SCIENCE AND ELEMENTARY TECHNOLOGY (SET)

Teacher's Guide

Primary One
(P1)

Adapted version

Kigali, 2022

FOREWORD

Dear teacher,

Rwanda Basic Education Board is honoured to present Primary One Science and Elementary Technology teacher's guide which serves as a guide to competence-based teaching and learning to ensure consistency and coherence in the learning of Science and Elementary Technology subject. The Rwandan educational philosophy is to ensure that learners achieve full potential at every level of education which will 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 their learning process. Many factors influence what they learn, how well they learn and the competences they acquire. Those factors include the relevance of the specific content, the quality of teacher's pedagogical approaches, the assessment strategies and the instructional materials available. We paid special attention to the activities that facilitate the learning process in which students can develop ideas and make new discoveries during concrete activities carried out individually or with peers. With the help of the teacher, learners will gain appropriate skills and be able to apply what they have learnt in real life situations. Hence, they will be able to develop certain values and attitudes allowing them to make a difference not only to their own life but also to the nation.

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 and values and attitude by the learners where concepts are mainly introduced by an activity or situation that helps the learners to construct knowledge, develop skills and acquire positive attitudes and values.

In addition, such active learning engages learners in doing things and thinking about the things they are doing and they are encouraged to bring their own real experiences and knowledge into the learning processes. In view of this, your role is to:

- Plan your lessons and prepare appropriate teaching and learning materials.
- Organize group discussions for learners considering the importance of social constructivism suggesting that learning occurs more effectively when the learners work collaboratively with more knowledgeable and experienced people.
- Engage learners through active learning methods such as inquiry methods, group discussions, research, investigative activities and individual 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.
- Encourage individual, peer and group evaluation of the work done in the classroom and use appropriate competence-based assessment approaches and methods.

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

Part 1: Explains the structure of this Teacher's guide and gives you the methodological guidance.;

Part 2: Gives the sample lesson plan as reference for the teacher's lesson planning process .;

Part 3: Provides the teaching guidance for each concept given in the pupil's book.

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

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

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Director General, REB

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Finally, my word of gratitude goes to the Rwanda Basic Education Board staff particularly those from the Curriculum, Teaching and Learning Resources Department (CTLRD) who were involved in the whole process of writing of this translated and adapted teacher's guide.

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PART I: GENERAL INTRODUCTION

1.0. About the Teacher's guide

This book is a Teacher's guide for Primary One Science and Elementary Technology subject. It is designed to accompany student's book and intends to help teachers in the implementation of competence based curriculum specifically Science and Elementary Technology syllabus.

As the name says, it is a guide that teachers can refer to when preparing their lessons. Teachers 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 Science and Elementary Technology and guidance on assessment.

• **Part II: Sample lesson plan**

This part provides a sample lesson plan, developed and designed to help the teachers 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:

Each unit is made of the following sections:

- **Unit title:** from the syllabus
- **Key unit competence**: from the syllabus
- **Prerequisites (knowledge, skills, attitudes and values)**

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 teacher 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; teachers are free to take or add another cross-cutting issue taking into consideration the learning environment.

- **Key new vocabularies**

This is a list of key words which seem to be new to learners. While teaching, the teacher will make sure that the meaning of those words is well captured by learners. This will allow the mastery of concepts and content detailed within the unit.

- **List of lessons**

This section presents a tabled list of suggested lessons, lesson objectives copied or adapted from the syllabus and duration for each lesson.

- **Teaching approach for each lesson**

In this section, each lesson is developed by describing how it will be conducted in classroom. Note that it is a proposal which leaves the room to the teacher of adapting the lesson to the context of the class and school environment. Each lesson development shows the lessons objectives, teaching and learning materials, teaching and learning activities, conclusion of the lesson and assessment of the lesson.

- **Summary of the unit**

This part provides the key points of content developed in the pupil's book.

- **Additional information for the teacher**

This part gives the teacher additional content and advanced knowledge on the unit to be taught. Remember that the teacher must have much knowledge and understanding beyond the content or topic in the syllabus and pupil's book.

- **Answers to end of unit assessment**

This part provides answers or guidance to questions of the end of unit assessment in the pupil's book and suggests additional questions and related answers to assess the key unit competence.

- **Additional activities (remedial, consolidation and extended activities)**

The purpose of these activities is to accommodate each pupil (slow, average and gifted) based on end of unit assessment results.

Structure of each lesson

Each lesson is made of the following sections:

Lesson title 1:

Lesson objectives

- **Teaching and learning materials**

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

- **Teaching and 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 pupil's book.

- **Conclusion of the lesson**

- **Exercises for assessment or application activities**

This provides questions and Answers to exercises of assessment or application activities.

Note: The guide ends with references.

1.2. Methodological guidance

1.2.1. Developing competences

Since 2015, Rwanda shifted from a knowledge based to a competence based curriculum for pre-primary, primary and general secondary education. For TTCs, it is in 2019 that the competence based curriculum was embraced. This called for changing the way of learning by shifting from teacher centred to a learner centred approach. Teachers are not only responsible for knowledge transfer but also for fostering pupil's learning achievement, and creating safe and supportive learning environment. It implies also that a pupil has to demonstrate what he/she is able to do using the knowledge, skills, values and attitudes acquired in a new or different or given situation.

The competence-based curriculum employs an approach of teaching and learning based on discrete skills rather than dwelling on only knowledge or the cognitive domain of learning. It focuses on what pupils can do rather than what they know. Pupils develop basic competences through specific subject unit competences with specific learning objectives broken down into knowledge, skills and attitudes. These competences are developed through learning activities disseminated in pupils -centred rather than the traditional didactic approach. The pupil is evaluated against set standards to achieve before moving on.

In addition to specific subject competences, pupils also develop generic competences which are transferable throughout a range of learning areas and situations in life.

Below are examples of how generic competences can be developed in Science and Elementary Technology:

Generic competence	Examples of activities that develop generic competences
Critical thinking	These activities require pupils to think critically about subject content. These may include: - Work in groups in different ways e.g. taking turns, listening, taking decisions, - Observe and analyse. Example: mark out areas in the school and get different groups to record living things like insects, persons, animal, birds - Discuss and give scientific reasons of phenomenon commonly known like sun shining, raining, changing colours for plants, etc - Observe, record, interpret data recorded during experiments - Identify and use the applications of Science and Elementary Technology concepts to solve problems in life and society
Research and Problem solving	- Research using internet or books from the library - Design a project for making toys and materials
Innovation and creativity	- Create an experiment procedure to prove a point - Making practice in different units - Conduct experiments with objectives, methodology, observations, results, conclusions - Identify local problems and ways to solve them
Cooperation, Personal and Interpersonal management and life skills	- Work in Pairs - Small group work - Large group work
Communication	- Telling a story related to the lesson of SET needed to be studied - Presenting ideas verbally or in writing - Reading text related to SET
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 friends more knowledgeable in areas that need personal improvement and development - Exploit all opportunities available to improve knowledge and skills in SET.

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. The eight cross cutting issues identified in the national curriculum framework are: genocide studies, environment and sustainability, gender, Comprehensive Sexuality Education (CSE), Peace and Values Education, Financial Education, standardization Culture and Inclusive Education.

Some cross cutting issues may seem specific to particular learning areas or subjects but the teacher needs to address all of them whenever an opportunity arises. In addition, learners should always be given an opportunity during the learning process to address these cross cutting issues both within and out of the classroom so as to progressively develop related attitudes and values.

Below are examples on how crosscutting issues can be addressed in Science and Elementary Technology:

Cross-cutting issues	Examples on how to integrate the cross-cutting issues
Inclusive education	Involve all pupils in all activities without any bias. Eg: Allow a learner with physical disability (using wheelchair) to take notes or lead the team during a task or an experiment.
Gender	Involve both girls and boys in all activities: No activity should be reserved to only girls or boys. Teacher should ensure equal participation of both girls and boys during activities as well as during cleaning and tidying up work areas after practical tasks.
Peace and Values Education	During group activities, the teacher will encourage learners to help each other. During all teaching and learning activities, texts and examples used by the teacher should reflect promotion of peace and values among them at school and with others in society.
Standardization culture	- Some lessons involve carrying out practical tasks. Instructions should be clear for pupils to always check if they are using appropriate materials. - Through making quality works/objects which are attractive to the community.

Environment and sustainability	- In order to avoid the environment pollution, before, during or after practical tasks, pupils should avoid throwing wastes anywhere; special places or appropriate containers should be used. - During field visits, pupils should be reminded of not damaging or destroying environment components or of not throwing wastes in the environment.
Financial Education	- When making toys and objects for example, pupilsare encouraged to use the resources well by using the quantities that are just required. - Using materials, and tools in proper way for safeguarding their durability - Making different objects that can be sold

1.2.3. Attention to special educational needs in teaching and learning SET subject

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

In order to create a well-rounded learning atmosphere, teacher needs to:

- Remember that pupils learn in different ways so they have to offer a variety of activities (e.g. role-play, music and singing, word games and quizzes, and outdoor activities).
- Maintain an organized classroom and limit distraction. This will help pupils with special needs to stay on track during lesson and follow instructions easily.
- Vary the pace of teaching to meet the needs of each pupils. Some pupils process information and learn more slowly than others.
- Break down instructions into smaller, manageable tasks. Pupils with special needs often have difficulty in understanding long-winded or several instructions at once. It is better to use simple, concrete sentences in order to facilitate them understand what you are asking.
- Use clear consistent language to explain the meaning (and demonstrate or show pictures) if you introduce new words or concepts.
- Make full use of facial expressions, gestures and body language.
- Pair a pupil 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 thepupil . Both pupils will benefit from this strategy

- Use multi-sensory strategies. As all pupils learn in different ways, it is important to make every lesson as multi-sensory as possible. Pupils with learning disabilities might have difficulty in one area, while they might excel in another. For example, use both visual and auditory cues.

Below are general strategies related to each main category of disabilities and how to deal with every situation that may arise in the classroom. However, the list is not exhaustive because each pupil is unique with different needs and that should be handled differently.

Strategies to help pupils with developmental impairment

The teacher should:

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

Strategies to help learners with visual impairment

The teacher should:

- Help pupils to use their other senses (hearing, touching, smelling and tasting) 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.
- If the pupil has sight problem, ask him/her what he □ she can see. Get information from parents/caregivers on how the pupil manages his □ her sight problem at home.
- Make sure the pupil has a group of friends who are helpful and who allow the pupil to be as independent as possible.
- Plan activities so that pupils work in pairs or groups whenever possible.

Strategies to help pupils with hearing impairment

The teacher should:

- Strategies to help pupils with hearing disabilities or communication difficulties
- Always get the pupil's attention before you begin to speak.
- Encourage the pupil to look at your face.
- Use gestures, body language and facial expressions.
- Use pictures and objects as much as possible.

- Ask the parents/caregivers to show you the signs they use at home for communication use the same signs yourself and encourage other pupils to also use them.
- Keep background noise to a minimum.

Strategies to help children with physical disabilities or mobility difficulties

The teacher should:

- Adapt activities so that pupils i who use wheelchairs or other mobility aids, or other pupils who have difficulty in moving, can participate.
- Ask parents/caregivers to assist with adapting furniture e.g. The height of a table may need to be changed to make it easier for a pupil to reach it or fit their legs or wheelchair.
- Encourage peer support friends can help friends.
- Get advice from parents or a health professional about assistive devices.

1.2.4. Guidance on assessment

Each unit in the Teacher's guide provides additional activities to help pupils achieve the key unit competence. Results from assessment inform the teacher which pupil needs remedial, consolidation or extension activities. These activities are designed to cater for the needs of all categories of pupils; slow, average and gifted pupils respectively.

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

Continuous/ formative assessment

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

In Primary Three, formative assessment principle is applied through application activities that are planned in each lesson to ensure that lesson objectives are achieved before moving on. At the end of each unit, the end unit assessment is formative when it is done to give information on the progress of pupils and from there decide what adjustments need to be done. Assessment standards are taken into consideration when setting tasks.

Summative assessment

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

1.2.5. Pupils' 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 are: the uniqueness of subjects, the type of lessons, the particular learning objectives to be achieved, the allocated time to achieve the objective, instructional available materials, the physical/sitting arrangement of the classroom, individual pupil teachers' needs, abilities and learning styles.

There are mainly four different learning styles as explained below:

a) Active and reflective learning

Active learning helps learners to retain and understand information best by doing something active with it, discussing or applying it or explaining it to others. Reflective learning helps pupils to first think quietly.

b) Sensing and intuitive learning

In Sensing learning, learners tend to like learning facts while in intuitive learning pupils often prefer discovering possibilities and relationships. Sensors often like solving problems by well-established methods and dislike complications and surprises; In intuitive learning pupils like innovation and dislike repetition.

c) Visual and verbal learning

In Visual learning pupils remember best what they see (pictures, diagrams, flow charts, time lines, films, demonstrations, etc).; In verbal learning pupilsget more out of words (written and spoken explanations).

d) Sequential and global learning

In sequential learning puplsil tend to gain understanding in linear steps, with each step following logically from the previous one.In global learning pupils tend to learn in large jumps, absorbing material almost randomly without seeing connections, and then suddenly "getting it."

1.2.6. Teaching methods and techniques that promote the active learning

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

What is Active learning?

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

The role of the teacher in active learning

- The teacher engages pupils through active learning methods such as inquiry methods, group discussions, research, investigative activities and individual work activities.
- The teacher/ encourages individual, peer and group evaluation of the work done in the classroom and uses appropriate competence-based assessment approaches and methods.
- The teacher provides supervised opportunities for pupils to develop different competences by giving tasks which enhance critical thinking, problem solving, research, creativity and innovation, communication and cooperation.
- Teacher supports and facilitates the learning process by valuing pupil's contributions in the class activities.

The role of pupils in active learning

Pupils are a 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 pupil engaged in active learning:

- Communicates and shares relevant information with other pupils through presentations, discussions, group work and other pupil -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 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.

Some active techniques that can be used in Science and Elementary Technology

The teaching methods strongly emphasised in the competence Based Curriculum (CBC) are active methods. Below are some active techniques that apply in sciences:

a) Practical work/ experiments:

Many of the activities suggested in the Science and Elementary Technology curriculum as well as in the pupil's book are practical work or experiments.

Practical work is vital in learning Science and Elementary Technology; this method gives the pupil the opportunity to implement a series of activities and leads to the development of both cognitive and hands-on skills. The experiments and questions given should target the development of the following skills in pupils: observation, recording and report writing, manipulation, measuring, planning and designing.

A practical lesson/Experiment is done in three main stages:

- **Preparation of practical lesson/ experiment:** Checking materials to ensure they are available and in good state; try the task before the lesson; think of safety rules and give clear instructions.
- **Performance of practical lesson/ experiment:** Sitting or standing arrangement of pupils; introduction of the experiment: aims and objectives; setting up the apparatus; performing the experiment; write and record the data.
- **Discussion:** Observing and interpreting data; make generalisations and assignment: writing the experiment report, further practice and research.

In some cases, demonstration by the teacher is recommended for example when the experiment requires the use of sophisticated materials or very expensive materials or when safety is a major factor like dangerous experiments and it needs specific skills to be learnt first.

In case your school does not have enough science kit materials, experiments can be done in groups but make sure every pupil participates.

b) Project work

Science and Elementary Technology teachers are encouraged to sample and prepare project works and engage their pupils in, as many as possible. Pupils in groups or individually, are engaged in a self-directed work for an extended period of time to investigate and respond to a complex question, problem, or challenge. Projects are based on real-world problems that capture pupils' interest. This technique develops higher order thinking as the learners acquire and apply new knowledge in a problem-solving context.

c) Field trip

One of the main aims of teaching Science and Elementary Technology in Rwanda is to apply its knowledge for development. To achieve this aim we need to show to pupils the relationship between classroom science lessons and applied sciences. This helps them see the link between science principles and technological applications.

To be successful, the field visit should be well prepared and well exploited after the visit:

Before the visit, the teacher and pupils:

- agree on aims and objectives
- gather relevant information prior to visit
- brainstorm on key questions and share responsibilities

- discuss materials needed and other logistical and administrative issues
- discuss and agree on accepted behaviours during the visit
- Visit the area before the trip if possible to familiarise yourself with the

placeAfter the visit

When pupils come back from trip, the teacher should plan for follow-up. The follow-up should allow pupil to share experiences and relate them to the prior science knowledge.

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 pupils are involved in the learning process. Below are those main parts and their small steps:

1. Introduction

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

2. Development of the new lesson

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

- **Discovery activity**

Step 1
- The teacher discusses convincingly with pupils to take responsibility of their learning
- The teacher/ distributes the task/activity and gives instructions related to the task (working in groups, pairs, or individual to instigate collaborative learning, to discover knowledge to be learnt)

Step 2
- The teacher allows learners to work collaboratively on the task.
- During this period the teacher refrains to intervene directly on the knowledge
- The teacher then monitors how the learners are progressing towards the knowledge to be learnt and boost those who are still behind (but without giving them the information).

- **Presentation of learners' productions**
  - In this unit, the teacher invites representatives of groups to present the learner's productions/findings.
  - After three/four or an acceptable number of presentations, the teacher decides to engage the class / in adding more views / points.
- **Expanding of learner's productions**
  - The teacher asks the learners to evaluate the productions and look for ones which are correct, incomplete or false.
  - Then the teacher judges the logic of the learners's findings, corrects those which are false, completes those which are incomplete, and confirms those which correct.
- **Institutionalization (summary/conclusion/ and examples)**
  - The teacher summarises the learned knowledge and gives examples which illustrate the learn t content.
- **Exercises/Application activities**
  - Exercises of applying processes and products/objects related to learnt 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 the teacher is to monitor the fixation of process and product/object being learnt.

3) Assessment

In this step the teacher asks some questions to assess achievement of instructional objective. During assessment activity, learners work individually on the task/activity. The teacher avoids intervening directly. In fact, results from this assessment inform the teacher on the next step for the whole class and individuals. In some cases, the teacher can end with a homework assignment.

PART II. SAMPLE LESSON PLAN

This teacher's guide provides one lesson plan taking into consideration the type of lesson in the subject using the Competence-Based Curriculum (CBC) format.

Teaching requires good preparation to be effective. This is the only way that learning can be enhanced and assured. The teacher will find his/her work easier if she/he goes to class well prepared with the lesson content organized in logical manner. Whether you are at entry level, mid-career or more experienced teacher of Science and Elementary Technology, you still need a lesson plan in order to use the lesson time effectively.

Below is a sample lesson plan.

School: G.S ....…

Teacher's name: ……………...

Term	Date	Subject	Class	Unit No	Lesson No	Duration	No of Pupils
1	…../…/…..	SET	P1	1	1 /7	40 min	40
Type of special education need to be catered for in this lesson and number of learners for each category			Two pupils with vision impairment.				
Unit Title		Materials and tools used at home and at school					
Key unit competence		Explain the uses of materials and tools used at home and at school.					
Title of the Lesson		School materials for teacher and learner					
Instructional objective		Given all school materials, pupils will be able to differentiate learner's and teacher's materials correctly.					
Plan for this class (location: in/outside)		This lesson will take place inside the class and the pupils will work together in groups of 5 .					
Learning materials (for all learners).		Pen, pencil, coloured pencil, chalk and coloured chalk, colouring brush, paper, slate, cupboard, drawer, duster, water, note book cover, books, desk, pupils' bag, ruler, rubber, handkerchief.					
References		MINEDUC (1999), Science and Elementary Technology: P1, NCDP, Kigali.					

	Description of teaching and learning activities		
Timing for each step	Learners have observed, used well, matched each school material with its use., Learners and teachers are engaged in class activities and are able to differentiate between teacher's and learner's materials.		
	Teacher's activities	**Learner's activities**	**Generic competences and cross cutting issues to be addressed + Short explanation**
Introduction 5min	Sing a song: school materials are good.	Sing the song together Try to touch the material said in the song.	**Critical thinking** - To be able to match the materials with an image or real material. **Cooperation:** - Group gives good results - Learner cooperates with others. **Collaboration:** - Learners understand instructional language hence are able to raise their ideas.

| Development of the lesson 30 minutes | - To make groups of learners and giving them basic materials required at school
- Ask the learners to sit into groups of (5-8) and discuss the names of the given materials.

The teacher asks the learners to share what they discussed in different groups by following his / her instructions.

Teacher asks learners to separate materials they have been given, according to what they need and teacher's materials.

The teacher helps the learners in sharing ideas and gives them feedback about asked questions. | - Observing and touching materials.
Learners list the names of teaching materials.
- Leaners respect the teacher's instructions and give the names of the materials:

note book, pens, pencils, books, slate, duster, attendance list, rubber, etc.

Learners make two groups of materials given by the teacher (teacher's and learner's materials).

- Learners give answers of the asked questions.

Learners write teacher's comments as follows.

Learner's materials:
- note book, books, pens, pencils, rubber, school bag.

Teacher's materials:
Class dairy, pupil's, register , duster, | **Inclusive education**

-All learners should participate in this lesson whether disabled or not.

Gender education

-Girls and boys should participate equally.

Financial education:

Learners should know how to take care of materials by avoiding misusing or damaging them. |

Conclusion: 5min	Teacher asks the learners questions related to teacher's and learner's materials. -Teacher gives feedback to the learners	- Learners give answers for the asked questions. **Learners** write teacher's comments as follows. **Learner's materials:** - note book, books, pens, pencil, rubber, school bag. Teacher's materials: Class dairy, pupil's, register, duster, chalkboard, and pieces of chalk /.	
Teacher's Self-evaluation	The objective of the lesson was achieved. Next time we shall learn the uses of teacher's and pupil's materials		

PART III. UNITS DEVELOPMENT

TOOLS USED AT HOME AND AT SCHOOL

1.1. Key unit competence

To be able to explain the use of tools that are used at home and at school.

1.2. Prerequisites

Learners have studied some tools and materials in their nursery schools. They even know some tools' names from their family members even if it can be in their mother language.

1.3. Introductory activity and guidance

Guidance on introductory activity
- The introductory activity is in the Student book on page 1.
- Request learners to take their books and observe the images on Page 1.
- Ask them to name the images observed and their possible uses.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles..

1.4. List of lessons

Lessons	Learning objectives	Number of periods: 20
1. School materials for teacher and learner - Writing materials - Drawing materials - Storing school materials - Reading materials - Time telling objects	List learner's and teacher's materials used at school	4
2. Uses of different school materials for teacher and learner	Differentiate school materials basing on their uses	4
3. Cleaning materials used at school	- List materials that are used in cleaning at school - Clean school using different materials - Group cleaning materials basing on their uses.	2

4. Home tools and materials	List home tools and materials	2
5. Groups of home tools/materials based on their uses	Group home tools/materials basing on their uses.	4
6. The uses of home tools/materials	Identify the uses of home tools/materials	1
7. Cleaning home tools/materials	Clean different home tools/ materials	1
8. End of Unit Assessment		2

1.5. Teaching approach for each lesson

Lesson 1: School materials for teacher and learner

Objectives of the lesson

By the end of this lesson, the learners should be able to:

- List school materials
- Differentiate learner's from teacher's materials.

Teaching and learning materials:

Teacher's guide, pupil's book, pen, chalkboard, pencil, coloured pencil, chalk, coloured chalk, colouring brush and paint, paper, notebook, cupboard, shelf, duster, book covers, pupil's bag, chair, desks, tables.

Teaching Techniques.

- **Introduction**

Ask learners to sing a song which talks about some school materials.

- **Observation/touching**

Put pupils in groups and give them both teacher's and pupil's materials.

Ask learners to observe and touch the materials.

- **Listing school materials.**

Ask the pupils to list the names of materials they have in their groups.

Ask the learners in their small groups (5-8) to share what they have done.

Groups must avoid repetition of what the first groups presented.

Examples: A pen, pencil, coloured pencil, chalk, coloured chalk, paper, book, cupboard, duster, book, chalk board, covers, student's bag, chair, desks, tables, ruler.

- **Differentiating pupil's and teacher's materials.**
  • Ask the learners in their small groups (5-8) to separate teacher's from pupil's materials
  • Give the learners a mixture of pupil's and teacher's materials
  • Ask the learners to separate those materials and put them in their categories (Pupils 'materials and teacher's materials)
  • Ask the learners to give the name of each material
  • The teacher guides learners in their groups in sharing and commenting about what is being discussed.

Examples:

a) Learner's materials:

Blue pen/red /black/green, pencil, note book, book, school bag.

b) Teacher's materials:

Cupboard, chalk, coloured chalk, shelf, paper, books, duster, chalkboard.

Activity
  a) Draw any 2 pupil's materials
  b) Draw any 3 teacher's materials

Lesson 2: Uses of learner's and teacher's materials

N.B: This Lesson may be taught in two separate sub-lessons namely a) Uses of learner's materials (2 periods) and b) Uses of teacher's materials (2 periods). The teaching approach is the same in both lessons.

Objectives:

By the end of this lesson, learners will be able to:

- List the school materials and their uses.
- Differentiate school materials basing on their uses.

Teaching and learning materials

Pen, chalkboard, pencil, coloured pencil, chalk, coloured chalk, colouring brush when painting, paper, note book, books, cupboard, shelf, duster, book covers, school bag, chair, desks, table,

Teaching techniques

Introduction/revision

Ask the learners to list some of the materials used at school.

Examples:

Pen, chalkboard, pencil, coloured pencil, chalk, coloured chalk, paper, note book, books, duster, book covers, school bag, chair, desks, table.

Observation

Put learners in groups to observe the school materials

Listing the uses

Ask learners in their groups to observe and touch the materials given to them and then answer the following questions:

Examples of questions and their answers.

Questions	Answers
1. What materials do we see at our school?	1. pen, chalkboard, pencil, paper, chalk, duster, book, school bag
2. Give the uses of the following materials	2.
a) chalkboard	a) writing on
b) cupboard	b) keeping other materials
c) pencil	c) drawing
d) note book	d) writing in

Differentiating school materials basing on their uses.

Ask pupils in their groups to observe, touch the materials and ask the questions with the purpose of grouping the materials basing on their uses.

Example:

Questions	Answers
Put the following materials in groups basing on their uses: school bag, book, watch, bloom, cupboard, pen, note book, coloured pen, pencil	a) Used to write in: note book. b) Used for writing: pen c) Used in drawing: pencil d) Used to keep other materials: cup board e) Used in telling time: watch f) Used for sweeping: broom g) Used for studying: book

Exercises: Give examples of materials that are in the following groups:

Materials used, to write in, to write on, and to write, in drawing, to keep other materials, in sweeping, in telling time

Examples:

Groups	Materials
• Writing on	• chalk board
• Writing in	• note book
• Writing	• pen
• Drawing	• pencil
• keeping	• school bag
• sweeping	• Broom, mope.
• Learning	• Book.
• timing	• Watch, bell.

Lesson 3: Cleaning school materials

Objectives:

By the end of this lesson, the learners should be able to:

- List materials that are used in cleaning school materials
- Clean different school materials
- Differentiate cleaning materials basing on their uses.

Teaching and learning materials:

Water, mopping rag, broom, jerry can, duster, dustbin, toilet paper.

Teaching techniques:

Introduction

Ask the learners to list the materials that they know which are used in cleaning.

Examples: Water, mopping rag, broom, jerry can, duster, toilet paper

Observation/ touching

Create groups of (5-8) pupils. Ask them to observe /touch and list some school materials.

Ask the learners from different groups to share the ideas about their work and help them correct and select good points or good answers.

Grouping cleaning materials ask the learners to list the observed / touched cleaning materials from school materials.

Differentiating cleaning materials

Give learners cleaning materials and ask the learners to differentiate them basing on their uses.

Exercises

a) Group the following cleaning materials basing on their uses:

Broom, jerry can, duster, dustbin, toilet paper, water

Answer of the exercise

a) Cleaning materials at school

Create small groups of learners (2 by 2) and give them the following tasks:
- Group 1: Moping the class
- Group 2: Cleaning the windows of the classroom.
- Group 3: Cleaning the desks of the classroom.
- Group 4: Cleaning the chalk board
- Group 5: Sweeping the classroom.

Cleaning materials	Importance/Function / use
a) Broom	a) Sweeping
b) Jerry can,	b) Keeps water for cleaning
c) Duster	c) Cleaning the chalk board
d) Dustbin	d) Keeps wastes/dusts
e) Toilet paper	e) Used in toilet
f) Water	f) Used in mopping, washing and cleaning

Objectives

By the end of this lesson, the learners should be able to list home tools and materials

Teaching and learning materials:

Pupil's book, teacher's guide, desks, table, plates, trivet, pots, saucepan, spoons, cups, dishes, pestle, mortar, calabash bowl, broom, basket, mopping rag, cleaning cloths, hoe, wheelbarrow, cupboard, small baskets, cloths, knife, flat iron, mosquito net, jerry can, watch, mobile phone, radio, television, computer, mingle ring stick, wooden spoon, umbrella, bed, panga, sickle, spade, etc.

Teaching techniques:

Introduction

Read the poem to the learners "**Appreciating the kitchen**" as they repeat it.

POEM: "Appreciating the kitchen"
- Let me appreciate the kitchen
- Spatula is used to serve
- Saucepan is used to cook
- We meet at the table
- All of us at home
- Long live to the kitchen.

Ask the following questions to pupils:

What is the name of a home tool/utensil do you like more than others? Why?

Observation/ touching.

Form groups. give them teaching and learning aid pictures to observe and then ask learners the following questions.

Examples of questions and their answers.

Question	Answer
1. What materials did you observe / touch?	1. Sauce pan, plates, spoons, mat, cups. etc.
2. Do you know all materials shown in the pictures? State Yes or No	2. No

Listing home tools/utensils.

Ask the learners to sit in their groups and share the ideas on the list of main home tools/utensils.

Ask the learners again from different groups to share the ideas of their works and help them correct and select good points or good answers.

Examples:

At home, there are different materials like:

Desks, tables, plates, trivet, pots, saucepan, spoons, cups, dishes, pestle, mortar, calabash bowl, broom, basket, mopping rag, cleaning cloths, hoe, wheelbarrow, cupboard, small baskets, cloths, knife, flat iron, mosquito net, jerry can, watch, mobile phone, radio, television, computer, mingling stick, wooden spoon, umbrella, bed, panga, sickle, spade, etc.

Activity

The teacher asks every learner to reach home and observe home materials and state their uses.

Lesson 5: Groups of home tools/materials based on their uses

Objectives:

By the end of this lesson, learners should be able to group home tools/materials basing on their uses.

Teaching and learning materials:

Pupil's book, teacher's guide, desks, table, plates, trivet, pots, saucepan, spoons, cups, dishes, pestle, mortar, calabash bowl, broom, basket, mopping rag, cleaning cloths, hoe, wheelbarrow, cupboard, small baskets, cloths, knife, iron, mosquito net, jerry can, watch, mobile phone, radio, television, computer, mingling stick, wooden spoon, umbrella, bed, panga, sickle, spade. etc.

Teaching techniques:

Introduction/Revision

Ask questions that encourage learners to pay attention to the use of home tools/materials and the learners give answers for the asked questions. The teacher gives feedback to the learners.

Examples:

What type of home tools/materials breaks down easily if they are not kept well?

Answer:

Kitchen utensils /materials made 0ut of clay like plates, pots or cups

Observation:

Create groups of pupils (5-8) and ask them to observe the picture of house, and then list the main parts of house.

Ask the learners from different groups to share the ideas of their works and help them to correct and select good points or better answers.

Differentiating home tools/ materials

Distribute different materials into pupil's groups and ask them to differentiate those materials basing on their uses.

Tool/material
c) Table
d) Pot and saucepan
e) Basket
f) Watch
g) Radio
h) Hoe

Examples of home tools/materials

Exercises

Distribute different materials into pupil's groups and ask them to differentiate and group them basing on their uses.

Examples:

Pots and saucepans are used in the kitchen.

Dishes, plates, spoons, flask, are used on the dining table.

Baskets are used in storing/keeping other materials.

a) Ask the learners to discuss and differentiate home materials according to places where they are used.

b) Sharing the ideas from different groups and group the materials accordingly (in the kitchen, on the dining table, in the garden , in the bed room, etc.)

c) Ask the learners to guess the next lesson.

d) Expect "Uses of home tools/materials "as the answer of the asked question.

Lesson 6: The uses of home tools/materials

Objectives:

By the end of this lesson, learners should be able to differentiate home tools/materials according to their uses.

Teaching and learning materials.

Pupil's book, teacher's guide, desks, table, plates, trivet, pots, saucepan, spoons, cups, dishes, pestle, mortar, calabash bowl, broom, basket, mopping rag, cleaning cloths, hoe, wheelbarrow, cupboard, small baskets, cloths, knife, flat iron, mosquito net, jerry can, watch, mobile phone, radio, television, computer, mingling stick, wooden spoon, umbrella, bed, panga, sickle, spade, etc.

Teaching techniques

Introduction/Revision

Ask questions from the previous lesson

Examples of questions and their answers

Questions	Answers
a) Give 3 examples of materials that are used in the kitchen? b) What are the main tools/materials used in garden?	a) Saucepan, Spatula, knife. b) Hoe, panga, sickle, wheelbarrow, small hoe

Form small groups of pupils (5-8) and give them home tools/materials or pictures.

The pupils observe home tools/materials and the way they are used and then the teacher asks them what they have observed.

Examples of questions and their answers.

Questions	Answers
1. Which tools/materials do you have at home and have appeared in these pictures? 2. What is the use of each tool do you see in the pictures?	1. wheelbarrow, bicycle, chair, pot, panga, cloths, 2. Carrying harvested crops, transporting people and goods, sitting on, cooking, cutting grasses, wearing

Listing the uses of home tools/materials.

Ask pupils in their groups to list the uses of each tool/material (kitchen utensils l, garden tools , bath room materials, sitting room materials, toilet materials, and hygiene materials.) at home.

Differentiating the uses of home tools/materials

Learners differentiate the materials which are in the same group (kitchen utensils, garden tools, bath room materials, sitting room materials, toilet materials, and hygiene materials) based on their uses and how they are used.

Ask the learners from different groups to share the ideas of their works and help them to correct and select good points or better answers.

Examples of tools/ materials and their uses

Tools/materials and where they are used	Uses

1. In the kitchen
  a) pot/ saucepan, b) Stove
2. In the garden
  a) wheelbarrow, b) panga
3. In the sitting room
  a) chair
  b) table
4. In the bed room
  a) bed and mattress
  b) bed covers
5. In hygiene
  a) broom
  b) mopping rag
6. Dining hall
  a) plates
  b) spoon and forks
  c) table
7. In bathroom
  a) soaps
  b) towel
8. safety keeping
Bags, baskets
	1. a) containing food when cooking
	    b) supporting pot/saucepan when cooking
	2. a) carrying fertilizers and crops.
	    b) cutting grass
	3. a) siting on
	    b) we put materials like cup, plates etc.
	4. a) sleeping on
	    b) covering the bed
	5. a) sweeping
	b) mopping
	6. a) a room where we sit and eat .
	    b) used to eat
	    c) where to put food when eating
	7. a) cleaning the body
	    b) removing water on your body
	8. a) keeping fresh food

Exercises

In lesson 6 teacher asks the learners to practice the use of kitchen and table utensils by practicing the project of cooking and eating the cooked food

Lesson 7: Cleaning home tools/materials

Objectives:

By the end of this lesson the learner should be able to:

- List the tools/ materials that are used in cleaning home.
- Differentiate cleaning tools/ materials according to their uses.

Teaching and learning materials:

Basin, saucepan, water, soap, sponge, dish towel, table cloth

Teaching techniques:

Introduction/ Revision

The teacher asks the learners to list some tools/ materials that are used at home.

Example of question and answer.

Question	Answer
Give 5 examples of home tools/ materials?	Broom, basket, mopping rag, wheelbarrow, cupboard

Observation / touching

Help learners to form groups. And distribute teaching and learning materials (tangible and pictures). To observe and then ask them questions

Examples of questions and their answers.

Questions	Answers
1. Give the names of tools that you are seeing in the pictures?	1. Basin, saucepan, water, soaps, sponge, dish towel and tablecloth.
2. How these materials are used?	2. These materials are used in cleaning home materials.

Listing cleaning tools/ materials.

Ask learners in their small groups to list home tools/ materials used in cleaning at home.

Example of answers:

Water, soap, jerry can, basin, sponge.

Differentiating Cleaning / hygiene materials/tools

Help the learners to form groups and ask them to differentiate cleaning/hygiene tools / materials according their uses.

Example of questions and their answers.

Questions	Answers
1. Mention the uses of the following materials a) water. b) soap c) jerry can d) basin e) saucepan f) dish towel 2. State 2 materials used in cleaning that are useful to everybody.	1. a) washing the body and cleaning materials b) Cleaning body, cleaning cloths c) water container d) used when cleaning cloths, washing body, etc. e) cleaning fresh food and cooking. f) drying tools used in drinking and eating. 2. water and soap

Activity

Tell learners to help parents to clean home materials.

I have discovered that:

School materials include: writing materials, drawing materials, reading materials, storage materials, time telling materials, cleaning materials.

Home utensils/material/ tools include: garden tools, kitchen utensils, dining utensils, sitting/living room materials, bedroom materials.

1.6. End of Unit Assessment 1

Teaching and learning materials:

Forks, pupil's book, teacher's guide, desks, table, plates, trivet, pots, saucepan, spoons, cups, dishes, pestle, mortar, calabash bowl, broom, basket, mope, cleaning cloths, hoe, wheelbarrow, cupboard, small baskets, cloths, knife, iron, mosquito net, jerry can, watch, mobile phone, radio, television, computer, mingling stick, Spatula, umbrella, bed, panga, sickle, spade, pen, pencil, chalk, dish towel, paper, soaps,

Techniques of assessment

Ask questions about all lessons that cover this unit.

Assessment questions should be done individually and some in groups.

The assessment should focus on learner's knowledge and skills

Examples of assessment questions and their answers:

Questions	Answers
1. Give five example of home materials	**1**. Plates, water, chair, pot, saucepan.
2. State 3 groups of home materials basing on their uses.	**2.** kitchen materials, garden tools , storage materials.
3.State 2 tools/materials that are used to clean home materials	**3.** soap, water
4. Arrange the following tools according to their groups and their uses: Fork, cup, dish, mortar, pot, calabash bowl, broom, basket, mopping rag, hoe, small hoe, forked hoe, wheelbarrow, cupboard, small basket, spatula, knife, jerry can, basin, saucepan, chair, table, mobile phone, spade, pen, pencil, chalk board, chalk, coloured chalk, paper, note book, book, duster, school bag	**4.** a. **kitchen tools/utensils** b. Saucepan, pot, mortar, spatula c. **table tools**: cup, fork d. **Garden tools** e. Small hoe, hoe, wheel barrow, spade**.** f. **storage materials:** g. Cupboard, basket, school bag, jerry can, pot, small basket,
5. List five school tools/materials	
6 List 5 teacher's and 5 pupil's tools	h. **school tools used in writing/ Writing materials** i. Chalk, coloured chalk, pen,

7. How to keep   the following materials clean?
 	
  a. Chalk board
 	
  b. Notebook
 	
  c. Jerry can
 	
  d. Chair
	j. **Tools used to write on.**
	
	k. Chalk board, paper, note book.
	
	l. **tools used in studying**
	
	m. book
	
	n. **cleaning/ hygiene materials**
	
	o. basin, duster, mopping rag.

	5. Duster, cupboard, chalk, books, note book.

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8. List the importance of the following pupil's tools.

a. note book, school bag, pen.

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6. pupil

Note book, pen, book, pencil, ruler

Teacher

Chalk board, table, chalk, red pen, and duster

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9. List the uses of the following school materials.

- a. table
- b. shelf
- c. desks
- d. dustbin
- e. chalkboard

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7. By:

- a. cleaning it
- b. covering it
- c. washing it
- d. cleaning it

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10. why do we clean our materials

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8. a.is used in keeping notes

  b. where a student keeps documents.

  c. used in writing

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9.

- a. Used by teacher when writing.
- b. is used by teacher to keep his/ her documents
- c. Used by pupils in order to sit.
- d. For keeping wastes.
- e. e. is used to write on.

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10. Because we want to keep them safe and using them for long time.

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1.7. Additional activities

1.7.1. Remedial activities

1. Give an example of a material used at home   **Answer**/ Plate

2. Give an example of a material used at school **Answer**/ notebook

1.7.2. Consolidation activities

1. Give 3 groups of home materials basing on their uses Answer/ kitchen materials, garden tools and storage materials.

2. List five school tools/materials   **Answer**/ Duster, cupboard, chalk, books, note book.

3. State 2 most important materials that are used to clean home materials. Answer/ water and soap

1.7.3. Extended activities

1. List down different groups of school materials

Answers / **School materials include:** writing materials, drawing materials**,** reading materials**,** storage materials**,** time telling materials and cleaning materials.

2. List down different groups of home utensils and tools

Answer/ Home utensils and tools include: garden tools**,** kitchen utensils, dining utensils, sitting/living room materials and bedroom materials**.**

TOYS, VARIOUS MATERIALS, TEACHING AND LEARNING AIDS

2.1. Key unit competence

To be able to make various toys, materials and teaching and learning aids

2.2. Prerequisites

Children know some toys and materials from their home, nursery schools or their family surrounding. They have even tried to make the toys in their ways using some materials available in their home surrounding like sticks, wires, etc.

2.3. Introductory activity and guidance
Guidance on introductory activity
- The introductory activity is in the student book on Page 17.
- Request learners to take their books and observe the images on Page 17.
- Ask them to name the images observed and their possible uses.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles..

2.4. List of lessons

Lessons	Learning objectives	Number of periods: 20
1. Toys and materials made from papers	- Explain how toys are made from papers - Make toys from papers	2
2. Toys made from banana fibres	- Explain how to make a ball from banana fibres. - Make a ball do from banana fibre	2
3. Making toys from dry Sorghum Stalks	- Explain how toys are made from dry sorghum sticks /stalks. - Make sun glasses from dry sorghum sticks / stalks	2
4. Toys made from boxes, bottle covers andsticks	- Explain the ways of making toys from boxes, bottle covers and sticks - Make a car made from boxes, bottle covers and sticks	2
5. Toys or materials made from clay	- Explain how to make toys or materials from clay	6

- Making cow toy using clay - Making person toy using clay - Making dog toy using clay	- Mould a cow, person and dog from clay	
6. Production of toys from plastics, sticks, andthreads	- Explain how to make a toy from plastic, sticks and thread - Make flying toy like airplane from plastic, sticks and thread	4
7. End of Unit 2 Assessment		2

2.5. Teaching approach for each lesson

Lesson 1: Toys and materials made from papers

Objectives:

At the end of this lesson learners should be able to:

- Explain how toys are made from papers
- Make toys from papers

Teaching and learning materials:

A pair of scissors, razorblade, papers, tape , paper-glue, water, threads, staples,

Teaching techniques:

Introduction

Ask pupils questions allowing them to list names of materials that can be used to make toys from papers.

Examples of questions and their answers

Questions	Answers
1. What can you use to cut a paper properly?	1. a pair of scissors
2. What can we use to staple papers together?	2. thread, tape, or staples

Paper cutting

Ask learners to cut papers according to the desired box to be made

Joining parts that make a box

Ask pupils to make the surface area of a box using the cut papers.

A box

Making a box for storage by following the steps below:
-   To cut papers on a desired length
-   To join the cut papers to make the surface of sides
-   To join the base of the box to the surface of sides

Activity

A teacher asks every learner to make his/her own box for storage at home

Lesson 2: Toys made from banana fibres

Objectives:

At the end of this lesson learners should be able to:

-   Explain how to make a ball from banana fibres.
-   Make a ball do from banana fibre

Teaching and learning materials

Dry banana leaves, banana fibre, razor, pair of scissors, water

Techniques of teaching.

Introduction

Start by asking pupils questions related to dry banana leaves and find out if the dried banana leaves are useful.

Examples of questions and their answers

Questions	Answers
1. How do we call old banana leaves?	1. They are dry banana leaves (amashara)
2. What can be the use of an old banana leaves?	2. It can be used to make a ball doll to play

Preparing dry banana leaves and banana fibres (ibirere)

Demonstrate by using wet dry banana leaves and wet banana fibres and ask pupils to compare them with the dry ones in making a good ball. Teacher asks learners to prepare basic materials we use to make a good ball as follows:

- Cut banana fibres and dry banana leaves.
- Make banana fibres and dry banana leaves wet.
- Remove dry banana leaves from the banana plant.
- Take a banana fibre set in pieces
- Make small pieces of filament from banana fibres.
- Assemble dry banana leaves into the shape of a ball.

Activity:

Making a ball to play

Ask pupils to pick up the dry banana leaves bonded in the desired size and make the ball doll following the steps below:

1. Encircle the surface with the pieces of banana fibre you made as strings around the bonded leaves thoroughly

2. Turn around ropes/small pieces of banana filament you made and surround it on the ball tightly.

3. Knit ropes from side to side in and out of the main centre.

4. Turn around a rope diagonally downward and knit it in the main ropes.

5. Keep knitting ropes in and out from one another until there are only too small gaps

6. Knit ropes in and out in one another and cut the remaining edges

7. When the ball is complete, you can play with your schoolmates

Playing the ball
- Making pupils groups 6-8
- Set a visible starting line
- Teacher asks pupils to stand behind the starting line

Put a sign (a brick, a stone) in front of each group in approximately 10-15m (look at the figure).

1. Explanation and demonstration of:

   The first front learner will be the one to dribble the ball. This learner will dribble across the pitch, turn around, and get back to his or her team in an amazing way.

   (for instance: she or he goes jiggling the ball, crossing over with the ball, or riding the ball on his or her body).

   When a learner dribbles the ball back and forth to his or her group, the rest shall do this the same.

2. When all group members finish dribbling the ball , the second learner in every group takes the turn to dribble the ball in a different style from the first one.

3. Make sure everyone plays the game (everyone dribbles the ball)

4. Remind pupils to follow the line to avoid contacts when playing the game
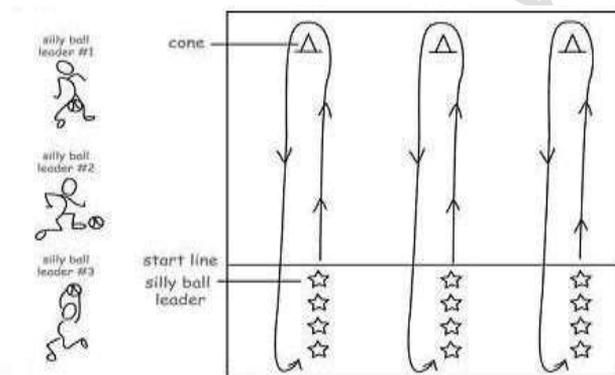
ACTIVITY:

Tell each learner to make a ball from home and bring it to school the next day .

Lesson 3: Making toys out from dry Sorghum sticks

Objective:

At the end of this lesson learners should be able to:

- Explain how toys are made from dry sorghum sticks /stalks.
- Make sun glasses from dry sorghum sticks / stalks.

Learning materials: Dry sorghum stalks, pair of scissors, razorblade, knife, small sticks

Teaching techniques:

Introduction

The teacher asks learners some of questions for making them to understand basic materials used in making toys from sorghum stalks**.**

Example of questions and answers

Questions	Answers
1. what remains after harvesting sorghum on their stalks	1. dry sorghum stalks (Ibikenkeri)
2. what are the uses of dry sorghum stalks	2. to make dolls, to make fence,

Preparing the materials to use to make sun glasses

Form groups of 5-6 pupils and take the pupils where sorghum is harvested in gardens close to the school, pupils pick the well sized sorghum stalks to make sun glasses

Cutting dry sorghum stalks to make glasses

Pupils guided by teacher cut dry sorghum stalks using razorblades , try to match them with small sticks giving the form of sunglasses

Making sun from dry sorghum stalks follows the steps below:

- Sticking together small pieces of sorghum stalks giving them a round circle of eyes
- Making the arms of sun glasses from sticks
- Sticking together

ACTIVITY

Asking pupils to make a car at home from sorghum stalks

Lesson 4: Toys made from boxes, bottle covers and sticks

Objectives:

At the end of the lesson, learners should be able to:
- Explain the ways of making toys from boxes, bottle covers and sticks
- Make a car made from boxes, bottle covers and sticks

Teaching and learning materials:

Boxes, bottle covers, avocado core, and sticks.

Teaching techniques:

Introduction

Ask pupils questions leading to the clear picture of how a car is shaped.

Example of questions and their answers

Questions	Answers
1. Who can tell us what makes a car roll?	1. Tyres
2. What is the shape of what makes a car roll on?	2. The shape of a circle

Observation/Touching

Group pupils in the groups of (5-8),

Distribute pictures showing the shape of a car, ask them to analyse it and manipulate the pictures to show main parts that make up a car.

- Pupils in their respective groups finally show the main parts of a car.

Cutting boxes and constructing a car using bottle covers and small sticks.

Ask learners to cut the boxes with razors on a desired size of a car they want to make

Putting together the parts of boxes in the shape of a car using small sticks and add tyres made from bottle covers joined by small sticks. Putting together the outcomes from all the groups and give critics.

Inserting holes and building a car using boxes, bottle covers, avocado core and small sticks.

Ask pupils to make 2 parallel holes in a box, inserting holes in bottle covers, cutting avocado core into 4 pieces.

Inserting small sticks into the holes you have created in the box and put on tyres (bottle covers)

Add the pieces of avocado core at the end of tyres to make sure they don't spin out.

Create another hole at the top of the box, add a thread to pull the car.

Exercise

Put pupils in small groups of (5-8),

Asks pupils to make cars in sorghum stalks by using bottle covers and small sticks.

Activity

To ask pupils to do a home work of making sun glasses and cars by using boxes, bottle covers, small sticks and bring them to school the next day.

Lesson 5: Toys or materials made from clay

N.B: This lesson may be taught in three (3) separate sub-lessons namely a) Making cow toy using clay (2 periods) b) Making person toy using clay (2 periods) and c) Making dog toy using clay (2 periods). The teaching approach of the three sub-lessons is the same.

Objectivities:

At the end of this lesson, learners should be able to:

- Explain how to make toys or materials from clay
- Mold a cow from clay

Teaching and Learning materials

Water, clay

Teaching techniques:

Introduction:

Ask questions to pupils with the purpose of enabling them discover that some of the domestic materials at home are made from clay.

Examples of such question and their answers

Questions	Answers
1. How do we call an activity of making bricks that are used to build your houses or your class?	1. Pottery
2. What type of soil is used to make bricks?	2. Clay

Preparing parts that makes up a complete cow

Form small groups of (5-8), cut clay by using water until it is fined and round clay into balls that are going to be used to make a trunk of a cow, a tail, legs and horns

Putting together main parts that makes a cow

Pupils put together all the parts that are important to mold a cow similar to a real cow. Teacher asks pupils to present what they have done and gives critics to every group.

Molding a cow like structure, the steps below are followed:

- Mold a trunk
- Mold a head with its horns

- Mold a tail
- Combining parts

Activity

Teacher gives a complete picture of a person and asks pupils to mold a complete person from clay.

Lesson 6: Production of toys from plastics, sticks, and threads

Objectives:

At the end of this lesson a learner, should be able to:

- Explain how to make a toy from plastic, sticks and thread
- Make flying toy like airplane from plastic, sticks and thread

Teaching and learning materials:

Plastic, sticks and threads

Teaching techniques

Introduction:

Ask questions purposely enabling learners to guess the picture of what makes an airplane fast and never stopped by any sky borne threats like air.

Example of questions and their answers:

Questions	Answers
1. Which one goes faster among the sharpened object and unsharpened object	1. Sharpened
2. Is the front part of an airplane sharpened? Yes or No	2. Yes

Observation / touching

Teacher groups pupils in small groups of 5-8, distributes a picture of an airplane and asks them to discuss about it, (how it is constructed, how it looks like and the visible main parts). Teacher guides pupil's outcomes with critics.

Cutting / Joining

After observing the parts of an airplane, pupils cut the sticks provided in the desired size in the form of an airplane and add plastic sacks then tighten them with threads on their airplane in order to make the flying toy like airplane.

Make a flying toy following these steps

- Joining the small sticks in the form of an airplane
- Covering plastic sacks on the sticks joined
- Put a long thread on the airplane made

Activity

Teacher asks every pupil to do a home work of making a flying toy like an airplane

2.6. End of Unit Assessment 2

Teaching and learning materials:

Papers, dry banana leaves, banana fibre, dry sorghum stalks, boxes, bottle covers, sticks, tape, thread, razorblade, pair of scissors, water, soap and basin.

Assessment techniques

Ask questions from every lesson that makes up this unit. Assessment questions can be done either individually or in groups. This assessment gives focuses on knowledge but more particularly skills.

Examples of skills-based activities to include in your assessment

Group pupils in groups and give them different materials, and each group gets enormous specific toys to produce.

Examples of toys to produce

Ball, car, telephone, radio, envelopes, flying toy like airplanes, car, sun glasses

Assessment criteria:
- Pupils present the toys they produced, in case some of them don't know how to make any , teacher asks one group member to explain to others how it is done or how it is called.
- Given enough time to everybody to imitate toys made from the groups
- Cooperatively summarizes how to maintain the toys produced
- Teacher supervises closely the pupil's activities and usage of materials to facilitate them with proper usage
- Train pupils to work together
- Demonstrate a proper storage and maintenance of toys produced
- Pupils should demonstrate spirit of hygiene of where they worked from
- Remind pupils about proper usage of materials and their safety and sparks their curiosity to make toys from cheap local materials
- Help each learner to choose a working team on his or her own
- Monitor usage of materials and their functioning in every group
- Collecting toys or materials made and choosing the best ones
- Thanking pupils with good work

Ask pupils to demonstrate their toys produced to their parents. Flying toys, cars, sun glasses, ball, telephone, radio, a person and a cow

2.7. Additional activities

2.7.1. Remedial activities

1. What type of soil used to make bricks? **Answer**/ Clay
2. Give an example of a toy **Answer**/ A ball

2.7.2. Consolidation activities

1. Give at least 3 examples of materials that can be used to make toys **Answer/** Plastics, papers, sticks
2. How do we call an activity of making bricks that were used to build your houses or your class? **Answer**/Pottery
3. What type of soil is used to make bricks? **Answers /** Clay

2.7.3. Extended activities

State the name of the toys that you can make from each of the following materials

a) Paper b) Dry banana fibre c) Dry sorghum stick d) Hard paper box e) Clay soil

Answer
a) **In paper**, I can make an **airplane** toy
b) **In dry banana fibre**, I can make a **playing ball**
c) **In dry sorghum sticks,** I can make **puppet glasses**.
d) **In a hard paper box**, I can make a **toy car**,
e) **In clay soil**, I can mold **a cow.**

3.1. Key unit competence

To be able to list and classify basic ICT tools and use a radio, telephone and television

3.2. Prerequisites

Learners of P1 know some ICT tools as they may have observed them at their home, in other surrounding families, at church and in the nursery schools. Some of them even know to plug and manipulate some ICT tools.

3.3. Introductory activity and guidance

Guidance on introductory activity

- The introductory activity is in the student book on Page 25.
- Request learners to take their books and observe the images on Page 25.
- Ask them to name the images observed and their possible uses.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles.

3.4. List of lessons

Lessons	Learning objectives	Number of periods: 20
1. Audio visual ICT tools, their uses and operatingthem. - Audio visual ICT tools and their uses - Operating Audio visual ICT tools	- List audio ICT tools (recorders and loud speakers) and video ICT tools - Differentiate audio ICT tools (recorders and loudspeakers) from video ICT tools - Operate available audio visual ICT tools	8
2. Audio ICT tools - Audio ICT tools and their uses - Operating audio ICT tools	- List audio ICT tools - Explain the functions and usage procedure of loudspeakers - Operate available audio ICT tools	6

3. Visual ICT Tools, their uses and operating them
 	
   - Visual ICT Tools and their uses
 	
   - Operating Visual ICT Tools
	- List visual ICT tools.
	- Differentiate audio ICT tools (sound recorder, loudspeaker) from visual ICT tools
	- State the importance and usage procedure of visual ICT tools.
	- Operate the visual ICT tools
		4

4. End of Unit Assessment		2

3.5. Teaching approach for each lesson

Lesson 1: Audio visual ICT tools, their uses and operating them.

N.B: This lesson may be taught in two (2) separate sub-lessons namely a) Audio visual ICT tools and their uses (4 periods) and b) Operating Audio visual ICT tools (4 periods). The teaching approach of the two sub-lessons is almost the same.

Objectives

By the end of this lesson learners should be able to:

- List audio ICT tools (recorders and loud speakers) and video ICT tools
- Differentiate audio ICT tools (recorders and loudspeakers) from video ICT tools
- Give the importance and usage procedure of audio ICT tools and video ICT tools

Teaching and learning materials

Pupil's book, teacher's book, visual teaching materials and concrete teaching materials like radio, television, fixed phone, mobile phone, computer, loudspeaker, microphone, head phone and camera.

Teaching techniques

Introduction

Ask learners to sing a song in which some of the audio and visual ICT tools are listed

Example:

Our Radio near of you

- **Observation/ touching.**

Tell the learners to sit in their groups and give them tangible teaching materials.

Request learners to observe and touch the concrete teaching and learning materials.

- **Listing audio ICT tools and video ICT tools**
  - Asking learners in their group to list the names of the teaching and learning materials they have been given
  - Asking learners in their groups to list those teaching and learning materials by making sure that each group does not repeat the names said by other groups

Examples

Radio, television, mobile phone, fixed phone, computer, loudspeakers, microphone, Headphone and camera.

- **Differentiating audio (recorders) and video ICT tools**

Ask the learner to differentiate audio ICT tools (sound recorder) and visual ICT tools.

Request learners to arrange themselves in groups and gives them mixed ICT tools. After explaining the meaning of the terms "radio" and "television" the teacher requests learners to differentiate audio ICT tools (radio) from visual ICT tools (television)

Examples

a) Audio ICT tools: Radio, mobile phone
b) Video ICT tools: television, mobile phone, computer and camera

Exercises on audio ICT tools (sound recorders) and television

The teacher form groups each of not more than 6 learners. She/he requests them to observe and touch pictures, different tools and ask them questions aimed at discovering audio ICT tools (sound recorders), video ICT tools and their names.

Examples of questions and answers

Questions	Answers
1. Give 2 examples of sound recorder tools	1. Radio, telephone
2. State three tools that are needed during video recording	2. Camera, television.

- **Home work**

The teacher requests learners to draw the following tools when they are at home:

   a) One sound recording tool
   b) One video recording tool

Lesson 2: Audio ICT tools (loud speakers)

N.B: This lesson may be taught in two (2) separate sub-lessons namely a) Audio ICT tools and their uses (4 periods) and b) Operating Audio ICT tools (2 periods). The teaching approach of the two lessons is almost the same.

Objectives of the lesson

By the end of this lesson, learners will be able to:

   • List audio ICT tools (loud speaker)
   • Explain the functions and usage procedure of loudspeakers

Teaching and learning materials:

Pupil's book, teacher's book, visual teaching materials, concrete materials: radio, television, fixed phone, mobile phone, computer, loudspeaker, microphone, head phone, camera

Teaching techniques

Introduction /Revision

Ask learners questions about basic ICT tools that they learnt in previous lessons.

Example of questions and their answers

Questions	Answers
1. State the types of basic ICT tools	1. Audio ICT tools (sound recorder and loud speaker) and visual ICT tools (television, camera)
2. For each type of your choice give two examples	2. Audio ICT tool: Radio, Visual ICT tool: Television,

Observation/ touching

Ask learners to sit in their groups and give them concrete teaching and learning materials. The teacher requests learners to touch the concrete teaching and learning materials.

Listing loudspeaker/audio tools

Ask learners in their group to list the names of teaching and learning materials they have. The groups sum up their findings by making sure no group repeat names already said by other groups.

Differentiating loudspeaker tools

Ask learners to arrange themselves in groups. He/she gives them mixed tools and requests them to group loudspeaker tools according to their importance and how they are used.

Examples: Loudspeaker, microphone, headphone.

Exercises: Arrange pupils in small groups of (5-6). Ask them to observe and touch images of various tools So, after you have discussions about the usage procedure and importance of the tools they have observed.

Guide learners while they sum up the findings from different groups and improve their answers

Example:

Observe these audio ICT and show how they are switched on and how they are switched off when they are being used or after using them.

Activity

Urge the learners to use properly the ICT tools that they have at their homes.

Lesson 3: Visual ICT Tools, their uses and operating them.

N.B: This lesson may be taught in two (2) separate sub-lessons namely a) Visual ICT tools and their uses (2 periods) and b) Operating Visual ICT tools (2 periods). The teaching approach of the two sub-lessons is almost the same.

Objectives of the lesson

By the end of this lesson learners will be able to:
- List visual ICT tools.
- Differentiating audio ICT tools (sound recorder, loudspeaker) from visual ICT tools
- State the importance and usage procedure of audio and visual ICT tools.
- Operate the audio and visual ICT tools

Teaching and learning materials:

Visual teaching materials and concrete teaching materials like radio, television, mobile phone, fixed phone, computer, camera

Teaching techniques:

- **Revision:**

Ask questions on the previous lesson.

Example of questions and their answers

Questions	Answers
1. Give two examples of loud speaker tools.	1. headphone, loudspeaker-
2. Which kind loudspeaker do you see on your home radio?	2. microphone

Observation /touching

Arrange learners in groups and gives them concrete teaching materials

Ask learners to observe and touch the visible physical teaching and learning materials.

Listing visual ICT tools:

Teacher instructs the learners to sit in groups.

The teacher requests learners to list the names of teaching materials they have been given

The learners share findings from their groups while the teacher improves their findings.

Examples: Mobile phone, computer, camera.

Differentiating various visual ICT tools:

Arrange learners in small groups (5-6), for pupils to observe/touch pictures of different basic ICT tools. Thereafter ask learners to discuss the uses, usage procedures and the names of those ICT tools

Give guidance to learners as they put together findings from different groups. Also improve or correct the answers given by learners.

Examples: Television, mobile phone, computer, camera

Home work

Ask learners to use ICT tools they own at home.

I have discovered that:

They are four categories of basic ICT Tools:

- Sound recorders and loudspeakers (in the group of audio ICT tools)
- Video recorder and video display tools (in the group of visual ICT tools)

The main ICT tools are: radio, television, mobile phone, fixed phone, computer, head phone, camera and microphone.

These ICT tools work when they are connected to an electricity power source or when they are powered with dry cells.

3.6. End of Unit Assessment 3

Teaching and learning materials

Teacher's book, pupil's book, visual teaching materials, concrete materials like television, mobile phone, computer, projector, radio, loudspeaker, headphone, microphone.

Assessment techniques:

Introduction/ Revision

Ask questions on all the lessons in the entire unit. An assessment is composed of questions that can be done in groups and those that can be done individually. This evaluation also puts more emphasis or focus on knowledge and skills.

Example of questions and their answers

Questions	Answers
1. How many types of basic ICT tools?	1. Four groups: video display tools, loud speakers, sound recorder, video recorder
2. Give 3 examples of video recorder tools?	2. Mobile phone, camera, and computer (with camera)
3. List basic ICT tools.	3. Radio, camera, loudspeaker, headphone, microphone, television, mobile phone, computer,

3.7. Additional activities

3.7.1. Remedial activities

1. Give 7 examples of basic ICT tools

Answer: Examples of basic ICT tools are: Radio, Television, microphone, loudspeaker, telephone, computer, camera

3.7.2. **Consolidation activities**

1. Give 3 examples of audio ICT tools

Answer: radio, microphone, speaker

2. Give 3 examples of video ICT tools

Answer: Computer, camera, television

3. Use your parents' radio to listen to Radio Rwanda

3.7.3. **Extended activities**

1. Use your parents' television to watch Rwandan Television
2. Show to your parents the cables used on a television and show where they are plugged
3. Start your parents' computer and watch a video stored in it.

UNIT
4   WATER

4.1. Key unit competence

To be able to identify sources and uses of water, washing light clothes and raw food.

Teaching and learning materials:

Teacher's guide, pupil book, pictures, basin, soap, handkerchief, socks, potatoes, Irish potatoes, carrots, green vegetables, fruits, bottles and cups

4.2. Prerequisites

Learners of P1 know water as they use it every day and in different ways. Some may have met different sources of water and observed different uses of water in different areas. Ask them some short questions to check what they know about water before starting this new unit.

4.3. Introductory activity and guidance
Guidance on introductory activity
- The introductory activity is in the Student book on page 31.
- Request learners to take their books and observe the images on Page 31.
- Ask them to name the images observed and their possible uses.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles.

4.4. List of lessons

Lessons	Learning objectives	Number of periods: 16
1. Sources, types and uses of water: - Sources of water - Types of water - Importance of water	- List the sources and types of water in the area where the school is located. - Distinguish between sources and types of water. - List the uses of water and how to keep it safe.	6
2. Steps of washing clothes	- List the steps of washing clothes. - Wash soft clothes - List the advantages of wearing washed clothes and	2

	disadvantages ofwearing dirty clothes	

3. Washing fresh raw foods and fruits
    - Steps of cleaning fresh raw foods
    - Steps of cleaning fresh raw fruits
	- Explain how to clean edibles
	 - Clean fresh foods
	 - Clean fresh fruits
		6

4. End of Unit Assessment		2

4.5. Teaching approach for each lesson

Lesson 1: Sources, types and uses of water

N.B: This lesson may be taught in three (3) separate sub-lessons namely a) Sources of water (2 periods), b) Types of water (2 periods) and c) Importance of water (2 periods). The teaching approach of the three sub-lessons is almost the same.

Objectives of the lesson:

By the end of this lesson, learners should be able to:
- List the sources and types of water in the area where the school is located.
- Distinguish between sources and types of water.
- List the uses of water and how to keep it safe.

Teaching and learning materials: Different pictures of water sources, drinking water and contaminated water.

Technics of teaching

Introduction

Visit water sources located around the school environment with the learners**.** Then ask questions to learners that help them discover different water sources situated around the school.

Example of questions and answers.

Questions	Answers
1. What makes water sources to differ?	1. Quantity of water they produce
2. Which source of water has too much water.	2. It is sea/Ocean.

Observation /touching

Help learners form groups of (5-8) pupils. Teacher asks the learners to observe water sources found in the school location and tell the s difference between those water sources

Learners share ideas from different groups and make comments, improvements and corrections

Listing and distinguishing sources and types of water:

Ask the learners in their groups, questions to help them list sources and types of water.

Examples of questions and their answers

Questions	Answers
1. What are the natural sources of water have you observed?	1. Rain water, rivers, lakes, sea
2. State 2 artificial sources of water	2. Dams, water from tanks
3. State the types of water you have seen?	3. Clean water, contaminated water.

- **Listing the uses of water:**

Put the learners in small groups of (5-8), ask questions helping them to discover uses of water on their own specifically also the uses of water to all organisms in general.

Give them time to discuss on the questions in their groups

Examples of questions and answers

Questions	Answers
1. Give 2 activities you do by using water.	1. Water is used for drinking, cleaning, etc.
2. What do you need when you are cooking food at home?	2. They cook food using water.
3. What do your parents use in order to wash your school clothes?	3. They wash clothes using water.
4. How do you take in drugs given by a doctor?	4. I use water

After discussions about the asked questions and sharing ideas, Give your comments and corrections.

Activity

Ask the learners to think about the situation when there is no water at home and also remind them to keep water safe as it is very useful in their daily life.

I have discovered that:

Water has different sources:

Natural sources of water: Flowing rivers, ground water, lakes, sea and rain water.

Artificial (human made) water sources: Dams, water tank, canals, etc.

Types of water: Clean water and contaminated water.

All living things require water to survive.

Lesson 2: Steps of washing clothes

Objectives of the lesson

By the end of this lesson the learners should be:

- Listing the steps of washing clothes.
- Washing soft clothes
- Listing the advantages of wearing washed clothes and disadvantages of wearing dirty clothes

Teaching and learning materials:

Pictures, water, basin, jerry can, soap, bucket, handkerchief (soft clothes), clothes line, pegs, iron, cupboard

Teaching Techniques:

Introduction

Discuss with learners and ask them questions to understand that the activity of washing clothes has different step, and if they are not respected, the clothes remain dirty.

Example of questions and their answers

Questions	Answers
1. Washing a cloth, is to put it into water and then immediately you remove it? Yes/ No	1. No
2. What do you do to make cloth clean if it is in water?	2. It is washed until it's clean.
3. What comes next after washing a cloth?	3. it is dried, and ironed.

Observation / touching

Group pupils in the small groups of 5-8

Asks them to observe and manipulate teaching aids which shows the steps of washing clothes. The teacher guides group discussion for the pupils to get clearly different steps of washing clothes. Presentation of group outcomes and the teacher gives critics.

Listing washing materials

Ask the learners in their groups to make discussions on materials used in washing clothes.

Examples: Basin, water, soap, clothes, clothes line, pegs.

- **Identifying the steps of washing.**

Ask the learners in their groups to identify the steps of washing.

Ask questions to the learners leading to the understanding that washing clothes requires different steps/stages. Presentation of group works/. outcomes

Examples of questions and their answers

Questions	Answers
1. What do we do first before washing clothes?	1. Putting clothes together and sorting them.
2. What can you do during washing clothes/how do you wash your clothes?	2. Putting clothes in water, washing them, to change water, to wash them again into clean water and drying them.

Ask one (1) pupil in each group to wash his/ her handkerchief following the steps of washing as the group members help him/her to remember every step of washing.

Activity

Ask every learner to wash his/ her handkerchief once they reach home**.**

I have discovered that:

The main steps of washing are: Before, during and after washing.

- **Before washing:** we first put together clothes and sort them.
- **During Washing**:   Putting clothes in water, washing them, changing water, rewashing into clean water, and drying.
- **After washing:** To remove them from clothes line, ironing clothes, keeping them well.

Sorting, soaking, washing, rinsing, squeezing, and hanging are steps of washing clothes.

Lesson 3: Steps of cleaning fresh raw foods and fruits

N.B: This lesson may be taught in two (2) separate lessons namely a) Steps of cleaning fresh raw foods (2 periods) and b) Steps of cleaning fresh raw fruits (2 periods). The teaching approach of the two sub-lessons is almost the same.

Objectives:

At the end of this lesson, learners should be able to:

- Explain how to clean edibles
- Clean fresh foods

Teaching and learning materials

Photographs, pictures, vegetables, fruits, carrots, sweet potatoes, water, jerry can, bucket, pan, Irish potatoes and eggplants.

Teaching techniques:

Introduction

Put pupils in small groups of (5-8), ask questions which help pupils identify and discover that fresh vegetables should be cleaned before cooking / eating.

Example of questions and their answers:

Questions	Answers
1. What do we first do when we buy a mango from the market before eating?	1. It should be washed with clean water
2. What do we do first for the garden vegetables before cooking?	2. They should be cleaned with clean water

Observation / Touching:

Group pupils in the small groups of (5-8)

Distribute pictures of some fresh foods that require cleaning before using; eating or cooking. Guide the group discussions to get a clear understanding of different

groups of fresh food (vegetables, fruits and edibles with underground roots).

Different groups present and share their work for you to correct and improve.

- **Cleaning fresh raw foods**

Group pupils in small groups of (5-8)

Distribute fresh edibles and pictures showing how to clean them.

Guide the discussions on how to clean edibles and how pupils are cleaning given edibles in their groups (vegetables, fruits and edibles with underground roots like carrots, Irish potatoes, sweet potatoes).

- **Cleaning edibles with underground roots like carrots, Irish potatoes, sweet potatoes, etc.**

All edibles with underground roots are cleaned in the same way, it requires plenty water to wash them properly to remove soil and immense them in water at least 3 times or more.

Cleaning vegetables

Before washing them, you are required to remove shabbiness

With water they should be immersed in, at least 3 times or more for the sand and mud to be washed away.

It is not good to clean vegetables after cutting them into pieces, as this causes loss of nutrients.

Activity

Ask pupils to take measures and educate parents on proper cleaning of fresh raw foods (Vegetables, fruits and edibles with underground roots like carrots, sweet potatoes, Irish potatoes…

I have discovered that:

Food is very important in our lives. For it to be very useful and effective in our bodies it should be well prepared before eating.

4.6. **End of Unit Assessment 4**

Teaching and learning materials

Pupil's book, teacher's guides, pictures, real materials like: basin, soap, handkerchief, potatoes, Irish potatoes, carrots, green vegetables, fruits, bottles and cups.

Assessment techniques

- **Introduction/ Revision**

Ask questions from every lesson in this entire unit. The assessment consists of questions that pupils do in groups and also individually. The focus is put on the learner's knowledge and skills. Also ask questions about previous lesson.

Examples of questions and their answers.

Questions	Answers
1. List the sources of water.	1. a) Natural sources of water: rain water, lakes, rivers, sea, ground water b) Artificial sources of water: water from dams, water from tanks.
2. State the stages of washing.	2. -**Before washing:** we first put together clothes and sort them. - **During Washing:** Putting clothes in water, washing them, changing water, rewashing them into clean water, and drying. - **After washing:** To remove them from clothes line, ironing, keeping them well. Sorting, soaking, washing, rinsing, squeezing, hanging.

Exercises

Give time for every learner to clean green vegetables and wash handkerchief following the steps of cleaning vegetables and washing clothes. Teacher encourages learners to work together collaboratively and appreciates the learners who performed well.

4.7. **Additional activities**

4.7.1. **Remedial activities**

1. What do your parents use when they are washing your clothes? **Answer**/ water, soap,....

2. Is water important in our daily life? Yes /No **Answer**/ yes

4.7.2. **Consolidation activities**

1. Give 4 natural sources of water. **Answer/ rain water, lakes, rivers, ground water**

2. Give 2 activities you do by using water. **Answers /** Cooking and washing

3. Explain various steps of clothes washing

Answer

- **Before washing:** we first put together clothes sort and soak them.
- **During Washing**:   Putting clothes in water, washing them, changing water, rewashing them in clean water, squeezing and drying.
- **After washing:** To remove them from clothes line, ironing, keeping them well

4.7.3. **Extended activities**

Briefly describe various sources of water and explain the uses of water

Answer

Sources of water are: Taps, Streams, Rivers, Lakes, Ground (ground water) and Rainfall

Water is important and used for: Drinking (drinking water), Washing clothes, watering plants, washing our body and Cleaning flesh food and fruits

UNIT

5 **ANIMALS**

5.1. Key unit competence

To be able to distinguish domestic animals from wild animals that can be found in the area in which the school is built, their importance and also identify an insect main body parts.

5.2. Prerequisites

Learners of P1 know some domestic or wild animals from their family and surrounding. They have crossed some animals or they have watched them on television. Ask them some questions to know what they know about animals.

5.3. Introductory activity and guidance

Guidance on introductory activity

- The introductory activity is in the Student book on page 39.
- Request learners to take their books and observe the images on Page 39.
- Ask them to name the animals on images observed.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles.

5.4. List of lessons

Lessons	Learning objectives	Number of periods: 12
1. Domestic animals and their importance	- List domestic animals. - Give the uses of domestic animals.	4
2. Wild animals and their importance	- List wild animals - Give the uses of wild animals	4
3. Insects and their body parts	- List the types of insects and their body parts - Give the uses and dangers of insects	2
4. End of Unit Assessment		2

5.5. Teaching approach for each lesson

Lesson 1: Domestic animals and their uses

Objectives

By the end of this lesson learners should be able to:

- List domestic animals.
- Give the uses of domestic animals.

Teaching and learning materials;

Pupil's book, teacher's guide, pictures showing domestic animals, eggs, shoes, and belt, Concrete teaching materials: different animals like cow, sheep, rabbit, goat, dog, pig, hen,

Teaching techniques:

Introduction

Visit a farm where they keep different domestic animals. Ask learners in their small groups to discuss the names of animals they are observing and touching.

Example: Cow, sheep, goat, rabbit, dog. Pig, ducks and hens.

Observation/ touching

Teacher asks the learners to observe and touch the animals kept at the visited place.

Listing the names of animals

Ask learners in groups to list the names of observed animals and answer the questions you ask.

Examples of questions and their answers:

Questions	Answers
1. State the names of domestic animals you have seen in farm?	1. Cow, sheep, rabbit, goat, pig, hen.
2. Give the names of domestic animals you see on these pictures.	2. Dog, duck, turkey, cow, sheep, goat, rabbit, pig and hen.

Differentiating domestic animals and stating their uses .

Ask learners to make groups and discuss the differences between domestic animals and state their importance. Guide the pupil's discussions by asking different questions.

Examples of questions and their answers

Questions	Answers
1. What are the groups of domestic animals?	1. Big livestock and small livestock
2. State the uses of domestic animals.	2. They give fertilizers, meat, money, shoes, belt, clothes, eggs, milk. Dogs protect our homes.

Exercises

Arrange learners in small groups of (5-8), distribute pictures of domestic animals and asks them to list their names and their uses .

I have discovered that:

Domestic animals are classified into two groups:

- **Big livestock:** Cattle
- **Small livestock:** goats, sheep, pigs, rabbits, poultry.

Uses of domestic animals:

They give meat, milk, eggs, manure and money. Skins of some animals are used to make shoes, and belts. Their wool is used to make clothes.

Objectives:

By the end of this lesson pupils will be able to:

- List wild animals
- Give the uses s of wild animals

Teaching and learning materials:

Teacher's guide, pupil's book, visual teaching and learning materials like pictures of different wild animals like lion, elephant, giraffe, leopard, hyena, gorilla, zebra and other small animals.

Teaching techniques

Introduction:

Ask pupils questions about domestic animals

Examples of questions and their answers:

Questions	Answers
1. List some domestic animals	1. Cow, sheep, goat, rabbit, dog, pig, duck, and hen
2. Big livestock consist of which animals?	2. Cow

Observation/ touching pictures of wild animals

Give pupil's images of wild animals, they observe then answer the questions that the teacher asks based on the observed images.

Examples of questions and answers

Question	Answer
1. What are the animals you see in these images?	1. Lion, elephant, giraffe, leopard, hyena, gorilla, antelope, zebra, gazelle, deer
2. Among the animals you have observed which is the biggest?	2. Elephant

Differentiating wild animals

Ask the learners in groups of (5-8) to have discussions, on the images of wild animals comparing them basing on their sizes.

Learners answer questions enabling them to discover the traits that differentiate wild animals.

Some of the questions to discuss in groups are;

Examples of questions and their answers

Question	Answer
1. Which animal do you see in these images?	1. Elephant
2. What is the name of the animals with the smallest size?	2. Insects

Exercises

Put pupils in groups, and give them images of some of the wild animals to state the names of those animals.

Activity

Draw any two wild animals

I have discovered that:

Wild animals live in forests, bush, water and zoo they are not kept at home.

Wild animals attract tourists who pay money in foreign currencies to the country.

They improve the wealth of a country

Some are sources of food e.g. fish.

Lesson 3: Insects and their body parts

Learning objectives:

By the end of this lesson, pupils will be able to:

- List the types of insects and their body parts
- Give the uses and dangers of insects

Teaching and learning materials:

Teacher's guide, pupil's book, visual teaching materials, concrete teaching materials: fly, butterfly, bee, mosquito, rat and a transparent bottle.

Introduction/Revision

Ask pupils questions about wild animals

Examples of questions and their answers

Question	Answer
1. Give 3 examples of wild animals.	1. Buffalo, hyena, gorilla
2. What are the uses of wild animals?	2. Wild animals attract tourists, they provide foreign currency to the country

Observation/ touching: Give images of insects to the learners; , they observe them then answer your questions.

Listing:

Ask learners in groups to discuss the names of animals shown in the images. The questions asked by the teacher guide/enable learners to discover the different animals .

Learners sum up the works /findings from their groups. Each group makes sure it does not repeat the names already said.

Examples of questions and their answers

Question	Answer
What are the names of insects that you are observing on this image?	Fly, mosquito, butterfly, bee and spider

Differentiating insects

Ask learners to identify differences between the insects they are seeing

Ask learners to group themselves and share ideas on the differences between the insects and identify their body parts. They also identify the uses and dangers of those insects.

Take learners outside the classroom, show them insects and ask them to catch the small animals/ insects and put them in transparent bottles.

Back in the classroom, Ask questions to make learners observe carefully the insects then discover the different body parts of those insects.

Examples of questions and their answers:

Questions	Answers
1. What is the difference between these insects?	1. Some insects don't have wings and legs
2. What are the main body parts of insects?	2. Head, thorax and abdomen
3. What are the dangers of insects?	3. Some spread diseases (mosquito, fly,)
4. Which insect is very useful ?	4. A bee s makes honey

I have discovered that:

Insects have three main body parts: Head, thorax and abdomen

Examples:

Mosquito, bees, fly.

Insects have some differences

Those with wings: bee, fly, mosquito, butterfly, wasp,

Those without wings (wingless insects): bed bugs, termites, ticks, flea ,lice

Some insects that are very useful : bees make honey,

Insects that spread diseases: mosquito spreads malaria,house flies spread diseases caused by poor hygiene.

5.6. End of Unit Assessment 5

Teaching and learning materials

Teacher's guide, pupil's book, visual teaching materials, like cow, sheep, goat, rabbit, dog, pig, duck, bat, mouse, lizard, fish, snake, fly, butterfly, bee, mosquito, rat, wasp, termites and ants.

Assessment techniques:

Introduction

Ask questions from all the lessons of the unit. The assessment is composed of questions that learners can do in groups and individually, this assessment also puts an emphasis or focus on the learner's knowledge and skills.

Exercises

Give time to every pupil so that she/he lists domestic and wild animals, insects and their uses .

Examples of questions and their answers

Question	Answer
1. Give 3 examples of domestic animals	1. Sheep, pig and rabbit
2. Give 3 examples of wild animals	2. Lion, zebra, hyena
3. What are the main body parts of insects?	3. Head, thorax and abdomen
4. Give three examples of insects	4. Spider, fly and mosquito
5. Give one example of insects that are dangerous to humans	5. Mosquitoes spread Malaria
6. What is the most important insect?	6. Bee makes honey
7. Name any 2 insects that have wings?	7. Butterfly, wasp…

5.7. Additional Activities

5.7.1. Remedial activities

1. Give two examples of domestic animals?   **Answer**/ Cow, sheep

2. State an example of insects. **Answer**/ Bee

5.7.2. Consolidation activities

1. Give at least 4 examples of wild animals. Answer/ Lion, zebra, elephant and hyena

2. State the 2 examples of domestic animals. Answer / Cow, Goat

3. Outline 3 main body parts of insects. Answer/ Head, Thorax and Abdomen

5.7.3. Extended activities

Give the two main groups of animals. Give at least 7 examples for each group

Answer/
- **Domestic animal: These are** animals that are kept at home
- **Wild animals: These are** animals that live in forests, bush, water or zoo.

Examples of domestic animals: Cow, sheep, goat, rabbit, dog. pig hen donkey, turkey, duck.

Examples of wild animals: Lion, elephant, giraffe, leopard, hyena, gorilla zebra snake fish crocodile monkey.

6.1. Key unit competence

To be able to differentiate cultivated plants and natural vegetation in the school area.

6.2. Prerequisites

Learners of P1 know some plants from their home and school gardens and community. They have crossed some plants or they have watched them on television. Ask them some questions to know what they know about plants.

6.3. Introductory activity and guidance

Guidance on introductory activity

- The introductory activity is in the Student book on page 47.
- Request learners to take their books and observe the images on Page 47.
- Ask them to name the plants on images observed and tell if they are cultivated or non-cultivated plants.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles.

6.4. List of lessons

Lessons	Learning objectives	Number of periods: 9
1. Cultivated plants	- List cultivated plants that are found in the community where the school is located	4
2. Non-cultivated plants (Natural vegetation)	- List non-cultivated plants that are found in the community where their school is located	4
3. End of Unit Assessment		1

6.5. Teaching approach for each lesson

Lesson 1: Cultivated plants

Objectives:

By the end of this lesson, pupils will be able to list cultivated plants that are found in the community where the school is located

Teaching and learning materials

Teacher's guide, pupil's book, visual teaching materials and concrete materials like bean plants, maize, sorghum, banana plant, tea plant, coffee tree, guava, avocado tree, barley plant, wheat, Irish potatoes plants, yam plant, and rice plant.

Teaching techniques

Introduction

Ask questions allowing learners think about the plants that they see in the community where their school is located.

Examples of questions and answers

Questions	Answers
1. Who can tell us 3 plants that are grown at home?	1. Sorghum, Sweet potatoes plants and cassava plant
2. Which plants do you see on your way to school?	2. Pupils cite different plants: banana plant, coffee tree, eucalyptus, avocado tree, barley plant, wheat, Irish potatoes plant, yam plant, rice plant and many others

Observation/touching

Take learners outside the classroom where they can find many plants. In their small groups of (5-8) observe plants in the area where the school is located.

Listing cultivated plants in the area where the school is located

As pupils are in discussions in groups outside the class observing different plants, ask them questions allowing them discover and identify the plants they know and see in the community. Each pupil gives the names of plants that she/he has seen around in the school community (school vicinity)

Examples

Bean plants, maize plant, wheat plant, sorghum plant, coffee tree, guava tree, avocado tree, barley tree, yam plant, sweet potato plant, cassava tree, Irish potato plant, rice plant etc.

Differentiating cultivated plants

Ask pupils to distinguish between cultivated plants and non-cultivated plants that they have found around their school.

In their groups, ask questions helping them discover different cultivated plants based their harvested products. Pupils summarize their works and findings from different groups and the teacher helps them to categorize/group the cultivated plants they have seen.

Examples of questions and their answers

Questions	Answers
1. List 4 plants which have different types of crops	1. Bean plant, sweet potato plant, sorghum and avocado tree
2. Tell what is harvested from the plants you have observed	2. Beans, sweet potatoes, sorghum, avocado.
3. In which categories are the plants you have seen?	3. Leguminous, tubers, cereals, fruits

Exercises

Put pupils in groups; give them enough images of cultivated plants. And ask learners to give their names and group them.

I have discovered that:

Cultivated plants are in these groups:

- Tubers
- Cereals

- Leguminous
- Vegetables and fruits

Lesson 2: Non-cultivated plants (Natural vegetation)

Objectives:

By the end of this lesson, pupils will be able to list non-cultivated plants that are found in the community where their school is located

Teaching and learning materials:

Teacher's guide, pupil's book, visual teaching materials, concrete teaching materials like acanthus, east African couch grass (urwiri), eucalyptus, couch grass, ficus, siara tree (umusave), euphorbia, black jack, lion's ear (igicumucumu) and sweet basil (umwenya).

Teaching techniques

Introduction/Revision

Take the pupils to a place where they can find different plants found in the environment where the school is located.

Observation/ Touching

Put pupils in small groups of (5-8). Ask them to observe/touch the plants found around their school environment. Then ask them questions allowing them discover that not all plants are cultivated.

Ask every group to bring different plants from where they have visited, at least 10 different types.

Listing

Ask pupils to list the names and groups of the plants their group has seen using the images on which are the different images. They put together findings from all the groups while the teacher provides his/her inputs to improve the answers.

Examples: Eucalyptus, black jack, fiscus, lion's ear, acanthus, couch grass, euphorbia, east African couch grass, sweet basil.

Differentiating cultivated plants

Take the pupils around the school where they can find different plants.

Ask learners in their groups to distinguish between cultivated and non-cultivated plants, using short questions, ask pupils to groups non-cultivated plants basing on how they grow.

Examples of questions and their answers

Question	Answer
1. Give the plants that are taller than others 2. State the groups of non-cultivated plants	1. Eucalyptus, ficus, guava tree . 2. **Tall plants:** tall trees, coral tree, **Short plants**: short trees Soda apple, acanthus, Clerodendrum Rotundifolium (ibiziranyenzi), **Herbs**: black jack, east African couch grass (urwiri)

Exercise

Put pupils in groups, give them enough images of non-cultivated plants and request them to give the names of those plants and their uses .

I have discovered that:

There are two types of plants:

Cultivated plants: bean plants, maize plants, sorghum, banana plant , eucalyptus, tea tree, coffee tree, guava tree, avocado tree ...

Non-cultivated plants: Acanthus, east African couch grass, couch grass, black jack, sweet basil, etc.

Among the non-cultivated plants there are:

- **Tall plants (trees)**

Example: guava tree, avocado tree …

- **short plants (shrubs):**

Example: soda apple and acanthus

- **Herbs**

Examples: Black jack, wandering Jew (uruteja), east African couch grass …

Non-cultivated plants are useful to both humans and animals.

We get herbal medicine .We get perfume

Edible (fruits, vegetables)

We get fire wood, charcoal)

Used as animal feeds

Used to make different tools

End of Unit Assessment 6

Teaching and learning materials

Teacher's guide, pupil's book, visual teaching materials, concrete materials like bean plants, maize plants, sorghum plants, banana plant, acanthus, East African couch grass, eucalyptus, couch grass, euphorbia, siara tree, tea tree, coffee tree, black jack, lion's ear, sweet basil.

Assessment techniques:

Introduction

Ask questions from all the lessons of this entire unit. The assessment is composed of questions that learners can do in groups and individually, this assessment also puts an emphasis or focuses on learner's knowledge and skills.

Examples of questions and their answers

Questions	Answers
1. Give 3 examples of cultivated plants.	1. Sweet potatoes plants, wheat and cassava tree.
2. Give 3 examples of non-cultivated plants.	2. coral tree, wandering Jew, east African couch grass
3. Which plants that produce edible fruits?	3. Pawpaw tree, guava

4. State the uses of plants to :
  a) People
  b) Livestock
	4. a) Some are edible, we make medicines, perfumes, wood for making some of home materials like chairs, bed etc.
	  b) Food for animals

5. State 4 examples of likely cultivated plants at your home.	5. Beans, cabbages, wheat, sweet potatoes
6. Give 2 examples of cereal plants	6. Sorghum, millet
7. Put the following plants in their groups : Irish potatoes, millet, cabbages, peas	7. Tubers: Irish potatoes Cereals: Millet Leguminous: Peas Vegetables: Cabbages

6.7. **Additional activities**

6.7.1. **Remedial activities**

1. Give any two examples of plants?   **Answer**/ Avocado tree, Mango tree

2. State two uses of plants **Answer**/ some plants are used as food and others are

used as medicines.

6.7.2. **Consolidation activities**

1. Put the following plants in their groups : Irish potatoes, millet, cabbages, peas

Answer: Tubers: Irish potatoes, **Cereals**: Millet, **Leguminous**: Peas, **Vegetables**: Cabbages

2. Give various examples of cultivated plants**.**

Answer: Bean plants, maize plants, sorghum, banana plant , tea tree, coffee tree, guava tree, avocado tree,

3. State an example of non-cultivated plants**.**

Answer: Wandering Jew (Uruteja)

6.7.3. **Extended activities**

 Distinguish between cultivated plants from non-cultivated plants

Answer: Cultivated plants are planted and grown whereas non cultivated plants are those which humans don't grow or plant.

WASTE AND HYGIENE

7.1. Key unit competence

To be able to differentiate various types of wastes and the importance of cleaning our surrounding

7.2. Prerequisites

Learners of P1 know different types of wastes as they are the remaining of human or animal activities and plants. Activities performed at their home, community and at their school generate various wastes. At their home, they clean the houses, grounds and other places. Ask them some questions to check their prior knowledge on this new unit of waste and hygiene.

7.3. Introductory activity and guidance

Guidance on introductory activity

- The introductory activity is in the Student book on page 51.
- Request learners to take their books and observe the images on Page 51.
- Ask them to name the objects on images observed and describe what people on images are doing.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles.

7.4. List of lessons

Lessons	Learning objectives	Number of periods: 13
1. Decomposing waste	- List wastes that can decompose - Treat wastes that can decompose	3
2. Non-decomposing wastes	- List wastes that cannot decompose - Treat wastes that cannot decompose	2
3. Ways of waste management	- Identify ways of managing waste	2
4. Ways of cleaning a home and its surrounding	- Clean a home and its surrounding	2
5. Importance of cleaning our surrounding	- Demonstrate the importance of cleaning our home and surrounding.	2

6. End Unit of Assessment		2

7.5. Teaching approach for each lesson

Lesson 1: Decomposing waste

Objectives:

At the end of this lesson, learners should be able to:

- List wastes that can decompose
- Treat wastes that can decompose

Teaching and learning materials:

Teacher's guide, Pupil's book, pictures, wastes from food, papers and leaves, compost pit

Teaching techniques:

Introduction

Take pupils near the school compost pit; to observe its wastes and compare these wastes with the ones found in their homes. Ask questions which help the pupils discover types of wastes in the compost pit.

Observing/touching

Take pupils near the school compost pit and asks them to observe its different wastes

Listing types of wastes

Ask learners, questions which help them list different types of wastes they've found in the compost pit.

Sorting decomposing wastes: Create small groups of (5-8) pupils, ask them to list and differentiate types of wastes they saw in the compost pit. After discussions in small groups, pupils present their findings together for you to correct and improve.

Example of questions and their answers

Questions	Answers
1. Are the wastes you are observing different?	1. Yes
2. What makes them different?	2. Their origins
3. How many types of wastes do you see there?	3. Three groups
4. List those types	4. Wastes that can decompose, wastes that cannot decompose and toxic wastes
5. Group the wastes you saw in the compost pit according to their origin.	5. - Wastes whose origin is animals. E.g. cow dung, goat droppings, chicken droppings
	- Wastes whose origin is plants: E.g. leaves and fruits
	- Wastes whose origin is the result of materials used by people e.g. Papers, boxes, etc...

Examples of the wastes in compost pit

Cow dung, goat manure, chicken poop, wastes from food preparation / peelings (Banana, Irish potatoes', sweet potatoes, beans), tree leaves, papers, boxes, wastes from metals, bottles and radio batteries.

I have discovered that:

1. Decomposing wastes are in three groups according to their origin
   - Wastes whose origin is animals. E.g. cow dung, goat and s, chicken droppings
   - Wastes whose origin is plants: E.g. Trees laves and fruit
   - Wastes whose origin is the result of materials used by people e.g. Papers, boxes, etc.

2. All wastes which can decompose should be put in a compost pit.

3. Wastes which can decompose and form manure .

4. Wastes can be used to produce burning materials to substitute fire wood and charcoal.

Lesson 2: Non-decomposing wastes

Objectives:

At the end of this lesson, learners should be able to:

- List wastes that cannot decompose
- Treat wastes that cannot decompose

Teaching and learning materials

Teacher's guide, Pupil's book, pictures, Plastic wastes, bottles, metal scraps etc.

Teaching techniques:

Introduction

In a short discussion ask questions to pupils from the previous lesson. Take the pupils to a collection of non-decomposing wastes to observe those wastes and compare them to the ones they see at home.

Ask questions which help pupils distinguish between wastes that can decompose (degradable) from wastes that cannot decompose (non-degradable wastes).

Examples of questions and their answers

Questions	Answers
1. What is the origin of the wastes you are observing?	1. Living organisms, metal wastes and used materials
2. What are the wastes which cannot decompose?	2. Plastic bottles, bottles, broken glasses and metal wastes

Observing/ touching

Put pupils in small groups and give them pictures with non-degradable wastes found at school or at home.

Activity:

List the wastes that cannot decompose found at your home.

Examples

Plastic bottles, bottles, broken glasses and metal wastes.

Groups of wastes which do not decompose

In their small groups, ask pupils the types of non-degradable wastes they saw.

Application activity

Put the following wastes in groups according to their origin

Metals

Glasses

Plastics

Plastic bags

Note: In the wastes found at home and at school, there exist toxic wastes.

I have discovered that:

The following are wastes that cannot decompose

- **Metals**
- **Glasses**
- **Plastics**
- **Bottles**

Toxic wastes

Some of wastes from hospitals, bottles which stored drugs/medicines, used syringes and used radio batteries.

Lesson 3: Ways of waste management

Objectives:

At the end of this lesson, learners should be able to identify ways of waste management

Teaching and learning materials:

Teacher's guide, Pupil's book, pictures, materials used in waste management such as Water, broomstick, towel, soap, sponge, compost pit, mopping rag, dustbins etc.

Teaching techniques:

Introduction:

Ask questions which help pupils understand dangers of wastes on living organisms.

Examples of questions and their answers

Questions	Answers
1. Is it good to put toxics wastes near people?	1. No
2. Where can you put wastes that can decompose?	2. In compost pit

Observing / touching

Put pupils in small groups and ask them to observe carefully the wastes at school.

Examples

Papers, dust, leaves, grass, etc.

Playing a game of collecting wastes

Choose a pupil who will litter wastes

1. Explain to the pupils that people who litter wastes are those who put wastes anywhere instead of putting wastes in the appropriate places like dustbin, compost pit etc.

2. Ask 1-3 pupils to litter wastes

3. The remaining pupils are divided into small groups of 6 pupils in each.

4. Draw the start line and other groups go behind it as shown on the picture below.

5. Put a bucket in front of each group

6. Provide a small bag filled with wastes to every member of the group who will litter wastes

7. Explain and show that:
   a) The one who will litter the wastes shall run in the ground doing so.
   b) Pupils in other group will try to collect wastes that are littered by putting them in the bucket in front of them. It is a must to always collect a single group of wastes

8. The game ends if all wastes are collected

9. If there is time to play again, pupils exchange their roles in the game (Those who were collecting to take part in littering.)
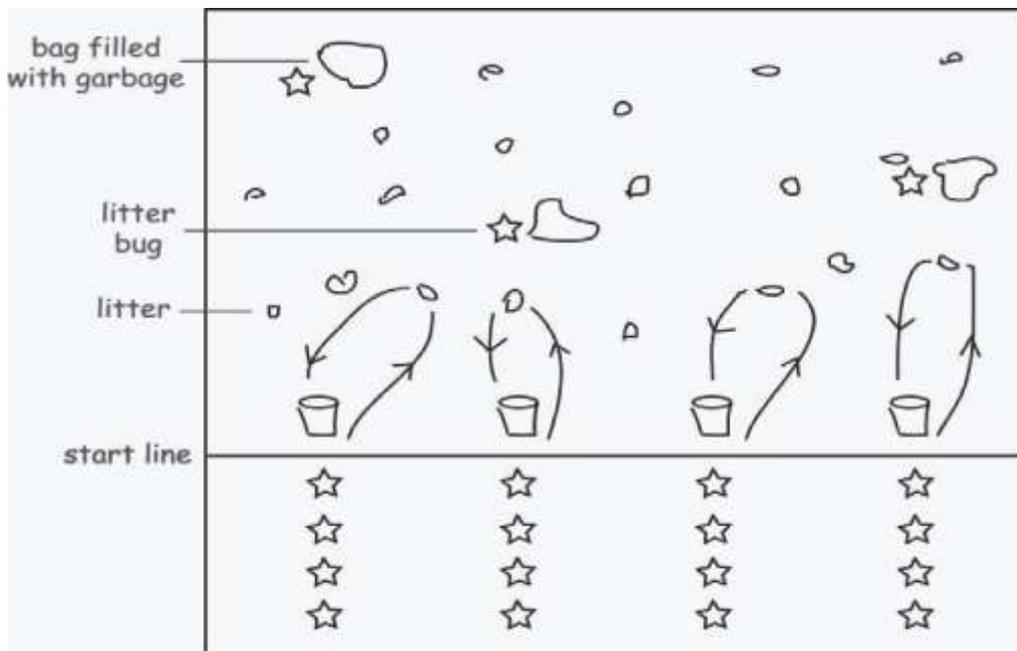
The figure above shows how the game is played.

Differentiating wastes collected by the pupils from the surrounding

Ask the pupils to list the groups of the wastes they collected.
In different groups, pupils make discussions with the aim of answering questions in order to correctly understand the following:

- Groups of wastes
- Waste management
- Why the wastes are separated according to their categories

Examples of questions and their answers

Questions	Answers
1. What wastes have you collected from the school and its surrounding?	1. Papers, tree leaves, wastes accumulated due to the wind, old radio batteries, old pens, wastes from old iron sheets.
2. In which categories are they?	2. Wastes that can decompose wastes that cannot decompose and toxic wastes.
3. Can wastes be collected and mixed?	3. No
4. Why not mixing them?	4. -Because they must be used in different activities. E.g. Degradable wastes are used as manure.
5. Why wastes must be put in the appropriate place?	- Because some might cause accidents like broken bottles
	5. -To avoid poor hygiene
	- To prepare them to give manure

I have discovered that:
- To clean the school is a must.
- There are some materials used to clean at school: Broomsticks, water, mopping rag, pieces of clothes, buckets, bags, and small baskets.
- In wastes management, different categories of wastes must be separated.

Lesson 4: Ways of cleaning a home and its surrounding

Objectives:

At the end of this lesson learners should be able to clean a home and its surrounding.

Teaching and learning materials

Teacher's guide, Pupil's book, pictures, Water, broomstick, hoe, towel, soap, sponge, mopping rag, dustbins etc.

Techniques of teaching.

Introduction

Ask questions helping pupils discover the importance of hygiene at home.

Examples of questions and their answers

Questions	Answers
1. What can you do when you are surrounded by wastes?	1. You clean/remove wastes
2. State the dangers of poor hygiene.	2. Diseases caused by poor hygiene

Observing / touching

Ask the pupils to observe pictures showing how to maintain hygiene. Group discussions with the purpose of understand how to clean a home and its surrounding. The teacher uses questions to monitor the discussions.

Examples of questions and their answers.

Questions	Answers
1. What are the ways of cleaning a home?	1. Remove grasses and bushes that surround the house, sweeping and mopping a house
2. State some of materials used in cleaning a home.	2. Broomstick, mopping rag, piece of cloth water, soap etc.

Differentiating various ways of cleaning a house and its surrounding.

In group discussions of (5- 8) pupils, ask questions with the purpose of making learners understand ways and materials used to clean a home and its surrounding.

Examples of questions and their answers

Questions	Answers
1. What ways can you use to remove wastes in your surrounding?	1. Remove and put them in the appropriate places.

2. What are the ways to clean:
  - Glasses?
  - Houses without cement?
  - Surrounding of a house?
	2. - Remove dust, use water and soap to clean them
	  - Pour little water before sweeping.
	  - Sweeping the areas around the house, cut grasses and bushes and then remove stagnant water

Exercises

Ask pupils to clean the classroom following instructions given.

Lesson 5: Importance of cleaning our home and surrounding

Learning objectives:

At the end of this lesson, learners should be able to demonstrate the importance of cleaning our home and surrounding.

Teaching and learning materials

Teacher's guide, Pupil's book, pictures showing the importance of cleaning our surrounding.

Teaching Techniques:

Introduction:

Ask questions which help pupils understand the importance of cleaning the surrounding.

Examples of questions and their answers

Questions	Answers
1. Why is there hygiene at the hospital?	1. Because if there is no hygiene, patients and other people would get diseases from the hospital.
2. What are the consequences / effects of poor hygiene?	2. Diseases caused by poor hygiene would infect people.

Explaining the importance of cleaning our surrounding

In group discussions of (5- 8) pupils, ask pupils to share ideas on the importance of cleaning our surrounding. monitor the discussions in each group. After the discussions, they put together their works or findings from each group for you to correct or improve.

Examples of questions and their answers

Questions	Answers
1. State the importance of cleaning our surrounding.	1. - Helps us to prevent diseases caused by poor hygiene - Our surrounding looks smart
2. How can we prevent ourselves from diseases caused by poor hygiene?	2. Always wash our hands with clean water and soap before and after eating, when we come from the toilets.

Exercises

Put pupils in groups and explain the games they will play.

Four groups, play the game of collecting wastes from the ground.

How the game is played.

- Two groups throw wastes on the ground and the other two groups collect those wastes and put them in the bags which will be later on put in the appropriate places.
- Other four groups do the exercises of cleaning the classroom: Two groups sweep and mop the classroom (If the classroom is not cemented, one group pour water and another one sweeps).
- Other two groups clean the glasses (Removing dust and washing by using the appropriate soap detergent)
- The teacher moves to all groups to see whether pupils are following instructions given to them
- After the game, the teacher asks pupils to appreciate their culture of cleaning by asking the following question.

Are you happy to study in a clean classroom? Yes/No

Activity

Referring to what you learnt on how to clean our surrounding, talk to parents on how you should clean your home and its surrounding.

I have discovered that:

It is important to clean the school and its surrounding.

7.6. **End of Unit Assessment 7**

Teaching and learning materials

Teacher's guide, Pupil's book, pictures, Water, broomstick, hoe, towel, soap, sponge, mopping rag, dustbins etc.

Assessment techniques:

Introduction

Ask questions from all lessons making this whole unit. The assessment includes questions to be done in groups and also individually

The emphasis or focus of the assessment is on the learner's knowledge and skills.

Examples of questions and their answers

Questions	Answers
1. Give three examples of wastes that can decompose.	1. Cow dung, leaves, wastes from food preparation (Potatoes, cassava, fruits etc.)
2. Give three examples of wastes that cannot decompose.	2. Bottles, plastics and metals
3. State ways of wastes management	3. Separating wastes (Those which can decompose and those which cannot decompose), Putting wastes in compost pit, throw toxic wastes into a very long dump.
4. How can you clean a home and its surrounding?	4. Remove grasses and bushes that surround the house, sweeping and mopping a house
5. Give the importance of cleaning our surrounding.	5. - Helps us to prevent diseases caused by poor hygiene - surrounding looks smart.

Exercises: Put pupils in groups and play the following games.

1. Collecting wastes

2. Clean the glasses (Removing dust and washing by using the appropriate soap detergent)

3. Cleaning the classroom (Sweeping and mopping)

4. Separating wastes that can decompose from those which cannot decompose

Note: Remind pupils that for non-cemented houses and classrooms, they must pour water first before sweeping**.**

7.7. **Additional activities**

7.7.1. **Remedial activities**

1. Give an example of wastes. **Answer**/ Cow dung,

2. Give an example of a material that can be used to keep wastes. **Answer** / Dustbin

7.7.2. **Consolidation activities**

1. Give an example of wastes that can decompose. **Answer/** Tree leaves

2. Give 3 examples of wastes that cannot decompose. **Answer**/ Bottles, plastics and metals.

3. How can we prevent ourselves from the diseases caused by poor hygiene?

Answers: Always wash our hands with clean water and soap before and after eating, when we come from the toilets, proper cleaning of our surrounding, proper cleaning of fresh edible food

7.7.3. **Extended activities**

1. State 3 categories / groups of wastes and give at least one example for each

Answer:
- Wastes that can decompose. E.g. Goat manure ,leaves peelings..
- Wastes that can't decompose. E.g. Bottles metals….
- Toxic wastes. E.g. Old batteries

2. What is the basic difference between bio-degradable wastes and non-biodegradable wastes?

Answer/ The basic difference between bio-degradable wastes and non-biodegradable wastes is that biodegradable wastes decompose or break down naturally whereas non-biodegradable wastes do not.

THE HUMAN BODY

8.1. Key unit competence

To be able to differentiate the main parts of a human body, their uses and appropriate hygiene.

8.2. Prerequisites

Learners of P1 have learned their body parts from nursery schools. They even know their body parts from their parents and colleagues even if it may be in their mother or any other language.

8.3. Introductory activity and guidance

Guidance on introductory activity
- The introductory activity is in the Student book on page 57.
- Request learners to take their books and observe the image on Page 57.
- Ask them to describe the image observed.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles.

8.4. List of lessons

Lessons	Learning objectives	Number of periods: 16
1. Main parts of the human body	- Identify the main parts of the human body. - Show the main parts of the human body.	2
2. The functions of main parts of the human body	- List the functions of the parts of the human body - Compare the functions of the main parts of the human body	4
3. Ways of cleaning different parts of the human body: - Steps and practice of washing hands	- Explain ways of cleaning different parts of the human body - Make use of water and soap to clean one's body.	8

- Steps and practice of taking bath of a body		
- Steps and practice of brushing teeth		
- Steps and practice of cleaning noses		
- Physical exercises		
4. End of unit assessment		2

8.5. Teaching approach for each lesson

Lesson 1: Main parts of the human body

Objectives:

At the end of this lesson, learners should be able to:

- Identify the main parts of the human body.
- Show the main parts of the human body.

Teaching and learning materials

Teacher's guide, Pupil's book, pictures showing main human body parts: head, trunk, arms and legs

Teaching techniques:

Introduction

Form small groups of (5-8) pupils, ask questions which help them understand the different human body parts.

Example of questions and their answers

Questions	Answers
1. Is the human body made up of different parts?	1. Yes
2. How many main parts has the human body?	2. 3 parts
3. Which part of human body is the most important?	3. All main human body parts complement each other.

Observing/touching

In group discussions of (5- 8) pupils, ask pupils to observe and touch pictures showing human body parts.

- **Listing main human body parts**

Ask pupils to observe and touch the parts of human body, and then list the main parts.

Put pupils in groups and ask them to distinguish between main parts of the human body.

Example of questions and their answers

Questions	Answers
1. Locate the head part	1. From the trunk
2. Locate the leg	2. From the trunk to the foot
3. How many main parts has the human body? State them	3. 3 parts - Head -Trunk - Arms and Legs

Observing and differentiating the different parts of a human body

Put pupils in groups and give them pictures showing parts of the human body. Ask pupils questions which help them differentiate the main parts of human body

Examples

Which main part of the human body is found between legs and head?

• Locate the head

Pupils in their groups share ideas locating different parts of their body: Head, trunk, and arms and legs.

The teacher asks a pupil from each group to go in front of others to show them the main parts of the human body. Others show parts of the trunk while another pupil shows parts of arms and legs.

Exercises

Show the pupils how the following game is played**:** Manzi/Mukamanzi says. This exercise helps pupils rehearse different parts of human the body through the game and helps a child to pay attention on what the teacher does.

How to play this game.

1. One pupil plays the role of Manzi (a boy) or Mukamanzi (a girl)

2. All pupils make a circle looking at Manzi/Mukamanzi

3. The teacher explains and shows that:
   - Pupils should do what Manzi/Mukamanzi asks them to do.

     E.g. *If Manzi says "Manzi says that, touch your toes "all pupils should touch their toes

     * If Manzi says "Jump" without starting by saying Manzi says that, pupils will not follow the instruction.
   - What is necessary is to understand the word "Manzi says" at the beginning of the instruction.

     Manzi will try to influence pupils to make mistakes. *E.g. Manzi says that, touch your nose, jump, and circulate yourself" some pupils will start to circulate themselves without understanding that their colleague gives instruction starting with "Manzi says"
   - If a pupil does an action when Manzi has not said "Manzi says that" That pupil sits down and others continue.

4. To choose another pupil who also plays the role of Manzi/Mukamanzi after a certain time and make them do the exercises.

I have discovered that:

The human body has three (3) main parts**:**

- Head
- Trunk
- Arms and Legs

Lesson 2: The functions / uses of human body parts

Objectives:

At the end of this lesson, learners should be able to:

- List the functions of the parts of the human body
- Compare the functions of the main parts of the human body

Teaching and learning materials

Teacher's guide, Pupil's book, pictures showing main human body parts head, trunk, arms and legs.

Teaching techniques:

Introduction;

Ask pupils questions about what they learnt from the previous lesson. Using the picture, ask revision questions on parts of the human body.

Example of questions and their answers

Questions	Answers
1. What are the main parts of the human body?	1. -Head -Trunk -Arms and Legs
2. How many main parts has the human body?	2. Three (3)

Observing/ touching

Ask the pupils to observe and touch parts of a human body from head to feet. And compare parts on the picture with the parts of their body.

- **Listing main parts of the human body**

Ask pupils to observe and touch pictures in the pupils' book.

Put pupils in groups and then ask them to list the functions / uses of the human body parts.

-Differentiating the functions of the human body parts

Help pupils differentiate functions of the human body parts

Head: Thinking, carrying

Trunk: Links / connects the main parts of the human body. The neck and limbs extend from the trunk

Arms and Legs: Help people to move and to perform different work but they particularly help people in doing physical exercises (running, jumping, applauding, kicking, skipping etc).

I have discovered that:

A Human body has three different main parts and each completes the other:

Head: Thinking, carrying

Trunk: Links the main parts of the human body. The neck and limbs extend from the trunk

Arms and Legs: Help people to move and to perform different works but they particularly help people in doing physical exercises (running, jumping, applauding, kicking , throwing, etc)

Lesson 3: Ways of cleaning different parts of the human body

N.B: This lesson may be taught in five (5) separate sub-lessons namely a) Steps and practice of washing hands (1 period), b) Steps and practice of taking bath of a body (2 periods), c) Steps and practice of cleaning noses (1 period), d) Steps and practice of brushing teeth (2 periods), e) Physical exercises (2 periods). The teaching approach of the five sub-lessons is almost the same.

Objectives:

At the end of this lesson learners should be able to:

- Explain ways of cleaning different parts of the human body
- Make use of water and soap to clean one's body.

Teaching and learning materials

Teacher's guide, Pupil's book, pictures showing main human body parts head, trunk, arms and legs, water, basin, soap, tooth brush and toothpaste

Teaching techniques:

Introduction

Ask pupils to answer questions related to human body, the main parts and the use of each.

Observing/ touching

Ask pupils to observe and touch different pictures showing how to clean a human body in general and how to clean each part of the human body specifically.

E.g. Brushing teeth, cutting finger nails and washing hands.

- **Listing how to clean human body.**

Put pupils in group discussions and ask them to answer questions on how to clean a human body.

Example of questions and their answers

Questions	Answers
1. What is the best way of cleaning the human body?	1. Washing the whole body, washing hands and nails, brushing teeth and doing physical exercises
2. When is it necessary to wash hands?	2. Before and after eating, coming from the toilets.

- **Differentiating how human body parts are cleaned.**

Referring to different ways of cleaning the body as suggested by pupils, the teacher asks the pupils to clean their body:

- Washing by using appropriate soap and water
- Washing hands before and after eating and when they come from the toilet
- Brushing the teeth. Done after getting up and after eating. When brushing their teeth, they use tooth brush and toothpaste.
- Doing physical exercises

Exercises

Before delivering the lesson of cleaning the human body parts, the teacher will first prepare sufficient teaching and learning aids.

Examples

1. Washing hands and finger nails; Water, nail clipper which trims finger nails, soap, towel.

2. Brushing teeth: Water, toothbrush, toothpaste, cup or glass.

3. Cleaning nose: Handkerchief

4. Doing physical exercises: Playing balls (based on their ages), jump ropes.

Before any other means of caring for the body is used or started, the teacher should give instructions to be followed.

Game: Proper cleaning of hands,

How is it is played;

1. Pupils are shown the start point at one end and draw a line using chalk or any other visible material.

2. Put pupils in groups of (6-8)

3. Ask each group to draw its line behind the starting line

4. Put a bucket filled with clean water in front of each group, on the other side of the ground

5. Put a piece of soap near the bucket filled with clean water
6. Remind learners and group members that each pupil should participate in this game
7. Pupils keep replacing each other running towards the bucket, to take soap and wash their hands using only ten seconds (counted loudly)
8. A pupil who finishes to wash his/her hands, must put the soap in its appropriate place and comes running towards his/her group
9. The next pupil is to run, when his/her colleague has returned to his position in the group
10. The game ends when all pupils have run and washed their hands

Note: Children may go beyond ten seconds articulated in the game because the main objective is to clean their hands thoroughly not to clean just quickly.
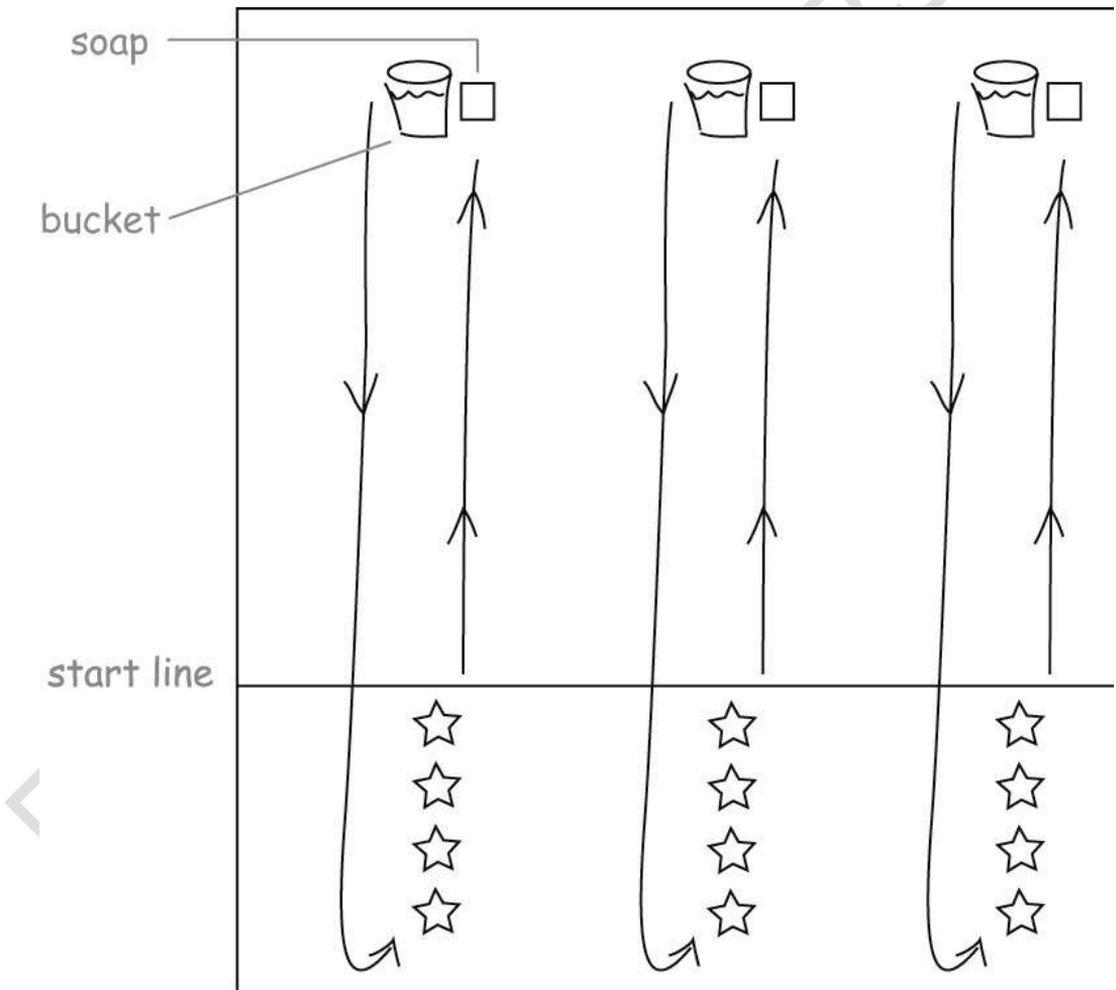
Drawing, showing how pupils stand in a line in this game.

End of Unit Assessment 8

Teaching and learning materials

Teacher's guide, Pupil's book, pictures, water, basin, cup, hoe, towel, soap, sponge, toothbrush, toothpaste, skipping rope, a ball etc.

Assessment techniques:

Introduction

Ask revision questions from the previous lessons.

Examples of questions and their answers

Questions	Answers
1. Give the main parts of the human body.	1. - Head - Trunk - Arms and legs
2. Give three examples of how to clean parts of human body.	2. Washing hands, washing the whole body, doing physical exercises
3. State the importance of washing hands.	3. Helps to prevent diseases caused by poor hygiene
4. Why is it necessary to brush our teeth?	4. - Helps to prevent teeth and mouth diseases - Makes teeth look clean
5. What are the materials used to: - Wash hands? - Brush teeth?	5. - **Washing hands**; Water, soap, cup, basin/bucket, towel. - **Brushing teeth**: Water, toothbrush, toothpaste, cup or glass.

Examples of End of Unit questions and their answers

Questions	Answers
1. Give the main parts of the human body.	1. - Head - Trunk - Arms and legs
2. State the functions of the following parts of human body - Head - Trunk - Arms and Legs	**2. Head**: Thinking, carrying **Trunk**: Links the main parts of the human body. The neck and limbs extend from the trunk **Arms and Legs**: Help people to move and to perform different works but they particularly help people in doing physical exercises (running, jumping, applauding ,skipping ,kicking etc).
3. Give three examples of how to clean parts of human body.	3. Washing hands, washing the whole body, doing physical exercises
4. State the importance of washing hands.	4. Helps to prevent diseases caused by poor hygiene
5. Why is it important to brush our teeth?	5. Helps to prevent teeth and mouth diseases. Makes teeth look clean
6. What are the materials used to: - Wash hands? - Brush teeth?	**6. Washing hands**; Water, soap, cup, basin/bucket, towel. **Brushing teet**h: Water, toothbrush, toothpaste, cup or glass.

8.7. **Additional activities**

8.7.1. **Remedial activities**

1. State any part of the human body?   **Answer**/ Head

2. Is it necessary to brush our teeth? Yes/No. **Answer**/ Yes

8.7.2. **Consolidation activities**

1. State the importance of washing hands. **Answers/** helps to prevent diseases caused by poor hygiene.

2. What are the materials used to: a) wash hands?   b) Brush teeth?

Answer: a) Water, soap, cup, basin/bucket, towel. b) Water, toothbrush, toothpaste,

cup or glass

3. Outline 3 main parts of the human body **Answer**/ Head, trunk, arms and legs

8.7.3. **Extended activities**

What can be done to have healthy human body? **Answer/**   Eating balanced diet and doing physical exercises.

NATURAL AND ARTIFICIAL MATERIALS

9.1. Key unit competence

To be able to differentiate natural materials from artificial (man-made) materials

9.2. Prerequisites

Learners of P1 know many materials as they use them in everyday life. From the churches, they know that there are some things created by God. They also see different things made by human. Ask them some questions to know what they know about materials before starting this new unit.

9.3. Introductory activity and guidance

Guidance on introductory activity

- The introductory activity is in the Student book on page 67.
- Request learners to take their books and observe the image on page 67.
- Ask them to name and shortly describe the images observed.
- Guide them and orient their answers by asking them some probing questions towards the discovery of the new unit name or content titles.

9.4. List of lessons

Lessons	Learning objectives	Number of periods: 6
1. Natural materials	- Define the term "Natural materials" - List natural materials found in the district where the school is located.	2
2. Artificial (man-made) materials	- Define the term artificial materials - List Artificial (man-made) materials found in the district where the school is located.	2
3. End of Unit Assessment		2

Teaching and learning materials to be used in this unit are:

Teacher's guide, Pupil's book, pictures showing soil, stones, wood, water, Metallic mineral resources, wool, animal skin and fur, sand, clay, various buildings, cars, roads, bridges, ship, fork, plate, soap, glass, paper, cement**.**

9.5. Teaching approach for each lesson

Lesson 1: Natural materials

Objectives:

At the end of this lesson, learners should be able to:

- Define the term "Natural materials"
- List natural materials found in the district where the school is located.

Teaching techniques;

Introduction

Form small groups of (5-8) pupils, ask them questions purposely helping them find the meaning of the word "resource" and giving examples found in the district where the school is located.

Putting together all the pupils group works and findings for you to correct and improve.

Example of questions and their answers

Questions	Answers
1. In what natural materials are bricks made?	1. Clay soil
2. What is the use of bricks?	2. Construction works (Building houses, fences etc.)

Soil=Natural material**; Bricks=**Artificial manmade material

A natural resource: is everything which exists naturally and can be used to make a useful artificial material; **e.g.**: Soil, rocks, water, Metallic mineral resources, sand, clay, etc.

Observing/touching

Take pupils out of the classroom and ask them to observe and identify the natural resources found around where the school is located.

Listing the natural resources

Put pupils in groups and then ask them to list names of natural resources they've observed.

e.g.: Soil, rocks, water, Metallic mineral resources, sand, clay, animal skin and fur, etc.

Distinguish between natural and artificial (man-made) materials based on their uses.

Put pupils in small groups and ask them to make discussions helping them differentiate natural resources from Artificial (man-made) materials.
Again, ask them to discuss as they try answering the following questions.

Example of questions and their answers.

Questions	Answers
1. What is the basic characteristic of natural resources?	1. Used to make Artificial(man-made) materials
2. How can you distinguish between natural and Artificial (man-made) materials?	2. Is everything which exists naturally and can be used to make a useful artificial resource.
3. State the use of the following natural resources: Soil, water, Metallic mineral resources, sand and clay	3. • **Soil:** cultivation, building, etc. • **Water**: Drinking, washing, watering plants, etc. • **Sand:** Used in construction • **Clay:** Used to mold different objects like pots, bricks, various drawings • **Metallic mineral resources:** Sold and brought money to the country.

Exercises

Put pupils in groups and give them enough pictures showing natural resources and ask the pupils to state their names and uses.

Assessment

Put pupils in groups and give them questions monitoring each group to know and guide their work

Example of questions and their answers

Questions	Answers
1. What is the meaning of a natural resource?	1. Everything which exists naturally and can be used to make a useful artificial resource.
2. Give 4 examples of natural resources	2. Land/soil, water, sand and metallic mineral resources.

I have discovered that:

A natural resource: is everything which exists naturally and can be used to make a useful artificial resource.

Examples

Clay can be used to produce different Artificial (man-made) materials needed in our daily life.

Lesson 2: Artificial (man-made) materials

Objectives:

At the end of this lesson, learners should be able to:

- Define the term artificial materials
- List Artificial (man-made) materials found in the district where the school is located.

Teaching and learning materials

Teacher's guide, Pupil's book, different pictures showing various buildings , boats, fork, plate, soap, glass, paper, cement, car, roads, bridges etc.

Teaching techniques:

Introduction

Form small groups of 6 pupils and in each group, they discuss with the purpose of understanding the meaning of what is an artificial resource and giving examples.

Examples

- Artificial resource is a man-made resource
- Examples: Different buildings, boats, forks, plate, soap, glass, cement, car, roads, etc.

Observing

- Bring to class some of Artificial (man-made) materials with you or you may also take pupils outside the classroom to observe and identify some of them in their school area.

Examples: Different buildings, cars, bicycle, roads and bridges

Differentiating various Artificial (man-made) materials basing on their uses.

In groups, ask the pupils to list various Artificial (man-made) materials basing on their uses. Guide or monitor the group discussions by asking questions.

Example of questions and their answers

Questions	Answers
1. What is the characteristic of Artificial (man-made) materials?	1. They are made by people and they may be improved.
2. State the importance of the following Artificial (man-made) materials? - Buildings - Car - Bicycle - Roads - Bridges	2. **Buildings**: Habitat for people, commercial purposes, schools, hospitals and offices. **Car**: Transportation of people and goods **Bicycle**: Transportation of people and goods **Roads:** - Promote trade, people's movement - Promote access to employment, social, health and education services **Bridges:** Provide passage over the obstacle (water body, valley etc.)

Exercises

Put the pupils in groups and give them enough pictures of Artificial (man-made) materials. And ask them to list the names of the observed pictures and their uses.

Assessments

Put the pupils in groups and give them questions, closely monitoring and guiding each group's work.

Example of questions and their answers

Questions	Answers
1. Explain the meaning of an artificial resource?	1. Everything that is made by people and it may be improved.
2. Give 3 examples of Artificial (man-made) materials that you find where you live.	2. Buildings, plates, cement
3. State the importance of the following resources - Buildings - Plates - Cement	3. - **Building**: Habitat for people, commercial purposes, schools, hospitals and offices. - **Plates**: Serving ready food for eating - **Cement**: Used in building houses, bridges, roads, etc.

I have discovered that:

Artificial (man-made) materials: Are resources that are needed in our daily life.

They are made by people and they may be improved too and be used in different works.

Example of Artificial (man-made) materials and their uses

Questions	Answers
1. Buildings	1. Habitat for people, commercial purposes, schools, hospitals and offices.
2. Plates	2. Serving ready food for eating
3. Boats	3. Transport of people and goods in water (Lakes, Oceans, Sea, Rivers, etc...)
4. Cement	4. Used in building houses, bridges, roads, etc.

9.6. End of Unit Assessment 9

Teaching and learning materials

Teacher's guide, Pupil's book, pictures showing soil/land, rocks, wood, Water, metallic mineral resources, wool, animal skin and fur, sand, buildings, clay, cars, roads, bridges, boats, fork, soap, glass, paper, cement etc.

Assessment techniques:

Introduction

Ask revision questions on the previous lessons

Examples of questions and their answers

Questions	Answers
1. Explain the meaning of a natural resource	1. Everything which exists naturally and can be transformed into a useful artificial resource.
2. Give 4 examples of natural resources.	2. Soil/land, sand, water, metallic mineral resources
3. Give 4 examples of Artificial(man-made) materials	3. Buildings, soap, boats, cement.

Exercises

Together with the learners remind each other the characteristics of natural and Artificial (man-made) materials.

Monitor what pupils are talking about and appreciate their works/activities.

Encourage pupils to work as a team and also appreciate the pupils who performed well.

Examples of End Unit Assessment questions and their answers

Questions	Answers
1. Give 4 examples of natural resources.	1. Soil/land, clay, water, metallic mineral resources
2. Give 4 examples of Artificial(man-made) materials	2. Buildings, soap, boats, cement.
3. State the use of the following natural resources: Soil/land, water, metallic mineral resources, and clay	3. - **Soil/land:** cultivation, building, etc. - **Water**: Drinking, washing, watering plants, etc. - **Metallic mineral resources:** Sold and bring money to the country, used to make some useful resources - **Sand:** Used in construction - **Clay:** Used to mold different objects like pots, bricks, various drawings, stoves etc.

Put the following resources in their categories / groups:

Forest, plastic chair, table, stones, sand, telephone, wheelbarrow, papers, Tin, school, cement, nails, Iron, tea, coffee, roads, and church.

Natural resources	Artificial(man-made) materials
1. Forests, stones	1. Plastic chair, table
2. Sand	2. Telephone, wheelbarrow
3. Tin, Iron	3. Papers, school
	4. Cement, nails
	5. Tea, coffee, roads
	6. Church

9.7. Additional activities

9.7.1. Remedial activities

1. What is an artificial resource? **Answer**/ Resource made by the people

2. Give example of an artificial resource **Answer**/ notebook,

9.7.2. Consolidation activities

1. Give at least 4 examples of Artificial(man-made) materials **Answer/** Desks, fork, plates, roads

2. State the uses of the following Artificial(man-made) materials
   a) Buildings   b) Cement

Answers: Building: Habitat for people, commercial purposes, schools, hospitals and offices.

Cement: Used in building houses, bridges, roads, etc.

2. Outline 4 examples of natural resources. **Answer**/ Land, water, Metallic mineral resources, sand

9.7.3. Extended activities

1. Distinguish artificial (man-made) materials from natural resource

Answer/ An artificial resource is everything that is made by people and it may be improved whereas a natural resource is everything which exists naturally and can be transformed into a useful artificial resource.

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