Give assignment to student teachers to make research the role of tutors, teacher at demonstration schools and student teachers for effective mode lesson observation.

● UNIT 10:

INTRODUCTION TO PSYCHOLOGY

10.1. Key unit competence

Justify the necessity of studying psychology and its related concepts to the profession of teaching

10.2. Prerequisites

The student teachers have intrapersonal and interpersonal skills, they live in society so they know that people are different, therefore these knowledge, skills and attitudes they have to identify individual differences and ability to adapt to others will help them to understand this unit 10

10.3. Cross-cutting issues to be addressed

Gender

This will be achieved through discussion in pairs, group discussion, and working together

Financial education

By effectively using materials, tools and equipment while teaching and learning.

Inclusive education

This will be achieved through discussion in pairs, group discussion, and working together without any kind of discrimination.

Comprehensive sexuality education

This will be achieved when girls and boys works together without any kind of sexual harassment.

Peace and values education

This will be achieved when students work together peacefully with a high level of morality, without fighting and insulting each other

10.4. Guidance on introductory activity

Help the student teacher to read the introductory activity and give them time to think of the knowledge and skills that any teacher should have for an effective classroom management and cater for individual differences. Guide them until they come up with the idea that teacher needs skills and knowledge that help him or her to understand the students and handle different behaviours accordingly.

To deal with all individual differences, the teacher needs to know and recognize individual differences between learners.

10.5 List of lessons

UNIT 10			
#	Lesson	Objectives	Periods
1	Key concepts of psychology	Explain psychology and its key concepts	1
2	Some branches of modern psychology	Identify different branches of psychology	3
3	Importance of psychology in education	Describe the importance of psychology in education	2
	Assessment.		1

Lesson 1: Key concepts of psychology

a. Learning objectives

Explain psychology and its key concepts.

b. Teaching resources

Flip chart, markers, psychologist profiles, handouts describing branches of psychology, examples of psychological research, chart with scientific method, internet (refer to Help a Child resource files)

c. Prerequisites/revision/introduction

let student teachers use their skills to describe people based on their overt behaviour or their ability to choose best friends who cannot cause dangers harms to them. These skills will help them to be able to study people based on their behaviour in combination with their mental processes.

d. Learning activities

Activity 1.1

Ask student teachers to refer to children they have ever observed and describe the behaviours they manifested. Ask them if all children observed manifested behaviour and based on the answer he/she provides ask him/her to explain why?

Suggested answer:

The student teachers will provide different answers based on their own observation and understanding what is essential here is to identify that they have notion of psychology within them so that will understand the related knowledge and skills more easily. Student teachers will be able to tell you that children in nursery schools have different behaviours, they will tell you that some cries while playing, others prefer to be alone, others are egoist, and others like to play with others and take turns during play. They will be able to tell you that this is because of individual differences, all children have different family background, do not like the same things, etc. do not worry if they give you the answers you do not expect from them just use psychology to understand why.

e. Application activity 10.1

Let student teachers read the activity and answer the questions, remember that all cannot work on the same pace, they are slow learners and gifted learners therefore remember to guide those with special problems.

Suggested answers: confer to the student teacher textbook in the in the sub-heading 10.1

Lesson 2: Some branches of modern psychology

a. Learning objectives

Identify different branches of psychology

b. Teaching resources

Flip chart, markers, psychologist profiles, handouts describing branches of psychology, examples of psychological research, chart with scientific method, internet (refer to Help a Child resource files)

c. Prerequisites/revision/introduction

Student teachers are aware of other sciences or disciplines and are able to classify things based on their relations or similarities this will enable them to identify the disciplines that may be the branches of psychology.

d. Learning activity 10.2

Give student teachers time to read the descriptions and identify the missing words. Do not be surprised annoyed when they provide the wrong answer because the missing words may be strange to them therefore allow them to discuss in groups so that they may share the ideas that lead them to the true answer.

Suggested answers:

- Clinical psychology
- Educational psychology
- Child development.

e. Application activity 10.2

Make sure that all student teachers try to find the answers for this activity and guide those with special needs to achieve the expected results from this activity. keep on checking that all learners are able to find the answers using the student teacher's textbook before starting next lesson.

Suggested answers: confer to the textbook of student teachers in the sub-heading 10.2

Lesson 3: Importance of psychology in education

a. Learning objective

Describe the importance of psychology in education

b. Teaching resources

Flip chart, markers, psychologist profiles, handouts describing branches of psychology, examples of psychological research, chart with scientific method, internet (refer to Help a Child resource files)

c. Prerequisites/revision/introduction

Tutor has to make a revision on the term psychology and ask the student teachers to brainstorm how they can use it in their lives.

d. Learning activity 10.3

Let student teachers first observe the picture before responding to the question. Tell them to relate what they see on the picture and what they think should be the importance of psychology education.

Suggested answers: confer to the student teachers' textbook in the sub-heading 10.3

e. Application activity 10.3

Make sure that the student teachers understand completely the content related to importance of psychology in education before answering the questions in the application activity.

Suggested answers:

1. Confer to the student teachers' textbook in the sub-heading 10.3
2. As a student teacher I will use psychology in the following ways:
 - I will use psychology to know the student.
 - I will use it to select and organize the subject matter or learning experiences.
 - I will use it to suggest the tools and techniques of teaching and learning.
 - I will use to arrange learning situations or environments.
 - I will use it to provide guidance services.
 - I will use it to solve classroom problems.
 - I will use it to build good relationships.

10.6. Summary of the unit

In this unit the tutor should most make focus on the main points which are definition of psychology and its related key terms, the commonly known branches of psychology as they are mentioned in the student teacher's textbook, as well as the importance of psychology in education.

10.7. Additional information for tutors

Consider that this is the unit that most of student teachers like and have curiosity to explore, therefore they ask more questions and make enough research in order to know more. It is very important if you make research before entering the class, let them ask questions, be firm and calm when but

also flexible when asked stupid questions otherwise they will find that you do not understand what you teach.

10.8. End unit assessment

The following are some of the answers that are more likely to be given:

1. Teacher should try their best to understand the learners' behaviour because when you do not know learners you cannot know how to manage them; you cannot be aware of individual differences. If you do not take time to know your learners, you cannot plan accordingly if do not know whom you are planning for, you cannot respond to the needs and interest of learners. If you do not know them therefore it is very important for the teachers to know their learners.
2. The branches of modern psychology which are judged necessary in education careers so that teachers can use them to ensure proper teaching and effective learning include the following:
 - Educational psychology
 - Developmental psychology
 - Guidance and counselling psychology
 - Psycholinguistic
3. Modern psychology is very important in education in the following ways:
 - **To know the student:** psychology enables the teacher to know his/her learner and identify his/her potentialities, capabilities, strength and weaknesses.
 - **Psychology is needed for selecting and organizing the subject matter or learning experiences:** When a teacher knows his students then it becomes easy for him to select and organize learning experiences and also selects or develops learning materials.
 - **It suggests the tools and techniques of teaching and learning:** Psychology suggests different tools and techniques which the use to make his class more attractive, so that he can involve students in the teaching learning process.
 - **To arrange learning situations or environments:** psychology helps the teacher to create or arrange appropriate learning situations for students. For example, the knowledge of group dynamics or group behavior gives the necessary art for teaching or learning in the group.

- **Providing guidance services:** The knowledge of psychology helps the teachers in providing guidance services to the students. He can better diagnose his students' abilities, interests, and aptitudes of his pupils and guide them accordingly.
- **Solving classroom problems:** There are innumerable problem like backwardness, truancy, bullying, cheating in the classroom situations which are to be faced by a teacher. psychology helps the teacher in this field also.
- **Knowing about him-self:** Knowledge psychology helps the teacher to know about himself. His own behavior pattern, personality characteristics, likes and dislikes motivation, anxiety, conflicts, adjustment etc.
- **Understanding how the body and mind work together:** Psychology allows teachers to understand more about how the body and mind work together. This knowledge can help with decision-making and avoiding stressful situations. It can help with time management, setting and achieving goals, and living effectively.
- **The building of relationships:** Psychology makes it easier to live with others at school by understanding them more and working with their behaviour.
- **Improving communication:** A greater understanding of how humans think and behave will help teachers and students communicate better. They will be more effective in understanding what a person really means by gestures and actions.
- **Building self-confidence:** By understanding more about yourself and your personality, you can gain more self-confidence. You will learn more about your weaknesses and can build on them.
- **Enriching careers:** with psychology teachers will be able to understand their coworkers more and building a better friendship so that they will help each other to enrich their careers.

10.9. Additional activities

10.9.1. Remedial activities

1. What is the definition of modern psychology?

Answer: Psychology is the systematic scientific study of behaviour and mental processes

2. Give an example of behaviour

Answer: being kind, being rude, being hard working, being courageous, etc.

3. Give an example of mental processes

Answer: thinking, reasoning, imagination, perception, etc.

4. Why is psychology considered as a science?

Answer: Psychology is a science because it uses the scientific methods.

10.9.2 Consolidation activities.

After defining the word psychology, explain how it is useful in our daily life.

Possible answer: refer to the student teacher's textbook.

10.9.3 Extended activity

Question: Explain why the teacher needs the knowledge and skills of psychology in his/her career of teaching.

Possible answer:

The teacher in his/her career of teaching, he/she needs the knowledge and skills of psychology because of the following reasons:

In the classroom, they are different individuals from different backgrounds, therefore they have different behaviour that the teacher should be aware of to be able to manage their behaviours.

In the classroom there are students with different cognitive ability, therefore the teachers should have the knowledge and skills to deal with learners with different abilities.

The students in the classroom are individuals with different culture and dealing with this, requires the knowledge and skills of psychology.

In few words, the teachers should have the knowledge and skills of psychology because, it helps to study the behaviour and mental processes of different individuals.

UNIT 11:

INTRODUCTION TO HUMAN DEVELOPMENT

11.1. Key Unit competence

Justify why teachers should consider developmental stages and support holistic development.

11.2. Prerequisites

During this unit, learners have studied biology and some topics such as nervous system and reproduction system in O-Level and need to use related knowledge and understanding from this lesson. They also studied unit 10(introduction to psychology) which has some concepts related to this unit such as: psychology, branches of psychology (developmental psychology is one among them), behaviour. The tutor need to use the active methods and techniques to stimulates learners. Research based is one of the method which help learners to be involved while studying.

11.3 Cross-cutting issues to be addressed

During this unit the following crosscutting issues should be emphasized.

Gender education:

Remind learners that both males and females have similar should be treated equally and have the same rights and obligations as they all pass through the same sequence of human development irrespective of their sex. Therefore, need to be treated fairly and equally studying. People's opinion of gender roles should not deny or hinder one's right or responsibilities to meet his or her learning during this unit.

Comprehensive sexuality Education (CSE)

the tutor needs to equip learners with all necessary information about sexuality that are linked to this unit as it extents the understanding about how both sex (male and female) need to go through all stages of development.

Environment and sustainability:

During the study of this unit, student teachers appreciate the environment factors and how these influence brain.

They need to understand that development of human being happen in environment and it should be safe for a better seek to human development.

Inclusive education:

This will be much focused on as tutor understands the individual difference that may arise as result of their difference in development. Tutor will use different materials that cater for individual difference and encourage them to fulfil their potential throughout the entire unit.

Peace and values education: this is a broad cross cutting issue which will make student to appreciate the culture and values of Rwanda. Students teachers need to know that though we have modern stages of human development, we have them also in Rwandan culture.

11.4. Guidance on introductory activity

This introductory activity is intended to help learner have ability of making research and become aware of the culture. Teacher need to use effective techniques so that learners benefit from the activity. The other intention of this activity is to arouse learners' interest and motivation during the whole unit. Student make trial to sequence period of human development and their characteristics but learners may make mistakes and try again as the intention is to make them understand the logic behind modern stages of human development that will be developed later in lesson 3.

Learners analyse the picture and think about periods of development according to Rwandan culture. The intention is not to put periods of development on right sequence but understanding that we also have those period in Rwandan culture. Depending on the level of performance of the learner you may provide another remedial work to make them understand the activity.

Answer to introductory activity

Periods of development according to Rwandan culture

Period	Some major characteristics
Gusama (conception)	Union of ovum in fallopian tube
Gutwita (pregnancy)	Pregnancy lasts from conception to birth
Inda (embryonic and foetal periods)	All the body structure and internal organs are formed Completion of body structure and rapid growth in size The mother feels the movement of the foetus
Kubyara (birth)	labour pain, delivery process
Uruhinja(neonate)	No distinction between him/her and the world
Igisekeramwanzi	Smiles at anybody
Umwangavu/ingimbi(puberty)	Conscious about him/her with regard to general body cleanness Rapid physical changes
Inkumi/ umusore (late adolescence)	Unmarried Physically strong Relationship with opposite sex
Umugabo/ umugore(adulthood)	Have strong social responsibilities Married Rational thinking
Umusaza/ umukecuru	Regressive behaviour Despair

11.5. List of lessons

No	Lesson title	Learning objectives	Number of periods
1	Key concepts of developmental psychology	Explain the concepts related to developmental psychology and acknowledge the implication of developmental psychology to a future teacher	2
2	Developmental domains/aspects	Describe the domains of development.	2
3.	Developmental stages/periods	Describe stages through which individuals pass during development	2
4	Principles of development	Propose the implications of principles of human development	2
5	Brain Basics Factors of brain development	Explain the functions of the brain. Recognize the importance of the brain development.	3
	End unit Assessment		1

Lesson 1: Key concepts of developmental psychology

a. Learning objectives

Explain the concepts related to developmental psychology and acknowledge the implication of developmental psychology to a future teacher.

b. Teaching resources

Flash cards, photos, dictionaries, internet, student's book.

c. Prerequisites/Revision/Introduction:

Remember that learners have grown in different villages but have in mind the different development stages as they are sequenced in our culture.

Students need to think deeply and discover different stages of development in Rwandan culture and the teacher guide them to understand and arrange them. Students will need to make research either in library or internet and try to explain different terms related to development.

Learners should also try to compare periods of development according to Rwandan stages of development. They will also use the knowledge from what they studied in biology to understand the development, maturation and growth of individual. Learners may share their findings with their colleagues to come up with the best and common understanding. Let the learner try and make mistakes as it is one among the strategies towards a better understanding and all of these should be in connection with the key unit competence of the unit. These will help the learners to understand the other rest of the content of this unit.

d. Learning activities

Activity 11.1

In this learning activity learners try to make research and evaluate themselves to what extent they understand. Guide them to access resources such as dictionaries, books and internet if it is available for further research. On the first activity you may write the selected list of words to flash cards and learners pick the ones that are related to human development.

Possible answers for activity 11.1

Terms related to human development from the list are: Maturation, Growth, development.

Characteristics of growth

Maturational patterns are innate, that is, genetically programmed

For example, a four-month-old cannot use language because the infant's brain has not matured enough to allow the child to talk. By two years old, the brain has developed further and with help from others, the child will have the capacity to say and understand words. Also, a child can't write or draw until he has developed the motor control to hold a pencil or crayon.

Different **characteristics of growth are** like body structure, height, weight, color of hair and eyes are highly influenced by heredity.

e. Application activities6

Possible answers for application activity 11.1

Maturation refers to the sequential characteristics of biological growth and development. These biological changes occur in sequential order and give children new abilities. Changes in brain and nervous system account largely for maturation. Also a child must mature to a certain point before they can progress to new skills (readiness) While *Growth* means an increase in size, mass and in some quantity over time which can be physical observable (e.g., *growth* in height,).

Importance of developmental psychology to a future teacher

Note: This question does not have a standard answer but if the learner response is in line with the answers suggested below, you can award marks to the learner and help them to extent their views.

- Teacher gets to know the needs and motives of children at different levels and this assist them in motivating learners
- It helps pre-school teachers to develop appropriate curriculum for children.
- It helps teachers to understand mental and emotional reactions of individual child.
- It helps in service and pre-service teachers to be in a position to understand the individual differences in learning.
- Etc (students may extend the list).

Lesson 2: Developmental domains/aspects

a. Learning objectives

Describe the domains of development.

b. Teaching resources

Draw a picture that on Manila paper that show how 2 children are different in performing things physically, intellectually. *Flip chart, markers, handouts with information about developmental domains*

c. Prerequisites/Revision/Introduction

As they have seen in lesson one in this unit, the difference between maturation and growth and their characteristics, learners need to understand that difference and that growth of some body structure and maturation will help individual to perform different activities socially, intellectually, physically etc. All individual will not have the same abilities as result of their growth and maturation that are not at the same level.

d. Learning activities:

Activity 11.2

This activity help the learner to think beyond and discover about how physical development and growth are closely related with the development of muscle.

Possible answers for activity 11.2 refer student's book

- A. What aspect of development helped Munanari to hold the pencil is motor development.
- During one year, Munanari has not yet attain fine motor development which would help him to coordinate his finger movement

e. Application activities

Possible answers for application activity 11.2 refer student's book

1. A) cognitive development b) social development c) language development

Characteristics

Fine motor	Gross motor
<ul style="list-style-type: none">- Coordination of finger movement and dexterity- Holding a pencil, crayon, pen etc- Using computer keyboard- Buttoning clothe- Cutting with scissors- Tracing lines- Peeling- Weaving- Etc	<ul style="list-style-type: none">- Holding the chest up- Kicking a ball- Riding a bike- Throwing a stone- Jumping- Swimming- Playing soccer- Etc

Here you may help the learners to extent the list to better understand the difference between fine and gross motor.

Lesson 3: Developmental stages/periods

a. Learning objectives

Describe stages through which individuals pass during development.

b. Teaching resources

flash cards, photos, student's book. You may also draw people in different stages on a manila paper. *Flip chart, markers, handouts with information about developmental stages.*

c. Prerequisites/Revision/Introduction:

Students need to make research either in library or internet and try to explain different terms related to development. Learners should also try to compare periods of development according to Rwandan culture with modern stages of development. The introductory activity of this unit also will help learners to easily understand the content of this lesson.

d. Learning activity 11.3

Possible answers for activity 11.3

In this activity use the student's book and observe the picture to help students identify who is an old, a child, an adolescent, a baby and a toddler.

e. Application activity 11.3

Possible answers for application activity 11.3 refer student's book

Many psychological activities such as language, symbolic thought, sensorimotor coordination and social learning start manifesting during infancy.

Based on the photo, the individuals are in **Old age/late adulthood period** (60/ 65 ages)

Note that you can allow students to have more time and discuss about characteristics of people who are in Adulthood to prepare them to have prerequisites of unit 13

Lesson 4: Principles of development

a. Learning objectives

Propose the implications of principles of human development.

b. Teaching resources

Flip chart, markers, handouts with information about developmental principles, flash cards with developmental principles.

c. Prerequisites/Revision/Introduction:

During this chapter, learners have been introduced to key concept of development in lesson one and most of them are again used in this lesson. Make sure students understand their meaning and can also differentiate them. Learners also need to use what they have studied in lesson 2 with a better understanding of developmental domains and how their development are linked to different abilities people may display at different stages.

d. Learning activity 11.4

Possible answers for activity 11.4

In this activity help student understand that most of p1 students study better by seeing and manipulating (concretization). Teacher needs to bring concrete objects to make them understand. This changes as they grow up and later they may even learn abstractly in later years. This explains why every activity should match to the level of their development (**From concrete to abstract**).

e. Application activity 11.4

Possible answers for application activity 11.4

Note: This question does not have a standard answer but if the learner response is in line with the answers suggested below, you can award marks to the learner and help them to extent their views and if the internet is available allow them to conduct research on the implications of principles of human development.

The principles of development have highlighted the importance of “individual differences” from one child to the other and from one stage to another. This fact justifies the provision of diversified courses for the development of specific talents, abilities and interests and a rich and varied programme of co-curricular activities. Similarly, the curricular activities should be based on the needs and interests of various stages of growth i.e., childhood, boyhood or later childhood, pre- adolescence and adolescence.

Each stage of growth has its possibilities and limitations. This implies that teachers and parents should not demand of pupils or children what is beyond their stage of growth. If they do so, they will only cause frustrations, heighten tension and nervousness in children. For example, it is wrong to expect a primary school child to appreciate abstract concepts and theories.

The ‘inter-relatedness of principles of development’ demands presentation of knowledge in an interrelated manner and its integration with action. Since each child grows in his own unique way, it is that parents and teachers should treat each child as a unique individual and provide for this special needs and interests.

School programmers, procedures and practices should be adjusted to different principles levels of children, bearing in mind the individual variations in rates of growth. Since various aspects of growth are interrelated, parents and teachers should pay attention to all aspects. Good physical growth, for example, through the provision of play, games and sports, is conducive to effective intellectual development; malnutrition has been found to be an

important factor that retards development: hence, teachers and parents should cooperate in cultivating among pupils habits of balanced eating.

Principles of development help teacher to understand that students do not attain the level of development at the same time, hence plan for them according to their levels

Lesson 5: Brain basics

a. Learning objectives

Explain the functions of the brain.

b. Teaching resources

Biology student's book s3, flash cards, photos, internet.

c. Prerequisites/Revision/Introduction

Help student teachers to use effectively the concepts related of biology that they have studied in O-Level S3 such as brain, nerve, neuron etc, and apply them in this lesson.

d. Learning activities

Possible answers for activity 11.5.1 refer student's book

The information goes in brain for further processing.

e. Application activities

Possible answers for application activity 11.5.1 refer student's book

- a. False
- b. true

it is neuron

Left and right hemispheres are 2 parts of cerebrum Each hemisphere controls the opposite side of the body. If a stroke occurs on the right side of the brain, your left arm or leg may be weak or paralyzed. Not all functions of the hemispheres are shared. In general, the left hemisphere controls speech, comprehension, arithmetic, and writing. The right hemisphere controls creativity, spatial ability, artistic, and musical skills. The left hemisphere is dominant in hand use and language in about 92% of people.

Functions of brain

Every thought and action is controlled by the brain

The brain controls all functions of the body

Interprets information from the outside world, and embodies the essence of the mind and soul. Intelligence, creativity, emotion, and memory are a few of the many things governed by the brain.

The brain receives information through our five senses: sight, smell, touch, taste, and hearing - often many at one time.

It assembles the messages in a way that has meaning for us, and can store that information in our memory.

The brain controls our thoughts, memory and speech, movement of the arms and legs, and the function of many organs within our body.

Note that on this question facilitate the student teachers to use internet and library and make research on the functions of brain in our daily life.

Lesson 6: Factors of brain development

a. Learning objectives

Recognize the importance of the brain development.

b. Teaching resources

Flip charts, Manila paper, flash cards, photos, internet.

c. Prerequisites/Revision/Introduction

Help student teachers to use effectively the concepts related of biology that they have studied in O-Level S3 such as brain, nerve, neuron etc, and apply them in this lesson. They have also to analyse and use the content they studied in lesson 11.5.1 of this unit because they have the link.

d. Learning activities

Possible answers for activity 11.5.2

On this activity, tutor helps student teachers to play a game and understand the way brain and body communicate. Provide instruction to student teachers so that they can achieve the objective effectively.

e. Application activities

Possible answers for application activity 11.5.2 refer student's book

Factors that influence brain development refer to student's book.

Refer to additional information on this unit

11.6. Summary of the unit

Human development is very interesting to learn about. Development describes the growth of humans throughout the lifespan, from conception to death. development implies systematic and successive changes over time. Development does not just involve the biological and physical aspects of growth only, but also the cognitive and social aspects associated with development throughout life. By better understanding how and why people change and grow, we can then apply this knowledge to helping people live up to their full potential.

Developmental psychology: this is also called child psychology or human growth and development. It studies the developmental processes involved in human physical, emotional, social and intellectual changes from conception through adolescence including numerous factors that influence these processes. It is also **lifespan psychology studies** human development from conception to death.

Developmental periods of lifespan

Periods	Characteristics
Prenatal (conception to birth)	Nine months of rapid growth in which organism and systems appear, Extreme sensitivity to negative influence
Infancy (Birth to 2years)	Continued rapid growth, brain development provide the basis for the emergency of motor, cognitive and psychosocial accomplishments.
Early childhood (2 to 6years)	Physical growth slows somewhat, Substantial gains in cognitive and language development, the interplay between socialization and individual shapes personality and influences adjustment.
Middle and late childhood 6 to 12years	School becomes a major force in development, physical, cognitive, and psychosocial abilities become apparent.
Adolescence 12 to18	The changes of puberty affect all aspects of development, thought becomes more abstract, academic achievement begins to shape the future, the search for identity continues unabated.

Early adulthood 19 to 34	Higher education or the beginning of work beckons, relationships are the major focus of these years, marriage and children become central concerns of the lifespan.
Middle adulthood 35 to 65	Heightened responsibility, may include care of children and aging parents, growing community involvement, peak period for leadership and influence, time of physical change(e.g. menopause).
Late adulthood 65years and above	Retirement, decline health and strength, adjusting to death of loved ones, facing one own mortality, changing life style to enhance ‘successful aging”, enjoying greater wisdom.

The future teacher need to be knowledgeable about development psychology for a number of reasons. This will guide the teacher in his /her future planning when he/she understands the behavior of learners and how to deal with them at different level of development.

11.7. Additional Information for tutors

Why study children’s development?

As a teacher, you will be responsible for a new wave of children each year in your classroom. The more you learn about children’s development, the more you can understand at what level it is appropriate to teach them.

Each child develops partly like all other children, partly like other children, and partly like no other children. We often direct our attention to children’s uniqueness. But psychologists who study development often are drawn to children’s shared characteristics — as are teachers who manage and educate group of same – or similar-age children.

Development is the pattern of biological, cognitive and socio-emotional changes that begin at conception and continues through the lifespan.

Education should be developmentally appropriate. That is, education should take place at level that is neither difficult or stressful nor too easy or boring for the age of the child.

Trough this unit, students should keep in mind how the developmental changes we describe can help him/her understand the optimal level for learning and teaching.

Teacher also need to be knowledgeable about brain development for better contributing to teaching the future Rwandan citizens how they may contribute to the brain development of children which will help them to be good decision makers and have high level of critical thinking.

Impact of 1000 days to brain development

The first 1,000 days are a time of tremendous potential and enormous vulnerability. How well or how poorly mothers and children are nourished and cared for during this time has a profound impact on a child's ability to grow, learn and thrive. This is because the first 1,000 days are when a child's brain begins to grow and develop and when the foundations for their lifelong health are built.

Research in the fields of neuroscience, biology and early childhood development provide powerful insights into how nutrition, relationships, and environments in the 1,000 days between a woman's pregnancy and a child's 2nd birthday shape future outcomes. this occupies the time of pregnancy and 2 years after birth (nine months of pregnancy which is equal to 270 days and 2 years after birth ($365+365=730$) and the total sum is 1000 days).

Studies show that countries that fail to invest in the well-being of women and children in the first 1,000 days lose billions of dollars to lower economic productivity and higher health costs. It is why several of the world's leading economists have called for greater investments in the nutrition and well-being of mothers, babies, and toddlers as a way to create brighter and more prosperous futures for us all.

11.8. End unit assessment

Let student teachers brainstorm and arrange their ideas in line to how the body and brain communicate (refer to student's book).

Let student teachers discuss about the question and guide them towards the factors that can affect brain development of a child. Student teachers should discuss how Ingabire should put in practice all the factors that positively affect brain development. Students are allowed to extent the list and have others views not necessary listed in their book.

Stages of development refer to the lesson 3 in the student's book. Student should exclude the prenatal stage.

11.9. Additional activities

11.9.1. Remedial activities

1. What do you understand by the following terms:
 - a. Developmental psychology
 - b. Growth

Answer:

- a. Developmental psychology** is a branch of psychology that studies the developmental processes involved in human physical, emotional, social and intellectual changes from conception through adolescence including numerous factors that influence these processes.
 - b. Growth** is the quantitative increase in size, height and weight and expansion of vocabulary to the point of maturity. It involves the multiplication of body cells.
2. Give 3 examples of human development domains

Answer: cognitive development, physical development, social development

3. Which of the following principles of development explains that the child gains control of the head first, then the arms and then the legs.
 - a. Cephalocaudal principle of development
 - b. Proximodistal principle of development
 - c. Development depends on maturation and learning
 - d. Development proceeds from the simple to the more complex

The answer is “a”

4. Write one function on the following lobes of brain
 - a. Frontal lobe:** It helps in Judgment, planning, problem solving
 - b. Temporal lobe:**

Helps in Understanding language

11.9.2. Consolidation activities

1. Identify and explain reasons why a future pre-primary and primary school teacher should carry out child study.

Answer:

- It helps the teacher to know the nature and characteristics of classroom he/she should have.
- To know the individual differences of children/learners.
- To be aware of the problems and challenges children face e.g. divorce, drug abuse, child abuse, domestic violence etc.
- To be able to use effective methods and materials of teaching.
- To be able to comply with the curriculum development process.
- To acquire the effective approach for classroom management.
- For the purposes of classroom management.
- Child study helps a teacher to implement inclusive education.

11.9.3. Extended activities

Comparing the periods of development according to Rwandan culture and to modern psychology

According to Rwandan culture	Age	According to modern psychology
Gusama Gutwita Urusoro Inda	0-9 months after conception	Prenatal period
Kubyara Uruhinja Igisekeramwanzi Inshuke	0-2 years 2-6	Infancy Early childhood
Umwana ukurikira abandi Umwana utashya	6-11/12 years	Middle and late childhood
umwangavu/ ingimbi Inkumi/ umusore Ingaragu/ umwari	12-15 years 15-20 years 20-25 years	Adolescence
Umugabo/ umugore Igikwerere/ ijigija Igihumuza/igicambyaro Umusaza/ umukecuru	25-30 years 30-45 years 45-65 years From 65 years	Adulthood Old age

UNIT 12:

THEORIES OF HUMAN DEVELOPMENT

12.1. Key unit competence

Apply principles and theories of human development in education and in real-life situations

12.2. Prerequisites

Students having introduced human development they should be familiar with domains or aspects of human development because theories of are linked to these theories. They should have experienced with daily practices of young children or adults.

Throughout history student teacher have had different ways of explaining and understanding behaviour. Development theories are crafted by psychologists after conducting lots of observations and tests with children. When a certain theory becomes popular and well known, it influences the actions of others (teachers, parents, social workers). It is therefore useful to be aware of some of the prominent theories in history and understand the contribution these theorists made to our understanding of development today. It is important to note that with time some theories are proven incorrect or limited as more information or evidence is gathered

12.3. Cross-cutting issues to be addressed

Comprehensive sexuality education: Some theories like that one of psychosexual development help student teachers to be aware of the role that the sex plays in one's development.

Inclusive education: All individuals are given chance to participate irrespective individual differences.

Gender education: Through involving both boys and girls in activities in all activities or in different scenarios.

12.4. Guidance on introductory activity

To help student teachers get introduced on *theories of human growth and development* student teachers are put in a situation which allows them to reflect on daily observed behaviours of all people. Tutor can use internet to illustrate some phenomena happening in our daily life if need be. All activities should reflect the behaviour of people as linked to discoveries made by theorists.

Help student teachers to find the meaning by using “concept map” technique to build the meaning of terminologies. Let them explore using internet or dictionary. Find attempted meanings of suggested terminologies. Incite students to find out other definitions. The session can be carried out in smart classroom.

End by arising the key message to theories of human growth and development.

Answer to introductory activity

Possible answers:

1. a. No, because he is lacking some skills. It is too early.
b. Yes of course and not only that but also they spend their much time playing.
2. The following are traditional believes and practices:
 - i. For pregnant mothers there are taboos (incite student teachers to tell some of them) taken as dos or don'ts. The ground reasons for these taboos were simply a way of taking care of an expectant mother.
 - ii. For stages of human development Rwandans have activities showing the awareness of growth and development:

Example see stages of human growth and development as discussed in unit 11.

12.5. List of lessons/sub-heading

#	Lesson title	Learning objectives	Number of periods
1	Cognitive development theory (Jean Piaget 1896-1990)	Apply cognitive theory in real life situation	3

2	Psycho-sexual development (Sigmund Freud 1856-1939)	Create scenarios to explain sexual development	2
3	Psycho-social development (Erick Erikson 1902-1994) and John Bowlby 1907-1990	Describe social development theories and apply their implications to teaching and learning.	4
4	Moral development (Laurence Kohlberg 1927-1987 and Jean Piaget)	Compare and contrast moral development theories	3
5	Language development (David Wood)	Create scenarios to explain the stages of language development.	2
6	End unit assessment		1

Lesson 1: Cognitive development (Jean Piaget 1896-1990)

a. Learning objectives

Apply cognitive theory in education and real life situations

b. Teaching resources

Flash cards, flip charts and markers, internet (use smart classroom to look at different experiments on internet be it videos or images)

c. Prerequisites/Revision/Introduction

Incite student teachers to look their back and think about daily experiences of how people of different ages exhibit their behaviours in our daily life in terms cognitive abilities.

d. Learning activity 12.1

Guidance to teaching and learning activities

Before you come in the classroom to present cognitive theory of human development, ask them to make research, make short summary describing Jean Piaget in short, talk a little about his work and last describe his theory. The tutor makes a supplement on students 'work from his/her documentation.

For different illustrations/images describing the theory, ask student teachers to analyse them and talk about them. Ask student teachers to make a link between the principles and their illustrations.

Help student teachers to find answers by engaging them in their learning. Let them think and share their views about the task given.

Help them to discover that all individuals have different levels of thinking. The following are suggested answers but also consider the student teachers' views.

Possible answer:

Yes, they spend much of their times playing these games. They build a companion and assume different roles like making a family, they play with wheel toys (kugendesha ikidurugumu), and they dramatize different human drama that they encounter in their daily life. All of these mark their levels of interpreting their world. Thus people undergo different experiences which result in uniqueness and dynamics of human cognition.

e. Application activity 12.1

Refer to application activity 12.1 in a student book.

Suggested answers: Once we consider different activities from textbooks we will find that there is a logical flow of activities depending on abilities of development which is from simple to complex, from concrete to abstract, etc.

For example: For N2 and P3 students concretization is more emphasized when teaching. Teachers use different objects to help children learn by manipulation of object but for S1 students their tasks require much abstract thinking.

Lesson 2: Psycho-sexual development (Sigmund Freud 1856-1939)

a. Learning objectives

Create scenarios to explain sexual development

b. Teaching resources

Flash cards, flip charts and markers, internet (use smart classroom to look at different experiments on internet be it videos or images)

c. Prerequisites/Revision/Introduction

In a plenary session help student teachers to think about daily experiences of how people of different ages exhibit their sexual behaviours from infancy to old age.

d. Learning activity 12.2

Guidance to teaching and learning activities

Before presenting sexuality theory ask student teachers to make groups of five, read the student teachers book, make short summary describing Sigmund Freud in short, talk a little about his work and last describe his theory and ask them to make further readings from internet or books. The tutor makes a supplement on students work from his/her documentation.

Possible answer

“What did you observe that brings young children or adolescent pleasure?” Depending on our age there a series of erogenous zones and list them by referring to the content summary. Have student discuss on the task then introduce the concept of erogenous zones since these ones are organs used as sources of body pleasure.

e. Application activity 12.2

Possible answers

1. What behaviours do you observe at your school that lead to genital stage of adolescent?

At this age, many adolescents become interested in romantic and sexual relationships. They may question and explore their sexual identity— which may be stressful if they do not have support from peers, family, or community. Another typical way of exploring sex and sexuality for teens of all genders is self-stimulation, also called masturbation.

2. Advises: As adolescents tutor helps student teachers to brainstorm what are tips for caring them during genital stage. The following are tips but incite student teachers to provide other tips.

How to Help Your Children Navigate Adolescence

Children and their parents often struggle with changing dynamics of family relationships during adolescence. But parents are still a critical support throughout this time.

Here are some things you can do:

Help your child anticipate changes in his or her body. Learn about puberty and explain what’s ahead. Reassure them that physical changes and emerging sexuality is part of normal, healthy development.

Leave room for questions and allow children to ask them at their own pace. Talk to your paediatrician when needed!

Start early conversations about other important topics. Maintain open communication about health relationships, sex, sexuality, consent, and safety (such as how to prevent sexually transmitted infection and pregnancy, and substance use). Starting these conversations during early adolescence will help build a good framework for discussions later.

Keep conversations with your child positive. Point out strengths. Celebrate successes.

Be supportive and set clear limits with high (but reasonable) expectations. Communicate clear, reasonable expectations for curfews, school engagement, media use, and behaviour, for example. At the same time, gradually expanding opportunities for more independence over time as your child takes on responsibility. Youth with parents that aim for this balance have been shown to have lower rates of depression and drug use.

Discuss risky behaviours (such as sexual activity and substance use) and their consequences. Be sure to set a positive example yourself. This can help teens consider or rehearse decision-making ahead of time and prepare for when situations arise.

Honour independence and individuality. This is all part of moving into early adulthood. Always remind your child you are there to help when needed.

The adolescent years can feel like riding a roller coaster. By maintaining positive and respectful parent-child relationships during this period, your family can (try to) enjoy the ride!

Lesson 3: Psycho social development

a. Learning objectives

Describe social development theories and apply their implications to teaching and learning.

b. Teaching resources

Flash cards, flip charts and markers, internet (use smart classroom to look at different experiments on internet be it videos or images)

c. Prerequisites/Revision/Introduction

In a plenary session help student teachers to look at daily experiences of how people in different ages exhibit their social behaviours from infancy to old

age. Present different scenarios showing social route of human development referring to two theories of social development and mention their prominent.

d. Learning activity 12.3

Guidance on teaching and learning activities

Allow student teachers to read first the content summary of social development theories before you start the topic from text books. Ask student teachers to make further reading from student teacher's text book or elsewhere and internet. To make teaching and learning much real, the tutor creates simulated stories referring to different stages of social development for each stage in both theories. Use simulated stories to supplement student teachers readings. Ask them to make a link between what is read and what is presented in stories. Help student teachers to realize that there are two attempted theories of social development.

Answer to activities Activity 12.3.

The drives of Ganza stem from Social Development. He wants to become himself and stop dependence, he wants to become autonomous. When Ganza is too refrained, he may develop a sense of doubt. This marks our abilities to grow as social being. Social development refers to how people develop social and emotional skills across the lifespan, with particular attention to childhood and adolescence.

e. Application activity 12.3

1. In classroom setting the teacher should consider the level of children in their decisions they make. Recognizing that refraining children will end up in a crisis.
2. For Attachment Theory mothers who are available and responsive to their infant's needs establish a sense of security in their children. The infant knows that the caregiver is dependable, which creates a secure base for the child to explore the surroundings. Thus parents have to fulfil their responsibilities for children. Parents should have also a gradual release of responsibilities to children to help children become autonomous.

Lesson 4: Moral development theories

a. Learning objectives

Compare and contrast moral development theories

b. Teaching resources

Videos showing different moral development milestones at different ages.

c. Prerequisites/Revision/Introduction

In a plenary session help student teachers to look at daily experiences of how people in different ages exhibit moral reasoning from infancy to old age.

d. Learning activity 12.4

Possible answer to activities. Why do they have fear to commit errors?

- a. According to different moral theorists be it Piaget or Kohlberg they affirm that moral reasoning passes through stages. At this stage, children begin to follow rules in order to avoid punishment (Laurence Kohlberg) and for Jean Piaget the morality is imposed). Thus depending on the age attitudes towards the rules will not be the same for all individuals.

b. Guidance on teaching and learning activities

In a plenary session help student teachers to look at daily experiences of how people in different ages exhibit their moral reasoning or behaviours from infancy to old age. Tutor presents different scenarios showing moral route of human development referring to two theories of social development and mention their prominent. Help student teachers to compare and contrast the two theories of moral reasoning.

e. Application activity 12.4

Student teachers bring

Student teachers analyse their school internal regulations and support their views by linking them with **Kohlberg's Moral** or **Jean Piaget** moral Development Theory. Tutor helps them to see how rules apply.

Lesson 5: Language development

a. Learning objectives

Create scenarios to explain the stages of language development

b. Teaching resources

Videos showing different language milestones at different ages.

c. Prerequisites/Revision/Introduction

In a plenary session help student teachers to look at daily experiences of how people in different ages exhibit language behaviours from infancy to old age.

d. Learning activity 12.5

Guidance on teaching and learning activities

Before the lesson on language development theory ask student teachers to make research on David Wood , talk a little about his work and last describe his theory.

Answer to activities

1. Before making words, new born children raise their voices by crying when they want to request for their needs. True. Since they are in pre-linguistic stage, they are unable to express in words. We have to wait for linguistic period to hear from his/her words.
2. 2 years old cannot unravel a proverb because it is too early. (Have other reasons referring to language development theory.)

e. Application activities

Application activity Student teachers can create a scenario referring to any age. He can describe in his/her own words what a child is able to do in terms of language development. The tutor can also take a video from internet and ask student teachers to which level of development it may correspond

12.6. Summary of the unit

In this unit “*theories of human development*” we have discussed different attempted theories as well as their authors. Child development theories explain why and how children grow and develop (Mwagi, 2012). Different theories of child development have different perspectives of behavior and development of a child.

Those discussed are Jean Piaget's Theory for cognitive Development, Sigmund Freud's Theory for Psychosexual Development, Erik Erikson's and John BOWLBY's theories for social Development, Lawrence Kohlberg's and Jean Piaget theories for Moral development and David Wood's language development.

12.7 Additional information for tutors

Throughout history people have had different ways of explaining and understanding behavior. Development theories are crafted by psychologists after conducting lots of observations and tests with children. When a certain theory becomes popular and well known, it influences the actions of others (teachers, parents, social workers). It is therefore useful to be aware of some of the prominent theories in history and understand the contribution these theorists made to our understanding of development today. It is important to note that with time some theories are proven incorrect or limited as more information or evidence is gathered. The following are some criticism of described theories.

Theory	Reflections on the theory
Sigmund Freud	By today's rigorous scientific standards, this theory is not considered to be very accurate. However, it is still important and influential today because it was the first stage development theory that gained real attention.
Erik Erikson	Erikson's theory is limited by the fact that it describes only a typical pattern. The theory doesn't acknowledge the many differences among individuals.
Jean Piaget	Recent research has shown that he greatly underestimated children's capabilities and that children can achieve skills sooner than he said. Some children also develop skills of more than once stage at once. Some adults are also never capable of formal reasoning.
Lawrence Kohlberg	The theory fails to account for the fact that people often show the reasoning characteristic of several different levels simultaneously. It also favors individualistic cultures.

12.8. End unit assessment

Section A: Select the best alternative that suit your answer

1. Which of the following represents the correct order of Piaget's stage of intellectual development?
 - a. Sensory motor, concrete operational, Formal operational, Post operational
 - b. Sensory motor, pre operational, concrete operational, Formal operational**
 - c. Pre operational, concrete operational, Formal operational, sensory motor
2. Jeffrey learnt to pick up bits of cereal and push his fingers and the cereal into his mouth. Jeffrey discovered, however that this method did not work for Yogurt and eventually learned that Yogurt is eaten with spoon. Jeffrey's modified behavior shows
 - a. Accommodation
 - b. Assimilation
 - c. Conservation
 - d. Object permanence
3. Why do infants have reflexes?
 - a. They help babies survive
 - b. They are unnecessary evolutionary leftovers
 - c. They speed development
 - d. Psychologists are in serious disagreement on this issue
4. According to Erikson, adults who arrive at a sense of integrity
 - a. Feel ambivalence about their life choices
 - b. *Feel whole, complete, and satisfied with their achievements***
 - c. Feel contempt toward themselves and others
 - d. Dealt with significant psychological problems early in life
5. Using a pendulum apparatus, Callixte attempts to derive the physical laws that determine the rate at which a pendulum swings. Callixte's approach to solve this problem is to hold a relevant factor(x) constant and vary a second factor(y), and then to reverse this procedure by holding y constant and varying x. according to Jean Piaget, Callixte's level of cognitive functioning is most likely

- a. Pre-operational
 - b. concrete operational
 - c. Formal operational**
 - d. Sensorimotor
6. Children's belief that inanimate objects are real and conscious is known as
- g. Artificialism
 - h. Delusion
 - i. Animism**
 - j. Centration

Section B. Discuss the following

In described theories, is there any criticism or limitations that you can suggest to any of the theory?

Answer: see sub-heading 12.7

12.9. Additional activities

12.9.1. Remedial activities

1. Describe all the stages of language development according to David Wood.
2. With example for each, explain some of the characteristics of cognitive development of children during early childhood.
3. Adolescence is taken as a transition from early childhood to adulthood. With their level of thinking, what can we do for them to help them to become successful persons?

12.9.2. Consolidation activities

Having described Kohlberg's and Jean Piaget's moral reasoning, make an essay to illustrate their differences in their views.

12.9.3. Extended activities

Having understood all the described theories of human development, explain show how they will be useful for you when educating.

● UNIT 13:

DEVELOPMENTAL MILESTONES

13.1. Key unit competence

Cater for holistic development of learners with different ages.

13.2. Prerequisites

Student teachers should have knowledge on theories of human growth and development, principles of human growth and development and human reproduction

13.3. Cross-cutting issues to be addressed

Comprehensive sexuality education: Student teachers will understand how sex related concept is introduced in human beings and especially during adolescents they will judge tips necessary to help adolescents to become successful in life.

Inclusive education: Student teachers will realise and accept individual differences among people since all individuals don't grow in the same way.

Gender education: Student teachers will discover how sex comes in and make it different from gender.

13.4. Guidance on introductory activity

It is better to introduce lessons of this unit by allowing first student teachers to watch videos /images or listening to stories describing what a person can do at certain stage as he/she develops in stages to be taught. Students can take notes on piece of paper individually or in pairs or in groups on what they have watched/ seen or listen. The tutor asks student teachers to suggest activities which can help to develop in development for development domains of learners in different levels. After student teachers read the content summary from their text books.

The tutor introduces the concept of a milestone.

What are Milestones?

Developmental stages are often defined by milestones.

A milestone is a sort of marker that tells you where you are while traveling. The term is drawn from literal stone markers that were used to mark the passage of each mile on early roads. Today, the term milestone is used more figuratively, to indicate that a developmental stage has been achieved. Often, special milestones mark children's accomplishments, such as walking in infancy and entering school in early childhood, and these milestones can help mark children's movement inside and between developmental stages.

13.5. List of lessons/sub-heading

#	Lesson title	Learning objectives	Number of periods
Prenatal Period			
1	Prenatal stages	Describe what learning happens before birth	4
2	Risk factors for women and infants during pregnancy	Advise the community about the risk factors for women and infants during pregnancy and delivery	2
3	Key messages and recommended practices during pregnancy.	Suggest different strategies to help parents and the community to take care of pregnancy.	1
	Application Activity 13.1		1
Infancy (0-2 years)			
4	Key milestones for babies aged 0-3 months	Describe developmental milestone of an infant aged 0-3months and identify the games and activities to promote them	1
5	Key milestones for babies aged 4-6 months	Describe developmental milestone of an infant aged 4-6 months and identify the games and activities to promote them	1

6	Key milestones for babies aged 7-9 months	Describe developmental milestone of an infant aged 7-9 months and identify the games and activities to promote them	1
7	Key milestones for babies 10-12 months	Describe developmental milestone of an infant aged 10-12 months and identify the games and activities to promote them	1
8	Key milestones for babies 13-18 months	Describe developmental milestone of an infant aged 13-18 months and identify the games and activities to promote them	1
9	Key milestones for babies 18-24 months	Describe developmental milestone of an infant aged 18-24 months and identify the games and activities to promote them	1
10	Key messages and recommended practices	Make general recommendation on the best practices to promote holistic development in infancy	1
	Application Activity 13.2		1
Early childhood (2-5 years).			
11	Physical developmental milestones	Explain different games and activities that can promote physical development during early childhood	3
12	Cognitive developmental milestones	Appreciate the role of caregiver (teacher, parent and other guardians) in supporting children's learning and development	3

13	Social/Emotional developmental milestones	Identify different games and activities that can promote socio-emotional development during early childhood	3
14	Language development milestone	Identify different games and activities that can promote language development during early childhood	3
15	Key messages and recommended practices	Formulate the key message and recommendation practices relating to holistic developmental milestone for children a in early children and pre-schooler	2
	Application Activity 13.3		1
Middle and late childhood (6-12 years).			
16	Some milestones children reach during 6-8 years	Describe developmental milestone of a child aged 6-8 years and identify the games and activities to promote them	3
17	Some developmental milestones of 9-12 children	Describe developmental milestone of a child aged 9-12 years and identify the games and activities to promote them	3
	Application activity 13.4		1
Adolescence (13-18 years).			
18	Early adolescence	Explain the physical, cognitive, social and emotional characteristics of adolescents during early adolescence stage	3
19	Middle adolescence	Recognize the effect of physical, emotional, social and cognitive development of adolescence during middle adolescence	2
20	Late adolescence	Appreciate physical, cognitive, emotional and cognitive development that take place during this stage.	2

21	Adolescence egocentrism and social problems	Examine adolescents' egocentrism and social problems most adolescents face and provide ways of handling them effectively.	3
	Application activity 13.5		1
Adulthood and aging (19+).			
22	Early and middle adulthood	Explain the characteristics of early and middle adulthood	2
23	Late adulthood and aging	Recognize and appreciate the late adulthood	1
	End unity assessment.		2

Lesson 1: Prenatal stages

a. Learning objectives

Describe what learning happens before birth

b. Teaching resources

Video” *How baby develops during pregnancy*” For prenatal period or watch this video from internet <https://youtu.be/h82ltr84-Yg> or refer to Help a Child resource file 2017 downloaded. Ask student teachers to write down their observations and come up with them in a plenary session.

c. Prerequisites/Revision/introduction

Student teachers should have knowledge on development and human reproduction, theories and principles of human growth and development.

d. Learning activities

Activity 13.1.1.

By watching a video that shows how the baby develops during pregnancy student teachers write down their observations and make presentations in a plenary session.

Student teachers describe what they have seen in a video. They relate their observation on three prenatal stages as well as prenatal milestones i.e. germinal, embryonic and foetal stages. The tutor introduces the concept foetal learning by guiding student teachers to find in a video what actions that a baby can do during pregnancy. You may also introduce the concept of development in trimesters and birth process.

To get introduced on labour and birth process the tutor shows a video identified before the lesson. Ask student teachers to write down their observations and come up with their observations in a plenary session. The tutor guides student teachers for them to describe what they have perceived in a video and to read the content summary

Note: if videos or internet is not available, use images describing a certain stage.

e. Application activity 13.1.1.

The tutor tries to help children to describe pregnancy using a well labelled timeline from conception to birth. Other additional information from the searched of student teachers will be welcomed.

Possible answer to the application activity 13.1.1

1. The timeline is found in the content of this unit 12, lesson 1
2. Babies began to absorb language when they are inside the womb during the last 10 weeks of pregnancy. Babies are listening and learning and remembering during the last stages of pregnancy. Their brains do not wait for birth to start absorbing information. Sensory and brain mechanisms for hearing are developed at 30 weeks of gestational age, and the new study shows that unborn babies are listening to their mothers talk during the last 10 weeks of pregnancy and at birth can demonstrate what they've heard.

Lesson 2: Risk factors for women and infants during pregnancy

a. Learning objectives

Advise the community about the risk factors for women and infants during pregnancy and delivery

b. Teaching resources

Manila papers and markers.

c. Prerequisites/Revision/Introduction

Student teachers should have knowledge on development and human reproduction, theories and principles of human growth and development.

d. Learning activities:

Activity 13.1.2.

Answers

Yes, Catherine's life will impact on baby's life, because the baby is totally dependent on her mother during pregnancy.

Other views of student teachers aligned to the suggested answers are welcome.

e. Application activity 13.1.2

Student teachers say those risks or influences that are common for his environment.

Growth and development are continuous process. You refer to this principle to explain how pregnancy is the foundation for post natal life.

Lesson 3: Key messages and recommended practices during pregnancy

a. Learning objectives

Suggest different strategies to help parents and the community to take care of pregnancy.

b. Teaching resources

Manila papers and markers.

c. Prerequisites/Revision/Introduction

Student teachers should have knowledge on development and human reproduction, theories and principles of human growth and development.

d. Learning activities

Activity 13.1.3

Answers: refer to tips in additional information in this guide point 13.7.

e. Application activity 13.1.3

The following are guide to answers.

All the views will be turning around the importance of prenatal development as basis for future life (post natal period)

Student teachers can suggest other recommended practices as mention in tutor's guide.

Assessment on prenatal period

Prenatal development is the foundation for the future development since growth and development are continuous process whereby development of a given skill becomes the foundation for next skill. All organs and systems are formed during pregnancy and continue after birth. (all views justifying relevancy of prenatal life in shaping postnatal period are welcome)

Lesson 4: Some key milestones for babies aged 0-3 months

a. Learning objectives

Describe developmental milestones of an infant aged 0-3 months and identify the games and activities to promote them.

b. Teaching resources

Videos, handouts, pictures, printed case studies, developmental charts, internet, toys and materials for young children

c. Prerequisites/revision/introduction

Student teachers have concept in mind that a human being develops in progressive order from one stages to another, from simple abilities to complex abilities for example they all know that the way of communication for all babies after birth is crying. So as tutor profit these ideas and introduce this lesson by asking them questions about the behaviours they manifest in terms of all aspects of human development.

d. Learning activity 13.2.1

Let children read the activity 13.2.1 and relate the outlined statements to their understanding on the behaviour of a child aged 0-3 months and select those which are appropriate to them.

Suggested answer: confer to the student's book on the content under this activity 13.2.1.

e. Application activity 13.2.1

Advise the student teachers to read thoroughly the content appearing in tables and relate them to the infants they have ever observed so as to understand better and try to answer question in application activity. This is because understanding milestones for infants aged 0-3 months requires to do research by observing babies in this age and reading the findings of other researchers as it is revealed in the student teacher's textbook.

Suggested answers:

Confer to the student's book in the content appearing in sub-heading 13.2.1

Lesson 5: Some key milestones for babies aged 4-6 months

a. Learning objectives

Describe developmental milestones of an infant aged 4-6 months and identify the games and activities to promote them.

b. Teaching resources

Videos, handouts, pictures, printed case studies, developmental charts, internet, toys and materials for young children

c. Prerequisites/revision/introduction

The student teachers have already taught and learnt the milestones of infants aged 0-3 months. Now it is easy for you to do revision on it and then ask them to think of the infants aged 4-6 months.

d. Learning activity

Activity 13.2.2

Guide student teachers to read the activities and refer to the previous learning activity 13.2.1 to be able to select the behaviours that are related to the infants aged 4-6 months.

Suggested answers: confer to the student teacher's textbook on sub-heading 13.2.2

e. Application activity 13.2.2

Let student teachers review the content in their textbook while answering the questions in this activity.

Suggested answer: confer to the student's book on sub-heading 13.2.2

Lesson 6: Some key milestones for babies aged 7-9 months

a. Learning objectives

Describe developmental milestones of an infant aged 7-9 months and identify the games and activities to promote them.

b. Teaching resources

Videos, handouts, pictures, printed case studies, developmental charts, internet, toys and materials for young children

c. Prerequisites/revision/introduction

The student teachers have the knowledge they acquired from sub-unit 13.2.1 and 13.2.2. now you can do revision on these sub-units and tell them think about the abilities that infants of 7-9 can manifest.

d. Learning activities 13.2.3

Guide the student teachers to select the abilities among the outlined ones that are more likely to be manifested by infants aged 7-9

Suggested answers: confer to the content in the student teacher's textbook on the sub-unit 13.2.3

e. Application activity 13.2.3

let student teachers try this activity and where they find it difficult to come up with the answer let them consult in their textbooks and make sure that all learners are trying because some may be lazy and bored.

Suggested answers: confer to the content in the student's book on the sub-heading 13.2.3

Lesson 7: Some key milestones for babies 10-12 months

a. Learning objectives

Describe developmental milestones of an infant aged 10-12 months and identify the games and activities to promote them.

b. Teaching resources

Videos, handouts, pictures, printed case studies, developmental charts, internet, toys and materials for young children

c. Prerequisites/revision/introduction

Student teachers have prerequisites on developmental milestones on children aged 0-3, 4-6 and 7-9 months therefore the you have to build on these prerequisites and ask them to think of the milestones of an infant aged 10-12 months.

d. Learning activity 13.2.4

Guide student teachers while trying this activity, focus on those who always manifest difficulties to be able to identify the abilities related to the mentioned age range. Be there because sometimes you need to give scaffolding.

Suggested answer: confer to the student's book on the sub-heading 13.2.4

e. Application activity 13.2.4

Let your student teachers try their best to answer the questions in this activity. Advise them to consult their textbooks once they do not find the real answer from their mind because most of the knowledge and skills required for them to be able to provide the answers for this activity is to be able to use the resources appearing in their textbooks on the sub-unit 13.2.4

Suggested answer: confer to the student's book on the sub-heading 13.2.4

Lesson 8:Some key milestones for babies aged 13-18 months

a. Learning objectives

Describe developmental milestones of an infant aged 13-18 months and identify the games and activities to promote them.

b. Teaching resources

Videos, handouts, pictures, printed case studies, developmental charts, internet, toys and materials for young children

c. Prerequisites

Student teachers have knowledge and skills about development milestones of an infant aged below 13 months and games as well as activities that can promote them. They also have prerequisites on the aspects of human development so they able to categorize certain skills into different aspects. As tutor you have to build on all these and facilitate them to understand the developmental milestones of an infant aged 13-18 months.

d. Learning activity 13.2.5

Let your student teachers read and understand the activity, Facilitate them to understand if they are not able by themselves, focus on those whom you know that they always hardly understand. Do not tell them the answers immediately, let them brainstorm and no matter if they consult their textbooks.

Suggested answer: confer to the student's book on the sub-heading 13.2.5

e. Application activity 13.2.5

Student teacher should first be equipped with the knowledge, skills and attitudes required for them to answer the questions in the application activity 13.2.5 but tell them not to worry if they do not find the answer immediately, tell them to keep on searching until they find. But again do not forget to facilitate individuals with special educational needs.

Suggested answer: confer to the student's book on the sub-heading 13.2.5

Lesson 9: Some key milestones for babies 18-24 months

a. Learning objectives

Describe developmental milestones of an infant aged 18-24 months and identify the games and activities to promote them.

b. Teaching resources

Videos, handouts, pictures, printed case studies, developmental charts, internet, toys and materials for young children

c. Prerequisites/revision/introduction

Student teachers have the knowledge and skills about the developmental milestones of the infant aged below 18 months. They also have the ability to say that such skill or ability fall under cognitive aspect, social and emotional, physical and communication aspects.

d. Learning activity 13.2.6

Let student teachers have look on activity, facilitate them to understand, make sure that all of them have textbooks if not print out the papers with the activity 13.2.6, display to those without textbooks and answer the questions they have on it.

Suggested answers: confer to the student's book on the sub-heading 13.2.6

e. Application activity 13.2.6

Before that student teachers try to answer the questions in this application activity 13.2.6, first facilitate them to understand the content in this heading 13.2.6 and then let them go ahead with the application activity and check whether they all try even if they cannot do it at the same level, by checking it will enable you to identify the students with problem who need special help.

Suggested answer: confer the student's book on the sub-heading 13.2.6

Lesson 10: Some key messages and recommended practices during infancy (0-2 years)

a. Learning objectives

Make a general recommendation on the best practices to promote holistic development in infancy.

b. Teaching resources

Videos, handouts, pictures, printed case studies, developmental charts, internet, toys and materials for young children

c. Prerequisites/revision/introduction

The student teachers have knowledge and skills about developmental milestones in infancy and the related games and activities to promote them. They understand different domains of child development as well as the theories of child development. This simply means that they understand the development of a child in infancy, therefore to facilitate them on understanding the recommended practices you need to build on all these prerequisites and ask them to identify the best ways that parents and caregivers should take into consideration to help their babies who are in infancy.

d. Learning activity 13.2.7

Let the student teachers reflect on whatever they learnt from the developmental milestones in infancy and identify the gaps in terms of the best practices to ensure holistic development of children in infancy.

Suggested answers: confer to the student's book on the sub-heading 13.2.7

e. Application activity 13.2.7

This is the last lesson of the sub-unit 13.2, therefore if the student teachers went through the previous lessons successfully, they will answer the questions in this application activity but do not be surprised if you find some who are not able to perform like others because of individual differences. So, keep on facilitating them until they reach at desirable level.

Suggested answers:

Breastfeeding is good for child's health and development. Breast milk is the perfect food for baby to get immunities, nutrition and to line the brain cells for a smart start. breastfeeding is a great time to touch and hold baby close. Singing and humming soothes baby while Breastfeeding. Talking with your child as she is sucking will encourage her to suck well and be healthy. Therefore, a proper and enough breastfeeding enables the child to have a good foundation for further development in life.

Confer to the student's book on the sub-heading 13.2.7

Lesson 11: Physical development milestones during early childhood(2-5years)

a. Learning objectives

Explain different games and activities that can promote physical development at different stages

b. Prerequisites /Revision/Introduction:

Student teachers have some package on human development (Unit 12). Through this unit student teachers had opportunity to discuss largely the important of learning. They already have information about different theorists who contributed on human development and what they said on different developmental stages.

In real life, teachers should know that students are coming and living in community and they are from families where they observe children, their siblings who are at different ages, doing different activities. They had some time to be at community centres, schools and those cases provide the basic information to them childhood. Teaching this lesson , teachers should start from what students already know and help them to extend the knowledge regarding early childhood.

c. Teaching resources :

During the lesson, teachers will need the following resources: A picture that show children at different ages, doing different activities such as picking bins, writing on paper, skipping rope, running, etc....

The tutor needs also a flash disk for keeping a video, Projector for projecting a video on physical development in smart classroom, teachers guide, notebooks and other necessary books, blackboard, Flipchart, masking tape. student books, paper, scotches.

d. Learning activities:

Activity 13.3.2. (a):

During playtime at pre-primary school, observe three young children baby class, middle class and top class child. Write down the activities and abilities that you see from those different children:

The tutor prepares/prints out the physical developmental sheets with different ages and distribute them to the students and serve as guide (See physical milestones development 13.3.2 Student book)

Give a brief purpose to the students regarding center visiting to ensure they focus oriented and Discuss student behave at centers /school and children's interventions.

The tutor and student teachers discuss on common way to lead the observation: Five minutes observation to the child of three years, five minutes to the child of four years and finally five minutes to the child of six years old, observing the movement, activities they outside classroom .

For each single observation, students teachers identify and put down on the paper different children' abilities. After 15 minutes, students get back to school for sharing the observation outcomes.

Activity 13.3.2. (b):

Watch a video which shows what children are capable of by age 3, 4 and 5. Highlight the actions/activities related to physical development:

The tutor asks students to make two columns on piece of paper: They put on one column "Fine motors development and in another column they put Gross motor development

In smart room, Tutor invites students to watch attentively a video on physical development then they write activities that children do that can help them to develop physically.

After watching a full video, in pairs students discuss on what they have watched and put together .They choose one to share with the hole class. Then they supplement their answer with one activity they can do to support children for advancing in physical development. Example: Student can say I can provide materials to the child, play with a child,etc....

e. Application Activity 13.3.2

Tutor prepare pieces of paper (cutting developmental milestones to the children aged 2-5/6). Then according to the ages and abilities, he/she put s them into 5- boxes (depending on class size).

Tutor explain the purpose of activity and give them guidance on to sorting and matching piece of papers.

Tutor guide students in making five groups by counting (1,2,3,4,5,) depending to the number of boxes prepared before.

The students into groups, in full discussion, try to sort and match the piece of papers with ages and developmental milestones. In case the discussion doesn't take an end, tutor should intervene and support to avoid wasting time to simple discussion

After, using their book on the sub-heading 13.2.3 students compare what they did and the real classification, and identify how many pieces of paper classified appropriately and make required corrections.

Tutor ask questions: How the game was ? Easier? Difficult? Fun? Ask them to justify their answers?

The tutor ask examples of activities student teachers can do to help children aged early childhood and preschoolers children to develop physical abilities on right pace.

Lesson 12: Cognitive milestones development during early childhood

a. Learning objectives

Appreciate the role of caregivers (teachers, parents, other guardians) in supporting children's learning and development.

b. Teaching resources

Flipcharts, markers, flash cards, handouts, videos about children milestones, internet, blackboard, chalks, scissors, boxes, papers.

c. Prerequisites /Revision/Introduction

Theory of human development (**Unit 12**), the students learnt about cognitive structures. They already have information about different theorists who contributed on human development and what they said on different developmental stages. Example: Jean Piaget ' s theory on cognitive development gave students-teachers the overviews on this development.

The students-teachers had time to largely discuss the important of learning and how to learn. Student teachers have debated which most helpful idea from the theorists they studied and come up with common ideas. Student teachers read information about those different theorists who contributed on human development, Student teachers shared through case studies with examples of behaviors in real life situations

In families where students teachers grow up, student teachers have opportunity to interact, even to sometimes play a role of parents in supporting children in cognitive aspects. Throughout this lesson, a teacher should start from what students already know and help them to extend the knowledge regarding cognitive development in early childhood and pre-schooler ages. Briefly, teachers should know that students teachers have basic ideas from different theorists who conceived developmental stages theories and from personal experience in real life.

d. Learning activities

Activity 13.3.3 (a)

The tutors leads students in making three groups: Group one will visit a baby class (under three ages; second group visit 4-5 children middle class and another group visit top class (children aged 5-6)

Student teachers visit Early Childhood Development centre and observe children in free play/ corner time:

The tutor gives instructions for observation: Students should avoid interrupting children since they start playing /doing their activities during observation. Students teachers should only write what they have observed not what they know.

During observation:

Student-teachers put down on paper what they have observed, how children interact, level of thinking, imagination play, how they change everything in into reality how they share ideas and materials , the role of care givers during children activity/play , the time children keep on the same activity before moving to another one etc

The possible tips that student-teachers can put on papers:

Group one who observed baby class: They may write below tips

Children want to show their performance every moment, they are excited to understand simple stories, respond caregivers when asked them simple

directions, name some objects in a book, Tell others what he is doing, Children are able to sort and classify things, Play pretend with dolls or stuffed animals, are happy to play together, they can 1,2,3,.but difficult to match things with real numbers, name some colours etc

Group two who observed the middle class: Children are able to sort and match things according colour, size, they know to differentiate small and big things, short and long, They like to draw and want to tell you about their drawings describing them, they ask questions , when you ask them their names and ages, they are able to tell full name and age, Play with an activity for a longer stretch of time at least five minutes, they like singing, dancing, or acting, Point to and name many colors and shapes, they identify a few letters and numbers, recognize his name when he sees it printed.

Group three who observed top class (children aged 4-6 ages): Should come up with below tips:

Children play with words, imitating and make sounds, They point to and name many colors and shapes, they learn to identify a few letters and numbers, they draw a person with detail, they draw, name and describe pictures, they Count objects up to five , they follow the rules to games, but sometimes change them as she goes, they recognize his name when he sees it printed, They are able to play together, to follow rules, to differentiate good, and bad things, to solve simple problems they meet into their groups example: when a child beat her/ his mate, they call teacher for support,

After sharing what they have observed , ask students -teachers the role of caregivers during the activities:

Possible answers:

Caregiver visits each group appreciating their activities, asking questions, interact with them, listening to them and answering questions children ask her/him, support in handling the issues addressed to her/him, provide some material that children do not have at the moment they needs, help them to changes activities, for those who want to stay on one corners, listen to the children, challenges them for to help them grow in thinking etc ,

Activity: 13.3.3 (b)

Watch a video which shows what children are capable of by age 3, 4 and 5. Highlight the actions/activities related to cognitive development

Ask students to sit into group of three and to watch the video on “cognitive development”. They watch, discuss and put down what they observe. Then end of video they compare the video and they observation outcomes to the center they have visited.

Possible answers to the comparison:

In normal situation, all children like to play, old children are competitive than younger ones, old children are stable than old younger ones, every thing they do they need resources that help them to concretize their work, role of caregivers in necessary, children need old person next to them, they like to use hands in counting, they want every time to show adult what they do, praising in very important in learning, ...

e. Application Activity 13.3.3

Based on key knowledge gained from above presentation, student teachers in small groups do a gallery work discussing on given topic relating to the cognitive development: ability and activities that promote this domain for the child aged 2-6. They discuss on points, decide, and move to another paper to add on what another group find out.

Topics on flipchart:

Topic 1: Ability of children aged 2-3 years

Possible answer

- Can group / sort objects that are alike
- Begins to make-believe
- Can identify many items by name – including body parts, people, animals
- Can solve simple problems through trial and error
- Knows 200-300 words
- Is able to listen to short stories

Topic 2: Ability of children aged 3-4 years

Possible answers:

- Takes toys apart and explores them
- Matches an object in her hand to a picture in a book
- Enjoys pretend play
- Sorts objects by shape and color

Topic 3: Ability of children aged 4-6 Years

Possible answers:

- Can count 10 or more objects
- Knows the colors
- Better understand the concept of time
- Knows about things used every day in the home: food, working, gardening, money.

Topic 4: Activities those caregivers can do for supporting children

Possible answers:

- Give time to the children and stimulate them,
- Talk to the children during activities: Ask questions –Answers to their questions
- Observation and records what children do for developmental follow-up
- Provide any support the at a child need
- Provide age appropriate toys etc

Lesson 13: Socio-emotional milestone development during early childhood

a. Learning objectives

Identify different games and activities that can promote socio-emotional developmental at the different stages

b. Teaching resources

Flipcharts, markers, handouts, videos about children milestones, internet, blackboard, chinks, scissors, boxes, papers, Syllabus,

c. Prerequisites/Revision/Introduction

Throughout theory of human development, the students learnt about socio-emotional structures from confirmation of Erick Eriksons. The students, from what they have learnt from this theory, they have some knowledge about under five children. Example: they know that young children experience a widening social world, to cope with new challenges they meet, they need to engage in active, purposeful behaviour. They develop a sense of responsibility

children increase their initiative and as parents always expect a sense of responsibility to them, children develop uncomfortable guilt feelings if they are irresponsible.

They learnt that at this period, children start developing a sense of autonomy and their behaviors are personal. Children develop their independence and a sense of shame and doubt

Briefly, Students-teachers have knowledge of emotional development of children. Again, in every day life , they live in community , families where they interact with children. Through observation prior made, students teachers can say further about under six children. Tutor will build on what they know to introduce socio-emotional milestones.

d. Learning activities

Activity 13.3.4 (a)

Case study:

Kariza is a little girl of five years old. She is first born in family of three children. Her mummy doesn't have a job, she most of time stayed with her at home, and provide necessary support to her, they play together, provide time to talk to her even if she was still younger. She loved her mummy so much than his daddy who worked far from home and come to see them only once a month. When daddy arrive home, he looks like stranger person coming. She become shy when her daddy was at home: She shows fear, she doesn't want see in his father's face her . She didn't want to stay with him for long. With low salary his daddy gains, he bought one story books with nice images of trees, animals and persons wearing nice clothes. Kariza like to read a book with her mummy and her mummy collect different toys with attractive colours and at home they enjoy playing together.

However, at one year old, mother's fall sick and Doctor told her that she was pregnant. Since that moment she was continuing to be affected and she was in situation that did not allow her to provide usual necessary support to Kariza like she did before. It was struggle for her to be at home without anyone who is able to show her a parental love. Fortunately, they have a good called Mary, she was a lady who loved Kariza so much. Since her mummy doesn't feel well, every day Mary come early coming took Kariza on back and went at her home stay together play, share food and drinks. Kariza did not have opportunity to play with other children until she entered preschool at three years old. It was very difficult to her during first month she was at kindergarten centre. She feared to play with others and she wanted to be with her teacher only and play with her. When teacher asked her to play with others, she become aggressive and frustrate, she cried.

Little by little, with caregivers'support Kariza was integrated among other children. Kariza developed a strong friendship with other, she showed awareness with other children, she was interesting to play with them to share toys, she can laugh, she always engage others in imagination play, she listens attentively while other children spoke to her. Now, she is five years old, she always like to please her friends, she is flexible to the other children'rules . All children like to play with her , she makes them happy.

Explore case study with students-teachers and guide them towards the lesson of the day:

Invite first students to read and understand the case study. Then ask some questions:

Through the case study, identify all things and persons that make Kariza happy? Why? Mummy plays with her, ready nice book with her, proved time to talk to her most of time,

Who helped Kariza to integrate among children's groups?

When dad's kariza come home, how was Kariza? Fear and shy

e. Application activity 13.3.4

Watch a video which show what children are capable of by age 3, 4 and highlight the actions/activities related to Social and Emotional development.

Ask teacher students to watch video and individually write some information regarding social- emotional development from video. Use the tips they have put on papers and brainstorm on video content.

Some students' thought:

Children explain verbally that written , Children explain their happiness (They can say things that make them happy); Children express the affection, they can show their feelings,...

Ask student what children need for sicio-emotional development ? they need adults to be around for support, praising, stimulating, asking them how do they feel, find resources for them, Student-teachers may talk about how children control their emotions.

Lesson 14: Language development for children aged 2-5 years

a. Learning objective

Identify different games and activities that can promote language developmental at the different stages.

b. Teaching resources

Video. Screen, laptop, blackboard, chalks, syllabus,

c. Prerequisites/Revision/Introduction

From theory of human development, unit 12, the students have overview on language structures. The students have some knowledge about under five children. Example: They know that how children develop language for prior unit E (prenatal, infancy), they know how younger children experience progressively that language.

From their prior experience from their families, in community, teacher-students know at this aged children for example ask many questions, deal with object everywhere and develop language when talking about those objects, they like to interact, play with peers and in whatever they do they talk. Briefly, Students-teachers have knowledge of children's communication and language development.

d. Learning activities

Activity 13.3.5

Ask students to make a big circle and explain instructions related to the game: "I went to the market and I bought ...":

- Identify a student A who would start a game and while saying "I went to the Market I bought banana. All students will be clapping their hands continuously. They will continue clapping until the last student sings using the same words.
- The student B will first say the name food that student A said and then add her/his own food,
- A student C, should say two previous food before adding her/his own

Example :

Student A: I went to the market, I bought Banana

Student B: I went to the market I bought Banana, I bought rice,

Student C: I went to the market, I bought Banana, I bought rice, I bought maize

- Brainstorming on the game: Together tutor and students discuss on game asking comprehensive questions on game :

Questions	Answers
Identify developmental domain that you may develop when playing this game ?	By playing this game , you may develop “ Language and other domain like emotional ” and fine motor development by clapping hand
Determine specific skills to be developed through the game	Skills to be developed are “ Listening , talking, memorize ...
Explain how this game develop language	You gain new vocabulary, sounds, etc
What do have to do to ensure you perform well the game ?	Understanding well instruction regarding the a play, pay attention to what your colleagues said, think about what to be added / your preference food you bought from the market ?

e. Application activity 13.3.5:

Sorting and classification game:

Make a table with developmental domains linked to different ages and sort below milestones and promoting actions then classify them into the table. After the learners, discuss about game if it was simple, complex, interesting, and why. They discuss on some particularities like children exposed to the different facilities and toys, children living with supporting caregivers.

Ability and actions for sorting and classification: -

Table: Expected classification:

Stage between 2-3 years		Stage between 3-4 years	Stage between 4-5/6
By 30 months	By 36 months		
<ul style="list-style-type: none"> -Understands simple questions and commands -Identifies many body parts -Carries on "conversation" with self and dolls -Asks "what's this?", "what's that?", and "where's my -Sentence length of 2-3 words (ie: "more juice" or "want cookie") -Names pictures on print or picture books and actions 	<ul style="list-style-type: none"> -Uses about 450 words Can give first name when asked -Uses past tense (e.g. "ed" endings) and plurals (e.g. "s" endings) (not always correctly) Combines names of things with action words ie: baby sleep -Understands simple time concepts such as "last night" and "tomorrow" Refers to self as "me" or "I" instead of by name -Uses their words to get adult attention ie: "watch me!" -Likes to hear the same story over and over 	<ul style="list-style-type: none"> -Enjoys books, simple songs, nursery rhymes, silly words, and stories -Has a vocabulary of 900 or more words -Most of what they say can be understood -Puts words together to form 3-4 word sentences -Asks and answers "who", "what", and "where" questions -Asks LOTS of questions -Likes to talk and have conversations with people 	<ul style="list-style-type: none"> -Continues to learn lots of new words very quickly -Vocabulary of 4,000-6,000 words -Uses sentences of 4-6 words -Talks a lot and about everything they are doing or thinking -Tells long stories about own personal experiences -Asks "who" and "why" questions -Interested in explanations for their "how" and "why" question

<ul style="list-style-type: none"> -Refers to self by name -Uses 2 word negative phrases such as “no want”, “not go” or “no right” -Forms some plurals by adding “s” (e.g. books) -Asks for a drink or snack -Has about 200 spoken words in their vocabulary 	<ul style="list-style-type: none"> -Uses “no” or “not” in their speech -Talks to other children as well as adults -Answers “where” questions -Uses short sentences to tell what he/she has just done or wants to do ie: “me do it” or “me want to jump” -Matches 3-4 colors -Knows the words “big” and “little” -Holds up fingers to tell age 	<ul style="list-style-type: none"> -Uses proper grammar most of the time -Uses pronouns “I”, “you” and “me” -Knows their name, gender, street name, and a number of nursery rhymes -Knows some prepositions (position words) such as in, on, and under -Often makes mistakes with negatives and use “double negatives” ie: “I don’t not want to go” -Follows a 3-part command -Begins to recognize some letters and words (e.g. recognizes “stop” sign) -Sorts (match) objects by: function (find something you play with, wear, etc); size (big, little); familiar colors. -Names one color 	<ul style="list-style-type: none"> -Continues to learn lots of new words very quickly -Vocabulary of 4,000-6,000 words -Uses sentences of 4-6 words -Talks a lot and about everything they are doing or thinking -Tells long stories about own personal experiences -Asks “who” and “why” questions -Interested in explanations for their “how” and “why” questions -Understands and uses “tomorrow” and “yesterday” -Uses past, present and future tense, mostly, but not always, correctly -Interested in written words, letters and numbers.
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		<ul style="list-style-type: none"> -Is developing number concepts can give you 1, more, or all of something -Counts objects, even if they don't have all the numbers correct. -May repeat sounds, words, or phrases (may sound like stuttering) -Stays with one activity for 8-9 minutes 	<ul style="list-style-type: none"> -Matches and sorts objects in a large variety of ways -Understands prepositions (e.g. beside, behind, in front) -Stays with an activity for 11-12 minutes
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Directed discussion on game: Possible Student feedbacks:

How was a game? Simple? complex? Interesting?

Answer: It was complex because given activities are many and it is confusing with ages. The game is funny, we first discuss and some time we do not agree on matching when we read a check list we find the right place for each ability/activity.

Lesson 15: Key Messages and recommendations practices related to early childhood

a. Learning objective:

Formulate the key messages and recommendation practices relating to holistic developmental milestones for children in early childhood and pre-schooler.

b. Teaching resources

Flipcharts, markers, handouts, blackboard, chalks, papers, pens and Syllabus,

c. Prerequisites/Revision/Introduction:

This is the last lesson after four lessons that talk about four development milestones. And throughout discussion and application works, and previous unity on infancy, and prenatal stages, students –teachers have enough package on developmental domain, skills that children need to develop, activities that promote milestones, and role of adults: teachers, parents, and other guardians for children to develop their abilities apparel to the ages. Again, Student teacher receive fundamental information from different theorists who talked further about human development. During this lessons, teachers should bear into mind and build on prior skills that students have.

d. Learning activities

Activity 13.3.6

Working into small five groups and discuss on given topics. Then share with whole students the discussion outcomes.

The proposed topics:

- Play is a key in development and impacts all developmental domains
- Reading a book with a child impact language development
- Parental involvement for children development and learning,
- Safe place for children's life and learning against harmful
- Reading a book with a child plays a key role in development

e. Application activities 13.3.6

Possible key message:

Children spend much time with their parents and they need their support. However, parents need skills on children development and they need to know what they should do to for supporting children. Some parents lack the knowledge, skills and attitudes to support children's learning and development. Besides, early childhood is foundation for lasting life we all need to close fingers for supporting our children for good future of families and country. Children need to develop holistically, in language, emotional, socially, physical etc. Therefore, parents should ensure children are nourished well and safe, are given time for playing, access centers and play materials for learning. And whole community should love and protect children. We are hoping that this campaign will increase awareness to every for all children benefit.

Possible objectives of campaign:

- To raise family and community awareness for supporting children's holistic development
- To emphasize on importance of parental involvement in children 's learning

Lesson 16: Some milestones children reach during 6-8 years

a. Learning objective

Describe developmental milestones of a child aged 6-8 years and identify the activities to promote them.

b. Teaching and learning resources

Videos, handouts, pictures, printed case studies, developmental charts and internet

c. Prerequisites/revision/introduction

The student teachers have knowledge and skills about developmental milestones in infancy and early childhood in all aspects of human development therefore they will be able to understand the developmental milestones of a child aged 6-8 years. You need to build on all these prerequisites and facilitate student teacher to understand the developmental milestones of children of 6-8 years.

d. Learning activity 13.4.1

Guide student teachers to read and understand the activity, let them refer what they learnt in infancy and early childhood and try this activity. Keep on facilitating those with special problems to ensure that all are achieving the desired objectives.

Suggested answers: confer to the student teacher book on heading 13.4.1

e. Application activity 13.4.1

Make sure that you facilitated all the learners to the level they are able to do this activity well. But do not forget to keep on checking whether there are no individuals who are behind others and facilitate them individual.

Suggested answers: confer to the student's book on the sub-heading 13.4.1

Lesson 17: Some milestones children reach during 9-12 years

a. Learning objectives

describe developmental milestones of a child aged 9-12 years and identify the activities to promote them.

b. Teaching and learning

Videos, handouts, pictures, printed case studies, developmental charts and internet

c. Prerequisites/revision/introduction

The student teachers have already acquired the developmental milestones in infancy, early childhood in addition to developmental milestones of the child aged 6-8 years now you can make a revision on it and facilitate them understand the developmental milestones of the child aged 9-12 years.

d. Learning activity 13.4.2

Give them a case study related of a child aged 9-12 and tell them to answer the question on activity 13.4.2.

Example of a case study: Eric is a child of 10 years, he has fine gross motor skills, is able to read, write and perform calculations, he has mental reversibility, when he is at school he is always with other children of the same sex and when he talks, he thinks more about how others can interpret what they say. He is always very attentive in the classroom. He is very happy when the teacher engages them in athletic skills and always gives them about friendship and lends him books to read at home, the teacher does all these things with tension to develop Eric's talents. Based on this case study ask student teachers to identify among the outlined skills those that match with the child of 9-12.

Suggested answers: confer to the student's book on the sub-heading 13.4.2

e. Application activity 13.4.2

let student teacher do this activity as assignment, advise those who can be challenged to approach their classmates whom they think can help. When they finish make sure that you check how they did and provide constructive feedback.

Suggested answers: confer the student teacher textbook on the heading 13.4.2

Guidance on Introductory activity on adolescence:

During this sub unit, it has found that it is big and we broke it into number of lesson that will help student teachers to follow effectively and help the tutor to teach it in a simple manner. This was in the intention of avoiding student teachers to be bored and simplify the workload of the tutor to plan it effectively. During this sub unit, be attentive and stimulate your learners as most of them fall under this stage of development. Allow them to ask questions and do not rush quickly. Use many activities and research as well as possible.

Note: put learners in group. Work on the list and extent and also guide your learners to provide a short explanation.

Possible answers

1. Some characteristics of people who belong in such group

Adolescent becomes concerned with the Hypothetic-Deductive Reasoning: Formal operational thinkers can form hypotheses, set up mental experiments to test them, and isolate or control variables in order to complete a valid test of the Hypothesis

- Rapid physical growth and development- Change in voice change in weight, height and strength
- Sexual maturity and the onset of sexual activity
- Development of adult mental processes and adult identity
- Experience onset puberty and secondary sex characteristics
- Become self -conscious
- Develop ability to think abstractly
- High communication skills
- The Adolescent is able to use Abstract Rules to solve a whole class of problems
- The Adolescent is able to apply logical thoughts

2. Problems that most of children who belong in that category usually face

- Misunderstanding concerning sex: the first menstruation and nocturnal emission will shock many adolescence because of ignorance
- Aggressiveness or withdrawal: this may happen when adolescents cannot adjust to the environment

- **Rebellious attitude:** this happens when the sense of independence and responsibility is seldom recognized
- **Emancipation:** this happens with the ambition for freedom from parental sovereign.
- **Emotional tension:** this is caused by self respect and personal pride

The following are problems that many students face during adolescence

- Early pregnancy
- School drop out
- Suicides
- Delinquency
- Drug abuse

Lesson 18: Early adolescence

a. Learning objectives

Explain the physical, cognitive, social and emotional characteristics of adolescents during early adolescence stage

b. Teaching resources

Internet student's book, photos, scenario

c. Prerequisites/Revision/Introduction

During this lesson, student teachers will use the pre-learnt content on human development and characteristics of adolescents as also learned in O-Level. Tutor need to stimulate learners and provide to them probing questions that will guide them to understand this lesson.

d. Learning activity 13.5.1

Give student teachers to discuss in pairs and answers questions of the scenario.

Possible answers refer student's book

1. These children do not obey their parent
2. They are adolescents and want to have freedom and independence. This is characterized by the time that they enter home. Peer group also during these ages may influence children to misbehave.
3. They steal money from their parents

4. The first thing to do when your child does not have acceptable behaviour is to sit with him/her and discuss about his/her behaviour and how they are destructive to the society and his/her future also. **(here you can allow your learners to provide other advice)**

e. Application activities

Possible answers refer student's book

Lesson 19: Middle adolescence

a. Learning objectives

Recognize the effect of physical, emotional, social and cognitive development of adolescence during middle adolescence

b. Teaching resources

Internet if it is available, student's book, photos, scenario

c. Prerequisites/Revision/Introduction

Student teachers have learnt early adolescence in previous lesson which is more related with this lesson. To understand this lesson, it is better to have review on previous lesson. Use many probing questions and techniques to make learners become aware of the new lesson.

d. Learning activity 13.5.2

Guide student teachers and allow them time to discuss on scenario.

Possible answers refer student's book

- She was not proud of her face because of the acne.
- She would get early pregnancy and leave the school.

e. Application activity 13.5.2

Possible answers refer student's book

a. True b. True c. False

Lesson 20: Late adolescence

a. Learning objectives

Appreciate physical, emotional and cognitive development that take place during this stage.

b. Teaching resources

Internet if it is available, student's book, photos, scenario

c. Prerequisites/Revision/Introduction

Student teachers have learnt early and middle adolescence in previous lesson which have a logical sequencing with this lesson. To understand this lesson, it is better to have review on previous lessons. Use many probing questions and techniques to make learners become aware of the new lesson.

d. Learning activity 13.5.3

Possible answers refer student's book

The scenario of this activity intends to stimulate student teachers to understand the difference of late adolescence with other stages of adolescence. They need to analyse this difference in terms of behaviour. Let student teachers do it in pairs and guide them in their discussion. They may think of other examples that exist in their academic environment which may help them to understand better this difference.

e. Application activity 13.5.3

Group student teachers in different groups and discuss the question of this activity. Let each group present to harmonise their ideas.

Possible answer

During this stage, Teens are entering early adulthood and have a stronger sense of their own individuality now and can identify their own values. Late adolescence has two meanings. First of all, it represents the final years of adolescence. It is when all the changes have taken place and the young person is ready to properly enter adulthood. During this stage an adolescent has grown in all potential and is regarded as an adult.

However, many re-establish an "adult" relationship with their parents, considering them more an equal from whom to ask advice and discuss mature topics with, rather than an authority figure.

Lesson 21: Adolescence egocentrism and social problems

a. Learning objective

Examine adolescents' egocentrism and social problems most adolescents face and provide ways of handling them effectively.

b. Teaching resources

Internet if it is available, student's book, photos, scenario

c. Prerequisites/Revision/Introduction

all previous lesson of this part of adolescence stage are correlated with this lesson. Student teachers need to go back and revise with the help of the tutor. Go through the characteristics of each three stages of adolescence and do application questions reserved for every stage. This will wake student teachers and become motivated to participate actively in this lesson.

d. Learning activity 13.5.4

On this activity, learners observe the picture and give them time to discuss the question about the photo.

Possible answers for activity 13.5.4 refer student's book

Some of the problems that such behaviours may cause in society are the following: Fighting, sexuality, vagabondage, pregnancy, early marriage, school drop out, juvenile delinquency, accidents, psychological problems, help learners to extent the list and encourage them to find the meaning.

Refer the student's book to strengthen student's ideas.

e. Application activity 13.5.4

Possible answers refer student's book

Assessment adolescence

Identify four characteristics of adolescents' emotions.

Answer:

1. Characteristics of adolescents' emotions:

Complexity: The experiences gained from the environment make the adolescent's emotions more complex.

Tolerance of loneliness: Adolescents commonly want to be alone.

Bearing tensions: Adolescents develop competencies to bear tension in different social situations.

Development of abstract emotions: They can express their emotional feelings in relation to abstract objects.

Realism in emotional experiences: They can realistically recognize the strength and weakness of one's character.

Ability to show increased compassion. They are able to enter into kinship with the feelings and impulses involved in any sort of emotional experience.

2. Reasons adolescents' social functioning and interpersonal relationships between adolescent and their parents are difficult:
 - Because they physically look like as adults, adolescents are demanded by their parents to be more responsible and tact more like an adult while they do not possess the social and cognitive qualities necessary for them to be competent as an adult.
 - The home ceases to be the centre of social and emotional interest and adolescents develop more relationships with people outside the family.
 - Adolescents are ambivalent towards adults especially parents and teachers whom they may think are unreasonable.
 - Parents don't allow adolescents to make their own choice of activities, friends and subjects among other things.

3. Cognitive development during adolescence

- *Most older teens can now think abstractly and hypothetically;*
can discern the underlying principles of a situation and apply them to new situations;
can think about the future; and can consider many possibilities and logical outcomes of possible events.
 - *Youth develop a greater ability for complex thought (i.e., they can think abstractly, use reasoning skills, show more intellectual curiosity and can understand the hypothetical).*
 - *Teens develop greater abilities for logic and reason; their thinking is predominantly concrete rather than abstract.*
 - *Teens begin to question rules and beliefs they previously accepted at face value*
4. a. Amina has eating disorder which is Anorexia nervosa

b. Causes may include the following:

Genetics: You may be more likely to develop an eating disorder if you have a family member who has one. This may be because of a genetic predisposition to traits associated with eating disorders, such as perfectionism. More research is needed to determine whether there's truly a genetic link.

Emotional well-being. People who have experienced trauma or have mental health conditions, such as anxiety or depression, may be more likely to develop an eating disorder. Feelings of stress and low self-esteem may also contribute to these behaviors.

Societal pressures. The current Western ideal of body image, self-worth, and success equated with thinness can perpetuate the desire to achieve this body type. This may be emphasized further by pressure from the media and peers.

If left untreated, eating disorders can lead to serious illness and even death.

Along with the lower body weight, girls with anorexia nervosa can lose their menstrual periods (amenorrhea). The loss of periods is associated with osteopenia, early bone loss that can lead to painful fractures.

Eating disorders are also linked to other serious health problems, such as kidney disease and heart disease. Each of these health problems requires specific tests and treatment.

Teens should be proud of their body

Seek advice to elders or parents

Note: On this sub question, let student teachers give their ideas. They should be in line with the following: teens should know the effect of eating disorder to them. They should try to advice their colleagues whom they know have such disorder.

Lesson 22: Early Adulthood And Middle Adulthood

a. Learning objectives

Explain the characteristics of early and middle adulthood

b. Teaching resources:

Internet if it is available, student's book, photos,

c. Prerequisites/Revision/Introduction

During this lesson, student teachers will use the knowledge got from previous lessons of this unit especially the content of late adolescence. Guide student teachers with questions to make them motivated and you may create stories that will facilitate your student teachers to understand the content of this lesson.

d. Learning activity 13.6.1

- Before starting this lesson refer to student,s book and guide learners to work out the introductory activity on adulthood and aging.
- Continue then with the activity 13.6.1

The main **characteristics of adolescence** are biological growth and development, an undefined status, increased decision making, increased pressures, and the search for self.

A period of Rapid Physical/Biological

Appearance-Consciousness:

Adults are characterized by maturity, self-confidence, autonomy, solid decision-making, and are generally more practical, multi-tasking, purposeful, self-directed, experienced, and less open-minded and receptive to change. All these traits affect their motivation, as well as their ability to learn

The **physical** abilities are at their peak, including muscle strength, reaction time, sensory abilities, and cardiac functioning. The aging process also begins during early **adulthood** and is characterized by changes in skin, vision, and reproductive capability

Note: that student teachers use different characteristics to differentiate adult and adolescence. They may refer to adolescence stages and compare their developmental domains with how they think may not be the same in adulthood stage. Allow them to discuss either in pairs or in groups

Note that this question does not have exact answer, allow student teachers to outline and explain how they can help old people in their community. Request them to share their ideas in pairs

e. Application activity 13.6.1

Possible answers for application activity 13.6.1 refer student's book

1. It is during early adulthood, people generally form intimate relationships, both in friendship and love.
2. Physical characteristics during middle adulthood
 - Decreasing height, after 55 years, approximately 2 inches lost for men, 1 inch for women.
 - Increasing weight
 - Decreasing bone density, for women, loss is twice as fast.
 - Decreasing strength, 10% loss by 60 years.
 - Organs no longer function as efficiently as they once did.
 - Lung and heart capacities decrease.
 - Decreasing vision and light sensitivity.
 - Decrease in hearing.

The biopsychosocial changes that accompany midlife are menopause (the cessation of menstruation) in women and male climacteric (male menopause) in men.

On this question, let student teachers have time to do this activity and share their ideas with their classmates. They may use pair-share and discuss on the question deeply.

3. crystallized intelligence is dependent upon accumulated knowledge and experience we have gathered throughout our lifetime while Fluid intelligence is more dependent on basic information-processing skills and starts to decline even prior to middle adulthood.

Lesson 23: Late adulthood and aging

a. Learning objectives

Recognize and appreciate the late adulthood

b. Teaching resources

Internet if it is available, student's book, photos,

c. Prerequisites/Revision/Introduction

Guide student teachers to revise on the previous lesson which is more related and inseparable with this lesson. Request them to revise a bit on previous lesson and ask them guiding question that will lead them to the new lesson.

d. Learning activity 13.6.2

Possible answers refer student's book

1. Physical characteristics of people who are in late adulthood

- Energy reserves dwindle(diminish).
- Cells decay. Muscle mass decreases.
- The immune system is no longer as capable as it once was in guarding against disease.
- Body systems and organs, such as the heart and lungs, become less efficient. Overall, regardless of people's best hopes and efforts, aging translates into decline.
- While energy is lost, the ability to conserve energy is gained
- Most hearing loss is not noticed.
- There is lessening or cessation of sex, sometimes because of physical symptoms such as erectile dysfunction in men, but often simply a decline in libido.

2. The older adults encounter mental, emotional and behavioural problems such as: adults have depression, anxiety, and dementia (mental deterioration, also known as organic brain syndrome). They are also common diseases that attack them during this period. Those are like Depression, Alzheimer's disease, Dementia, etc. During this late adulthood there are increased risks of aging associated with diseases and death.

3. Note that this question does not have direct answer. Student teachers make a discussion in group and analyse the importance of old people in society.

d. Application activity 13.6.2

On this activity, allow student to make research either in library or in smart room if the internet is available.

Possible answers for application activity 13.6.2 refer student's book

1. Write short notes on:

Dementia is the progressive deterioration in cognitive function, the ability to process thought (intelligence).

Senescence: Senescence or **biological aging** is the change in the biology of an organism as it ages after its maturity. Such changes range from those affecting its cells and their function to that of the whole organism.

2. **Menopause:** Menopause is the cessation of menstruation and ovulation in women as estrogen production dwindles. Menopause typically occurs between the ages of 45 and 55. Males also experience a form of menopause, with decreased production of sperm cells resulting from reduced levels of testosterone.
3. Progressive, age-related hearing impairment results primarily from destruction of receptor cells (tiny hair cells found in the cochlea), caused by continued exposure to excessive noise.
4. The general effect of Alzheimer's disease and its likely outcome.

Initially, the symptoms of Alzheimer's disease involve forgetfulness, particularly with respect to recent events. Eventually, as the disease progresses, the individual is no longer able to recognize family members or take care of himself or herself. Alzheimer's disease is fatal.

5. The difference between crystallized and fluid intelligence.

Crystallized intelligence refers to knowledge that is accumulated and stored. Fluid intelligence refers to the ability to reason abstractly, solve logical problems, and make quick inferences.

6. Neuronal death and aging.

In late adulthood, many individuals will lose about 5% to 10% of their neurons. However, there may be little noticeable difference due to the brain's many billions of neurons and system redundancy (other parts of the brain backing up the parts losing neurons). Aging can also be associated with decline in availability of neurotransmitters such as dopamine, serotonin, acetylcholine, and norepinephrine; these deficiencies may contribute to many of the declines seen in aging (e.g., reduced motor capacity and memory ability)

13.6. Summary of the unit

In this unit we discussed milestones of human development. Developmental stages are often defined by milestones. They indicate that a developmental stage has been achieved. We discussed development during pregnancy (from conception to birth) as well as post natal period life. We attempted to look at what an individual achieves in terms of development. Within this unit a focus has been put on recommended practices to help development at a given stage that teachers, parents and the community should bear in mind.

13.7. additional information

Tips on how should an expectant mother take care of pregnancy?

- Talk to your doctor about any over-the-counter and prescription medicines you are using. These include dietary or herbal supplements. Some medicines are not safe during pregnancy. At the same time, stopping medicines you need also can be harmful.
- Doctor may suggest taking prenatal vitamins with iron and folic acid to help protect you against anaemia. These vitamins also protect the foetus against serious problems with the brain and spinal cord.
- Keep blood sugar level up by eating whole, healthy foods and plenty of protein. Do this in small, frequent meals throughout the day. Vary your diet as much as possible. Choose fruits, vegetables, whole grains, calcium-rich foods, and foods low in saturated fat. The fetus gets all its food from you, so try to make healthy food choices. Try to have three meals every day, or six smaller meals if you have problems with nausea or heartburn.
- Wash fruits and vegetables before eating. Don't eat uncooked or undercooked meats or fish. Always handle, clean, cook, eat, and store foods properly.
- Taking plenty of fluids, especially water to keep one hydrated. Plain water is great.
- Get plenty of rest. Take a nap before dinner. Take a nap around lunch time.
- Get early and regular prenatal care physical examinations. Whether this is your first pregnancy or third, health care is extremely important.
- Avoid very hot baths. The high heat raises your risk of miscarriage and birth defects.
- Get plenty of sleep and find ways to control stress.

- Read books, watch videos, go to a childbirth lessons. Classes can help you prepare for the birth of your baby.
- Stay away from chemicals like solvents (like some cleaners or paint thinners), lead, mercury, and paint (including paint fumes). Not all products have pregnancy warnings on their labels. If unsure if a product is safe, ask your doctor before using it.
- Do physical exercises and avoid drugs like cocaine, heroin, marijuana, tobacco and alcohol to void birth defects.
- Cocaine, heroin, marijuana and other drugs increase risk of miscarriage, premature birth and birth defects. A baby could also be born addicted to the drug you've been abusing, which can cause serious health problems.

13.8. End unit assessment

1. Describe the process of conception by:
 - a. Defining genes and chromosomes.
 - b. Describing how heritable characteristics are passed by parents.
2. Describe the stages of prenatal development by defining and describing the germinal, embryonic and foetal period of development.
3. Discuss major environment influences on prenatal development by:
 - a. Describing maternal nutrition and its effect on foetal development.
 - b. Discussing the effect of maternal stress on prenatal development
 - c. Explaining the importance of prenatal care.
4. Suggest activities to help primary school children to develop their social and emotional skills.
5. Suggest activities to help early childhood children to develop their language and motor abilities.
6. What are the reasons that make adolescents to consider their views most perfect

13.9. Additional activities

13.9.1. Remedial activities

1. Describe the development of self-concepts.
2. Describe the role of gender in the formation of peer groups.

3. Discuss children's friendship during middle childhood.
4. During middle childhood describe fear, anxiety and aggression as common problems of children.
5. Outline an overview of pubertal changes
6. Discuss social development during adolescence period and suggest ways to help adolescence cope with the environment.

13.9.2. Consolidated activities.

1. Adolescence is for psychology what puberty is for biology. Explain the statement.
2. Suggest proper techniques that we can handle primary children's behaviours.
3. What are tips that we can consider when giving instructions to early childhood education since their language think has some limitations?

13.9.3. Extended activities

1. Describe some of the changes associated with brain development that occur during adolescence.
2. Outline three stages of labour.
3. Explain induced labour and when it is used.
4. Describe the language skills during infancy period.

UNIT 14:

FACTORS THAT INFLUENCE HUMAN DEVELOPMENT

14.1. Key Unit competence:

Describe how heredity and environment work together to shape human behaviour.

14.2. Prerequisites

Student teachers will use related skills and knowledge they learnt on different units in Biology during O-Level (such as :mitosis and meiosis, genetics, natural and artificial selection, response and coordination, reproduction in human beings, etc) and in social studies during upper primary which will help them to understand easily the content of this unit. The tutor needs to guide them and use this knowledge effectively. This unit does not stand alone; it is complementally with other pre-learnt units about human development. Tutor brings activities that help learners to recall easily the related content. Allow them to share ideas and make research whenever it is possible and all means allow.

14.3. Cross-cutting issues to be addressed

During this unit there are emerging issues which need to be integrated in the learning process. Each of these crosscutting issues is most important as all reflect to national aspiration and priorities. The following crosscutting issues should be highlighted as they directly reflect much to this unit.

Note: The examples below are just to guide you on how to address cross-cutting 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 into consideration of their environment or community.

Gender education:

Remind learners that both males and females have similar should be treated equally and have the same rights and obligations as they are all affected by nurture and nature equally during their development. There is a strong ethical urgent to afford every individual their basic human rights and gender

inequality results in women and girls being treated less favourably than men in schools and society should be removed. Therefore need to be treated fairly and equally during their studying. People's opinion of gender roles should not deny or hinder one's right or responsibilities to meet his or her learning during this unit.

Comprehensive sexuality Education (CSE): the tutor needs to equip learners with all necessary information about sexuality that are linked to this unit as to furnish them with skills related to reproduction and how they affect their offspring hereditarily. With the pre-requisite they have from Biology they will understand when to produce a boy or a girl when they will become mature and form families.

Environment and sustainability: During the study of this unit, student teachers appreciate the environment factors and how these influence their development. This will require them to have awareness on environment and understand how to protect it for better influence. They need to understand that development of human being happen in environment and it should be safe for a better seek to human development.

Inclusive education: this will be much focused on as tutor understands the individual difference that may come as result of factors that influence development. Tutor will use different materials that cater for individual difference and encourage them to fulfil their potential throughout the entire unit. Remedial activities and coaching will be provided to learner

Peace and values education: The need for Peace and Values Education in this unit is obvious this is a broad cross cutting issue which will make student to appreciate the culture and values of Rwanda. Peace is clearly critical for society to thrive and for every individual to focus on personal achievement and their contribution to the success of the nation. Values education forms a key element of the strategy for ensuring young people recognize the importance of contributing to society, working for peace and harmony and being committed to avoiding conflict. Student teacher will understand that we all have what link us as human being and this create our bond.

Standardization of culture: during this unit student teachers will understand clearly influence of both nature and nurture to human being and appreciate who they are as it is results of both. They will have to appreciate who they are and feel proud of themselves as they cannot change it.

14.4. Guidance on introductory activity

Build on previous knowledge, skills, values and attitudes to help the teacher assess the learner's prior knowledge and help link with the new content, try to stimulate learners interest and motivate them to pay attention in this unit.

At this point, there are no right or wrong answers as learners will gradually get more appropriate answers progressively as they go through the unit. Use an appropriate method such as small groups or pairs, provide learners with the Unit 14.1 introductory activity, and give instructions to the activity. During grouping or pairing, ensure a balance between boys and girls and learners' different abilities is maintained.

Possible answers

1. A child can resemble and act as parents in the following ways
 - She/he can have similar physical traits like parents such as face, eyes, height, head, legs, arms, feet, toes.....
 - She/he can have same behaviors/values like flexibility, honesty, love, trust, hard work, patriotism...
 - She/he can have same characteristics, personality, emotions, feelings, empathy
 - She/he can have same practices and skills like his/her parents like smoking, drinking beer, playing, praying,
2. Even though they are true twins, they have differences in skills because of the following reasons
 - They were trained differently: Rebecca was trained in basketball not in music while Anne was trained in music not in basketball
 - May be Anne likes music but dislikes basketball(she is interested in music, not in basketball)
 - Rebecca may be interested in basketball but not in music
 - The environment in which they grew up shaped them differently

14.5. List of lessons/sub-heading

No	Lesson title	Learning objectives	Number of periods
1	Biological factors (nature / heredity)	Give examples of characteristics which are determined by biological factors.	1
2	Function of genes and chromosomes in determining traits	explain the functions of genes and chromosomes.	1
3	Genetic abnormalities	Recognize and explain genetic abnormalities	1
4	Temperament	Be aware of different individuals temperaments	2
5	Impact of relationships (serve and return)	Recognize the impact of relationships to children's development	2
6	Influence of physical / natural environment	Explain the influence of physical environment to human development	1
7	Impact of toxic stress	Judge the effect of toxic stress to development Recognize how risk factors like toxic stress is harmful to human development	1
8	Relationship between heredity/nature and environment on human development/nurture	Believ-believe that development is influenced by a complex interaction of factors Provide recommendations for actions which support development	2
3	End unit Assessment		1

Lesson 1: Biological factors (nature / heredity)

a. Learning objectives

Give examples of characteristics which are determined by biological factors.

b. Teaching resources

internet (if available), pictures from student's book, flash cards.

c. Prerequisites/Revision/Introduction

Student teachers have to use learnt cont from biology O-Level that are more related to heredity. Tutor also needs to provide time for research so that learners recall easily the content and apply it in this lesson.

d. Learning activity 14.1

Possible answers refer student's book

Tutor will guide student teachers to share their answer with their colleagues and just provide justification.

Their justification should be in line with the influence of heredity to human beings. There are many traits that we share from our parents such as: skin, colour, general body shape and size, hair and eyes colour and a thousand other characteristics.

Activity 14.1

Possible answers

Student teachers may state one of his/her family member and list the characteristics that they share.

e.g:

- They may say that they have the same hair, skin, finger, face etc because they are they are brothers or sisters and share parents.
- He/she may say that he/she resemble with one parent because he has some inheritance from them.
- This is from inheritance as they all have some kind of resemblance.

e. Application activity 14.1

1. **Heredity** is the process of passing the traits and characteristics from parents to offspring. The offspring cells get their features and characteristics like genetic information from their mother and father. Heredity and genetics are the reason you look so much like your parents.

2. In its simplest form, biological components strongly determine our physical characteristics such as eye colour, height, hair colour, body type, and general looks.

Lesson 2: Function of genes and chromosomes in determining traits

a. Learning objectives

Explain the functions of genes and chromosomes.

b. Teaching resources

Flash cards, pictures in student's book, internet

c. Prerequisites/Revision/Introduction:

Student teachers use the content of S3 biology especially on the unit that explains more on genes (unit 20: genetics). Allow them to make further research in library or in smart classroom if the internet is available

d. Learning activity 14.1.1

organise students and prepare flash cards and group them into 2 groups (the first 22 cards and additional one which will take letter x represent mother's pairs of chromosomes and the other 22 cards plus one card that will have either letter x or y is for father's pairs of chromosomes) the cards of the same group should have the same colour. Help student teacher to play the game by shuffling many times they may change on the second group where they have x and put y for further shuffling.

1. The sex of the baby that has 2x sex cells is a girl
 - The sex of the baby that has x and y is a boy
2. Each baby will have 46 chromosomes because every parent contribute 23 chromosomes for each

e. Application activity 14.1.1

1. a. True b. False
2. Genes decide almost everything about a living being, they affect specific trait. Genes affect hundreds of internal and external factors, such as whether a person will get a particular colour of eyes, Genes are a set of instructions that determine what the organism is like, its appearance, how it survives, and how it behaves in its environment.
3. A dominant gene is able to express itself even in the presence of its recessive allele, dominant gene must exhibit his dominance over the recessive ones while recessive allele or factor is unable to express its effect in the presence of dominant allele.

Lesson 3: Genetic abnormalities

a. Learning objectives

Recognize and explain genetic abnormalities

b. Teaching resources

Internet, computer

Prerequisites/Revision/Introduction

Guide student teachers to use content learnt in previous lesson: functions of genes and guide them to revise so that they can recall the information related to genes.

c. Learning activities

on this activity help student teachers to think about how they can help a colleague who has such abnormality. This might be the discussion question to expand their views and help them to be aware with inclusive education.

Possible answers for activity 14.1.2 refer student's book

- He has flattened face, small nose, almond-shaped eyes because of large eyelid folds, respiratory and heart problems
- He struggles in many activities and this is the 4th year in p1
- Genetic abnormality

d. Application activities

Possible answers for application activity 14.1.2 refer student's book

1. a. False b. True c. False
2. The cause of mistakes that happen during the replication include exposure to radiation, drugs, or viruses or for no apparent reason.
3. **Genetic disorders** may be hereditary or non-hereditary, meaning that they might be passed down from the parents' genes. However, in some genetic disorders, defects may be caused by new mutations or changes to the **DNA**. In such cases, the defect will only be passed down if it occurs in the **germline**.
4. ALI had down syndrome.

Lesson 4: Temperament

a. Learning objectives

Be aware of different individuals temperaments

b. Teaching resources

internet, computers, scenario

c. Prerequisites/Revision/Introduction

Allow student teachers to share ideas on different behaviours of their colleagues in school environment. Help them to recall emotional development of infancy and adolescence; this will help them to understand easily this lesson

d. Learning activity 14.1.3

- Form group of students and give instructions of how they should simulate the behaviour of individual stated in the scenario.
- Student teachers may bring material that may help them to act effectively such as bags and other materials that are academic.
- After the scenario give student teachers time to reflect on different emotions of actors in different situations (they may do it in pairs or groups and share their views).

Possible answer for activity 14.1.3

Student teachers answer according to role playing of their class mate.

Some of behavior and emotions that characterized family members during role play:

- The members of group 1 are happy and enjoying life, they have no stress
- Members of grup 2 are happy, singing and enthusiastic and enjoying the celebration
- Members of family 3 are happy, happy, enthusiastic, excited, curious, satisfaction, some of them may cry because of happiness
- There is no happiness members of group 4, they have fear, sad, hatred, anxious, fearful, and every one does not enjoy to live in the family.

e. Application activities

Give students time to discuss either in groups or in pairs. Give them instruction and request them to share their ideas.

1. **High intensity** children will have very powerful reactions to things. When something negative occurs, their reaction will be very strong even if the situation isn't serious.

On the other hand **Low intensity** Children will react very mildly to negative and positive situations. They will have a restrained reaction to things that happen to them or may not appear to react much at all. It may be difficult to recognize how a low intensity child is feeling.

2. What Parents and teachers can do to help such children?

When parenting high intensity children, it's important to remember they are not purposely being difficult or dramatic. Understand that your child's strong reactions are part of their temperament and help them learn appropriate ways to express those strong emotional reactions. For low intensity children, it is often more difficult for parents to recognize how their low intensity child is feeling because they may not show those emotions in their reactions or will not show them very strongly. Knowing that your child is low intensity, you can work on picking up on your child's cues and even asking about their feelings so that you are tuned in to how they are feeling.

Also Let your daily schedule and expectations vary to meet your child's intensity of reaction can prevent conflict and stress, and allow your child to have their needs met in a way that plays to their strengths and builds upon their natural temperament.

The child faces "personality conflict" When the demands and expectations of people and the environment are incompatible with the child's temperament.

Children traits are never "good" or "bad." Children judge them according to how others receive them that it is when children perceive them as being a bad or good thing.

Introductory activity on environmental factors (nurture / experiential)

The introductory activity in this part helps the student teachers to make research on how environment can affect people's development. The tutor guides them and help them to discuss the findings.

Lesson 5: Impact of relationships (serve and return)

a. Learning objectives

Recognize the impact of relationships to children's development

b. Teaching resources

Internet, scenario, pictures in student's book

c. Prerequisites/Revision/Introduction

Student teachers use the learnt content of unit 12(theories of human development) especially on social development during infancy. Students understand how social interactions during infancy start in the context of care that parents especially the mother provide for the child since his or her birth.

d. Learning activity 14.2.1

Possible answers for activity 14.2.1 refer student's book

1. The reason why the baby cries is because the mother has not formed an attachment to the baby.
2. Advice is that mother should increase time they stay with their babies and care for them.

By responding in a warm, loving and gentle way, parents help their child learn about communication, behavior and emotions. Parents make their child feel safe and secure, and promote a strong relationship with their children.

e. Application activities

Allow students to discuss in groups and in pairs and also encourage them to share their ideas and views. This will help student teachers to extent their ideas, therefore help them to align them with the supporting argument.

Possible answer

Warm and loving interactions between parents and children develop confidence, resilience and communication. This prepares children for things they'll come across later in her life, like working through problems, dealing with stress and forming healthy relationships with other people in adolescence and adulthood. Strong attachments and relationships early in life also means children are more likely to have better mental health and fewer behavior problems

Lesson 6: Influence of physical /natural environment

a. Learning objectives

Explain the influence of physical environment to human development

b. Teaching resources

internet if it is available, scenario, student's book

c. Prerequisites/Revision/Introduction

give student teachers work that may help and attract attention towards physical environment. This may be related to questions of social studies that are related to components of physical environment and how these may have influence on people's lives.

d. Learning activity 14.2.2

On this activity, help student teachers to work in groups and discuss the impact of physical environment to human behaviour. Guide them to compile their ideas to make them suit the question.

Possible answer for activity 14.2.2

- Studying at different schools will influence them differently
- They may be different in intellectual performance
- They may be different in physical appearance
- They may be different in like and dislike

Here student teachers may also add other differences

e. Application activity

Possible answers

On environment a factors.

Lesson 7: Impact of toxic stress

a. Learning objectives

Judge the effect of toxic stress to development.

Recognize how risk factors like toxic stress is harmful to human development

b. Teaching resources

Internet, scenario, student's book

c. Prerequisites/Revision/Introduction

Use content learnt in the lesson 5 of this unit on the impact of relationships and how it may affect human development and also revise a bit on the content of social studies on disharmony and characteristics of conflict. This will help student teachers to understand easily the content of this lesson

d. Learning activity

On this activity help student teachers to form groups and discuss question on the scenario. Encourage them to share their ideas with their colleagues. Allow time to the group for presentation.

Possible answer for activity 14.2.3

- Mugisha may behave like his father in the future
- He is sad and always shy
- He is not open and does not trust every one(especially men)
- He may drink alcohol and become drunkard like his father
- Anxiety

e. Application activity 14.2.3

Divide student teachers in groups and give them time to discuss about the question. Note that there is no exact answer, therefore the tutor guide student teachers to come up with agreed upon ideas that fit the question.

Possible answer for application activity 14.2.3

Student teacher may choose one cause among the following and write the case study(see the example in story of activity 14.2.3)

- Emotional abuse
- Chronic neglect
- Substance abuse
- Mental illness

Lesson 8: Relationship between heredity/nature and environment on human development/nurture

a. Learning objectives

Believe that development is influenced by a complex interaction of factors

- Provide recommendations for actions which support development

b. Teaching resources

Scenarios, internet, student's book

c. Prerequisites/Revision/Introduction:

Use the learnt content of all previous lessons of this unit and analyse how both environment and heredity share to influence human development.

d. Learning activity 14.2.4

Possible answers refer to student's book

Help student teachers to analyse the picture and discuss in which ways environment and heredity interact to influence human behaviour.

Possible answer activity 14.2.4

after observing the picture, student teachers may list examples of how both heredity and environment play role in human development

- As it can be seen on the picture (first photo), both children are similar in face, have the same physical appearance, same hair etc. as they identical twins (the role of heredity) and they get much difference after they get married: one has become slender and is not happy as life is taught and another one has middle size and is always smart with smart face which make her to be happy and enjoy life (this explains the role of environment)

e. Application activity 14.2.4

1. Difference between fraternal twins and identical twins:

Identical twins happen when in the process of the fertilization of the ovum by the sperm; the ovum is made to split into two parts. In a normal process these parts are again united. Sometimes, however it so happens that these two split parts fail to unite together. The result is that each part is developed into a complete individual in the form of the pair of identical twins. They termed identical on account of identical nature of genetic material (exactly the same chromosomes and genes)

Fraternal twins: normally in each menstrual cycle the female produce a single ovum that can be fertilized by a sperm cell. In exceptional case, two ova may be produced simultaneously and be fertilized at the same time by two different sperms. This result in conception of two individuals who may be grown simultaneously in the mother's womb. These individuals are known fraternal twins. It is not essential for them to belong to the same sex. They may have similar or opposite sex.

2. Note : on this question allow student to conduct research either in library or in smart classroom if he internet connection is available

In general, the interaction for both heredity and environment is responsible for the following characteristics and traits:

- Somatic structure
- Physical appearance
- Mental make up
- Social behaviour
- Emotions

14.6. Summary of the unit

In this unit we have seen how both heredity and environment influence human development. Species, specific characteristics, family resemblance and similarities as well as variations pertaining to the individuality of an organism can be explained in terms of the contributions of heredity and environment.

Heredity refers to a biological mechanism that is responsible for the transfer of specific and ancestral characteristics from generation to generation with the help of immediate parents at the time of one's conception in the mother's womb.

On the other hand the environment consist of all those factors that influence the growth and the development of the individual from his conception onwards.

Biological factors such as: genes and chromosomes, temperament and environmental factors such as: physical environment, toxic stress interact in determining individual behaviour and development, though it is difficult to point with accuracy whether a particular trait emanates from our heredity or environment.

Our heredity endowments provide us the native capital to start the journey of life. How successful will be in life depends both on the potential value of our native capital and the opportunities and circumstances favourable or

unfavourable we get from our environment for reaching the maximum out of our starting capital.

14.7. Additional Information for teachers

An enduring issue in developmental psychology has been the question of what exercise a greater influence on development, our in born tendencies (nature) or our surrounding world (nurture)? again most developmental psychologists lean toward an interplay between these two forces in shaping development. They strongly argue that the interaction between genes and environment explains the individual development path each of us follows through our life span. Lerner (2002,p.89) has neatly summarized this argument as follows:

Nature and nurture are both involved in the production of behaviour.

Consequently, they cannot function in isolation from each other but must interact.

The resulting interaction implies that both nature and nurture are completely intertwined.

Twins mechanism

Life is the result of the union of two cells (male and female).in a normal case when a single cell is fertilized by sperm cell of the male, it results in the birth of single offspring. However in some cases, this normal function is disturbed and there are cases of multiple births (the birth of two or more offsprings at a time). The birth of twins falls in such category of multiple births. There are two distinct types of twins namely: identical and fraternal twins

Identical twins happen when in the process of the fertilization of the ovum by the sperm; the ovum is made to split into two parts. In a normal process these parts are again united. Sometimes, however it so happens that these two split part fails to unite together. The result is that each part is developed into a complete individual in the form of the pair of identical twins. They termed identical on account of identical nature of genetic material(exactly the same chromosomes and genes)

Fraternal twins: normally in each menstrual cycle the female produce a single ovum that can be fertilized by a sperm cell. In exceptional case, two ova may be produced simultaneously and be fertilized at the same time by two different sperms. This result in conception of two individuals who who may be grown simultaneously in the mother's womb. These individuals are known fraternal twins. It is not essential for them to belong to the same sex. They may have similar or opposite sex.

Gregor Mendel- The Father of Genetics

Both the parents contribute equally to the inheritance of traits. It was Gregor Mendel, known as the Father of Genetics, who conducted immense research and studied this inheritance of traits.

It was with his research on plant breeding and hybridization that he came up with the laws of inheritance in living organisms. He conducted his experiments on pea plants to show the inheritance of traits in living organisms.

He observed the pattern of inheritance from one generation to the other in these plants. And thus he came up with Mendel's Laws of Inheritance, which can be summarized under the following headings:

- Law of Dominance
- Law of Segregation
- Principle of Independent Assortment

Know Some Terms

Gene – It is the basic unit of inheritance. It consists of a sequence of DNA, which is the genetic material. A point to be noted here is that genes can mutate and can take two or more alternative forms.

Alleles – The alternative forms of genes which arise as a result of mutation. They are found in the same place on the chromosome and effect the same characteristic or trait but in alternative forms.

Chromosomes – These are thread-like structures of nucleic acids and protein that are found in the nucleus of most living cells. They carry the hereditary or genetic information in the form of genes.

Genotype – It is the complete heritable genetic identity of an organism. It is the actual set of alleles that are carried by the organism. This includes even the alleles that are not expressed, which means even the alleles that do not influence a specific trait that they code for.

Phenotype – It is the description of the actual physical characteristics of an organism, the way the genotype is expressed.

Dominant alleles – When an allele affects the phenotype of an organism, then it is a dominant allele. It is denoted by a capital letter. For example, "T" to express tallness.

Recessive alleles – An allele that affects the genotype in the absence of the dominant allele s called a recessive allele. It will express itself in the small letter. For example – "t" for tallness.

Homozygous – Each organism has two alleles for every gene. (Each

chromosome has one each) If both the alleles are same then it is called homozygous. If tallness is the trait, then it is expressed as “TT”

Heterozygous – If the two alleles are different from each other, then they are heterozygous in nature. If tallness is the trait, then it is expressed as “Tt”.

14.8. End unit assessment

On this assessment, let learners discuss and guide them to come up with the good understanding. Make sure they share their answer with the rest of the class for further discussion. They may have time to do a research in smart room if the internet is available

14.9. Additional activities

14.9.1. Remedial activities

1. Define heredity

Outline 5 characteristics of temperament.

Answer:

Heredity refers to a biological mechanism that is responsible for the transfer of specific and ancestral characteristics from generation to generation with the help of immediate parents at the time of one’s conception in the mother’s womb.

Emotional intensity, Activity level, Frustration tolerance, Reaction to new people, Reaction to change

2. Define genetic disorder

Outline any 4 traits that are determined by the interaction of both environment and heredity.

Answer:

A **genetic disorder** is a genetic problem caused by one or more abnormalities formed in the genome. Most genetic disorders are quite rare and affect one person in every several thousands or millions

Somatic structure, Physical appearance, mental makeup, Social behaviour, Emotions.

14.9.2. Consolidation activities

1. Discuss the relationship between temperament and the parent-child relationship during infancy.
2. Explain 3 forms of stress

Answer:

1. Temperament refers to relatively consistent patterns of emotion, activity, and sociability exhibited in babies almost from birth. Temperament can interfere with the formation of secure attachment, particularly when the child is considered “difficult.” Difficult babies cry and fuss more than other babies.

2. We have 3 forms of stress

Positive stress which is response to a normal and essential part of a health development (an example of positive stress is being called for interview which requires an individual to prepare more and try harder).

Tolerable stress which is response to activates the body’s alert systems to a greater degree (an example is when a person is frightened by a car accident).

Toxic stress is a response that occurs when a child experiences a strong, frequent and/or prolonged adversity which results in changes to their baseline state.

14.9.3. Extended activities

Explain how nature and nurture are intertwined in shaping human behaviour.

Note: on this activity help students to debate on how nature and nurture are intertwined to shape human development.

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