

THE REPUBLIC OF UGANDA

Ministry of Education and Sports

Primary School Curriculum

Primary 4 – Integrated Science Syllabus



National Curriculum Development Centre

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The National Curriculum Development Centre (NCDC) takes responsibility for any shortcomings that might be identified in the publication and welcomes suggestions for effectively addressing the inadequacies. Such comments and suggestions may be communicated to NCDC through: P.O. Box 7002, Kampala or E-mail admin@ncdc.go.ug or www.ncdc.go.ug .

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FOREWORD

The Curriculum for Primary Four

The Curriculum for lower primary (P1-3) which the learner in primary four went through was organized around different themes (Thematic) that were familiar to the learner. The main emphasis of that curriculum was numeracy, literacy and life skills. The medium of instruction for most children was the local language. English was taught as a subject.

In this curriculum for primary four, children are required to change from the theme-based to subject-based learning. They are also required to begin learning in English. P4 learners will have textbooks. The teacher will encourage learners to do all activities and make responses in English. These phenomena make primary four a transitional class.

The Primary Four Curriculum revisits content concepts and skills that have already been learnt in local languages as well as introducing some new content and concepts.

Learners and teachers will start the year using local language when necessary and there will be steady development in the use of English as the medium of instruction. By the end of primary four the local language will be used only for explaining the most difficult concepts. Written materials including textbooks will be in English. Local languages will continue to be taught as subjects to reinforce children's literacy.

The subjects to be taught in this Primary Four Curriculum include: English, Mathematics, Social Studies, Religious Education (Christian Religious Education – CRE) and (Islamic Religious Education – IRE), Integrated Science, Creative Arts & Physical Education (CAPE) and Local Language.

I, therefore, recommend this Primary Four Curriculum for its implementation in the on-going reforms in Uganda.

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The National Aims of Education

The Curricula in both Thematic Curriculum and Upper Primary have been designed to address the National Aims of Education as specifically stated in the Government White Paper on the Education Policy Review Commission Report (1992). The aims are:

- a) To promote understanding and appreciation of the value of national unity, patriotism and cultural heritage, with due consideration to internal relations and beneficial interdependence;
- b) To inculcate moral, ethical and spiritual values in the individual and to develop self discipline, integrity, tolerance and human fellowship;
- c) To inculcate into Ugandans a sense of service, duty and leadership for participation in civic, social and national affairs through group activities in educational institutions and the community;
- d) To promote scientific, technical and cultural knowledge, skills and attitudes needed to enhance individual and national development;
- e) To eradicate illiteracy and equip the individual with basic skills and knowledge to exploit the environment for self-development as well as national development; for better health, nutrition and family life, and the capacity for continued learning; and
- f) To equip the learners with the ability to contribute to the building of an integrate, self-sustaining and independent national economy.

Aims and Objectives of Primary Education in Uganda

The Government White Paper on Education (1992) state that aims and objectives of Primary Education should include the following:

1. To enable individuals to acquire functional literacy, numeracy and communication skills in Ugandan language and English.
2. To develop and maintain sound mental and physical health;
3. To instill the value of living and working cooperatively with other people and caring for others in the community.
4. To develop cultural, moral and spiritual values of life;
5. To inculcate an understanding of and appreciation, for, the protection and utilization of the natural environment using scientific and technological knowledge.
6. To develop a sense of patriotism and unity, an understanding of one's rights and responsibilities and an appreciation of the need to participate actively in civic matters.
7. To develop pre-requisite for continuing education and development.
8. To develop adequate practical skills for making a living
9. To develop appreciation for the dignity of work and for making a living by one's honest effort;
10. To develop the ability to use the problem-solving approach in various life situations; and

11. To develop discipline and good manners

Background

This is Primary Four Science Syllabus. In Primary 1-3 learning is based on themes, learning outcomes and competences. Most of the Science related competences are covered under the literacy strands of the Thematic Curriculum.

Learners in Primary Four are expected to have developed sufficient basic literacy skills both in local and English language. The teacher can now use English as a medium of instruction. This will help learners to form correct concepts, relate and consolidate what was learnt in earlier classes.

The instructional process, content and learner's text will have to be kept simple since this is a transition class and children are experiencing science subject based learning for the first time.

Rationale

This revised Primary Four (P4) Science syllabus has been designed to consolidate the basic literacy and numeracy skills acquired during the Thematic Curriculum. It is also intended to provide the learner with knowledge on basic science, health, agriculture and environmental knowledge, skills, attitudes, practice and values important to a P4 learner.

The main changes which have been made in this Primary Four syllabus are:

- Topic overflow from P1-3 e.g. seed germination, rabbits and personal hygiene have been included.
- Contents in some topics have been reduced in order to keep the learning experience light and simple. The more complex content has been shifted to upper classes.
- The scope and sequencing of content has been based on progression of outcomes and competences.
- Literacy skills and Language competences have been included in each topic to clarify concepts.
- Possible life skills which can be developed have been suggested in each topic.
- Subject competences and language competences have been included to replace objectives. These are arranged in order of cognitive levels namely knowledge, comprehension and application.
- Language competences have been included especially to reinforce literacy skills and to help clarify concepts.
- General outcomes instead of aims and objectives have been provided for each topic.
- The background for each topic has been given together with other necessary guidance to the teacher.
- Some topics have been re-designed, while others have been transferred to higher classes or other disciplines

NB: Bilingual medium of instruction is recommended but Learners' Text and all written responses must be in English.

General Methodology

It is strongly suggested that the teacher uses those methods and activities which put the learner at the centre of the teaching/learning process. The active verbs used in expressing the learning competences are all directed to the learner. This implies that as a result of teaching/learning process, the learner should exhibit these competences.

The learners' text is activity based to emphasize the continuous learner centred approach. The teacher is expected to constantly help relate science to real life situations and experiences. Not all schools in Uganda may have same learning environment. The teacher should feel free to use examples which provide the learner with the opportunity to acquire the same knowledge, concepts, skills, values and competences.

The methods a teacher chooses to use should be those which contribute towards the achievement of competences, learning outcomes and eventually lead to the achievements of aims and objectives of primary education. Such methods therefore, should cater for the spiral nature of the science syllabus. At Primary Four the topics introduced and basics covered should pave way for further study of the topics in upper classes. Primary four class will be useful in preparing learners for effective participating in P5-7

Assessment Guidelines

In principle continuous assessment is recommended and should be based on the summarized competences suggested in each topic. All assessments of learning shall be based on the learning competences given in this syllabus.

Like in P1-3, assessment guidelines are provided to guide the teacher carry out, manage and keep records on each individual learner, class progress and end of term performance. The teacher is encouraged to record those innovative products of the learner that may not have been planned but indicate positive progress.

Besides the Continuous Assessment, there shall be end of term and end of year assessment carried out and records kept.

General Learning Outcomes

When the learners go through this syllabus they will be able to:

- Survey, identify and distinguish the attributes of plants, animals, other objects and conditions in the environment.
- Use characteristics to compare and classify animals, plants and other objects in the environment.

- Identify the features and describe the functions of different parts of the human body.
- Take care of the different parts of their bodies and practice good health habits.
- Keep safe and avoid accidents.
- Understand the conditions for proper growth of living things.
- Apply correct scientific processes in investigations of various phenomena.
- Show knowledge of and take care of the environment for its sustainable use.

Specific indicators

The learner should be able to:

1. Identify and distinguish the attributes of plants, animals, other objects and conditions in the environment by;

1. Making trips and excursions

- Observing
- Collecting
- Grouping / classifying
- Recording
- Reporting

2. Use characteristics to compare and classify animals, plants and other objects in the environment by;

2. Making trips and excursions

- Collect specimens of plants and animals
- Observing plants and animals grow
- Grouping / classifying plants and animals (kingdoms)
- Comparing plants and animals
- Recording
- Reporting
- Caring

3. Identify the characteristics and functions of different parts of the human body by;

- Identifying and naming the different parts
- Describing functions of each part
- Caring for the different parts of the body

- Relating the different parts of the body to human activities

4. Take care of the different parts of the human body and practice good health habits by;

- Identify the different parts of the body
- Naming different activities done in order to keep the body clean.
- Caring for different parts of the body
- Keeping healthy and practicing good health habits
- Having self-concept, confidence and self-esteem

5. Keep safe and avoid diseases and accidents by

- Identifying ways of keeping safe from diseases and accidents at home and in the community
- Identifying common accidents and first aid given for each.
- Identifying dangers in the environment and taking precautions.

6. Understand the conditions for proper growth of living things by

- Identify the different conditions for proper growth
- Experiment the different conditions for proper growth
- Recording
- Reporting

7. Apply correct scientific processes in investigations of various phenomena by

- Identifying problems
- Designing and practice scientific investigation processes.
- Examining the evidence useful in inferences.
- Demonstrating the skills of observation, classification accurate measurement and recording,
- Making predictions, formulating hypothesis for evidence.
- Communicating findings accurately and honestly
- Analysing causes and effects
- Using a variety of sources for acquiring information
- Recording information with reasonable accuracy

8. Show knowledge of and take care of the environment for sustainable use by

- Make and record weather readings accurately
- Identify various resources in the environment
- Caring for the resources in the environment
- Making and using suitable labour saving devices to save time and energy
- Practice using the available resources sustainably
- Making an economic contribution to the individual family and community.
- Participate in environment conservation activities.

P4 Integrated Science Syllabus Topic Outline

TERM I

Theme	Topic	Sub-topics	Periods
1. The World of Living Things	Plant Life	<ul style="list-style-type: none">• Flowering plant<ul style="list-style-type: none">- Parts of a Flowering Plant- Functions of different parts- Seeds- Uses of plants to people	25
2. The World of Living things	Growing crops	<ul style="list-style-type: none">• Growing common annual crops (maize, beans / sorghum)<ul style="list-style-type: none">- Common annual crops in the community- Garden tools, equipment and materials- Practices for growing an annual crop- Common signs of disease and pest damage in crops- Common pests- Ways of controlling pests and diseases	25

3. Our Environment	Weather changes around us	<ul style="list-style-type: none"> • Changes in the weather <ul style="list-style-type: none"> - The water cycle - Rain fall - Simple weather chart 	10
4. Human Health	Personal Hygiene	<ul style="list-style-type: none"> • Keeping clean <ul style="list-style-type: none"> - Importance of keeping our bodies clean - Ways of keeping clean: body, clothing and bedding - Things sued for keeping our bodies clean - Keeping bedding and clothing clean - Importance of keeping our clothing and bedding clean - What can go wrong if we do not keep clean 	10

TERM II

Theme	Topic	Sub-topics	Periods
5. Human Health	Our Food	<ul style="list-style-type: none"> - Classes of food and their values - Uses of food - Deficiency diseases - How food gets contaminated - Preventing food contamination - Preparing simple dishes 	25
6. Human Body	Human Body Organs	<ul style="list-style-type: none"> - Major organs of the human Body - How the Human Body works 	10
7. Human Body	The Teeth	<ul style="list-style-type: none"> - Sets of teeth - Functions of the different types of teeth - Types and structure of teeth 	15

Theme	Topic	Sub-topics	Periods
		<ul style="list-style-type: none"> - Care of the teeth - Diseases and disorders of the teeth 	
8. Human Health	Sanitation	<ul style="list-style-type: none"> - Sanitation concerns - Importance of sanitation - Germs and diseases - Ways of maintaining sanitation 	20

TERM III

Theme	Topic	Sub-topics	Periods
9. Human Health	Communicable Intestinal diseases and worm infestation.	<ul style="list-style-type: none"> • Diarrhoeal diseases <ul style="list-style-type: none"> - Prevention, control and treatment of diarrhoeal diseases. - Mixing and making oral rehydration salts / solutions (ORS) making sugar, salt solutions (SSS). • Intestinal worms <ul style="list-style-type: none"> - Ways of entry into the body - Signs and symptoms of worm infestation and diseases - Management of diseases and worms. 	
10. Human Health	Vectors and diseases	<ul style="list-style-type: none"> • Examples of Disease Vectors <ul style="list-style-type: none"> - Characteristics of disease vectors - Structure - Life cycle - Where they live - Diseases associated with each vector - Prevention, control and treatment 	20
11. Human Health	Accidents, Poisoning	<ul style="list-style-type: none"> • Accidents 	10

Theme	Topic	Sub-topics	Periods
	and First aid	<ul style="list-style-type: none"> - Causes - Types of injuries - Types of fractures • Poisoning: causes, types of poisoning • First Aid and First Aid Kit <ul style="list-style-type: none"> - Care 	
12. World of Living Things	Animal Life	<ul style="list-style-type: none"> • Rabbits <ul style="list-style-type: none"> - External parts of a rabbit - Types of rabbits - Housing rabbits - Feeding rabbits - Breeding - Hygiene - General signs of a sick rabbit - Common diseases and parasites - Control and treatment - Keeping rabbit records 	20

TERM I

THEME: World of Living Things

Topic: Plant Life

General Background

Plants are very useful to both people and animals. Many common plants multiply by means of seeds. Seeds are formed from flowers of the flowering plants. This topic will help learners acquire the basic scientific knowledge of plant life through studying the structure of flowering plants in the local environment. At the start of the topic some seeds e.g. Beans and maize should be planted ready to use in the experiments recommended to study germination. There has been an introduction to this topic in P1-3 and this work should be revised. After investigating conditions for germination, observing the structure of seedlings, the class should be guided to compare the structure of seedlings with mature plants of the same group.

Learning Outcomes:

- Surveys, identifies and distinguishes the attributes of plants in the environment.
- Understands the conditions for germination and proper growth of flowering plants.
- Uses characteristics to classify a plant by studying its structure

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Identifies the external parts of a flowering plant.• Labels the parts of a flowering plant.• Discusses the uses of plants• Discusses the functions of the different parts of the flowering parts.• Investigates the conditions necessary for germination.	<ul style="list-style-type: none">• Names the different parts of a flowering plant orally in local language and in English.• Labels with correct spelling a diagram showing the different parts of a flowering plant.• Reads / writes short sentences on uses of plants to people• Reads/writes short	<ol style="list-style-type: none">1. Parts of a flowering plant:<ul style="list-style-type: none">- roots- stems- leaves- flowers2. Functions of each part of a flowering plant3. Seeds<ul style="list-style-type: none">- Seed structure.	<ol style="list-style-type: none">1. Planting seeds2. Collecting different flowering plants3. Naming, the parts of the collected plants.4. Drawing, labelling the parts of the collected plants.5. Discussing uses of plants to people6. Describing the

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
<ul style="list-style-type: none"> Describes the structures of a seed. 	<ul style="list-style-type: none"> sentences on conditions necessary for seed germination. Draws and labels diagrams of a flowering plant. 	<ul style="list-style-type: none"> Conditions necessary for germination <p>4. Uses of plants to people:</p> <ul style="list-style-type: none"> food medicinal sold for money construction firewood charcoal 	<p>structures of a germinating seed</p> <p>7. Experimenting in pairs with local seeds.</p> <ul style="list-style-type: none"> Seed viability Conditions for germination Noting the progress in germinating seed.

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> Creative thinking Critical observation Problem solving Decision making Effective communication 	<ul style="list-style-type: none"> Fluency Audibility Logic Care Responsibility Appreciation Taking decisions 	<ol style="list-style-type: none"> Name different parts of a flowering plant. Describe the functions of parts of the flowering plant. Describe types and conditions necessary for germination.

THEME: World of Living Things

Topic: Growing Crops

General Background

Most of your learners know about different crops grown in locality and county. In Social Studies they name other crops that grow in Uganda. Although each crop is grown differently, there are some common activities that are carried out when growing any crop using different garden tools, equipment and materials. Crops can be used as food or sold to get money. Crops should be cared for well by protecting them from pests and diseases. Exposing learners to seeing, feeling and smelling real crops, enhances understanding and development of the concepts you intend to develop especially to learners with special educational needs.

Learning Outcome:

- Demonstrate skills in growing crops for increased output.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Identifies common crops in the community.• Groups the common crops into perennials and annuals.• Draws and labels annual crops.• Identifies common tools, equipment and materials used in growing annual crops.• Describes the uses of common tools, equipment and materials.• Draws and labels common tools and equipment.• Identifies crop growing	<ul style="list-style-type: none">• Names the common crops in local language and in English.• Reads / writes words with correct spelling• Draws and labels annual crops• Recites rhymes / poems about crops.• Names the common tools, equipment and materials.• Reads and spells the words correctly• Draws and labels the tools.• Writes a short story about tools.• Names the crop growing	<ol style="list-style-type: none">1. Common crops:<ul style="list-style-type: none">- Maize- Sorghum- Peas- Ground nuts- Bananas- Beans- Cassava- Coffee- Tea- Cotton2. Groups of crops<ul style="list-style-type: none">- Perennial crops: coffee, tea, bananas- Annual crops: maize, sorghum, peas, ground nuts, cassava,	<ul style="list-style-type: none">• Naming common crops• Grouping common crops into perennials and annuals.• Identifying common tools, equipment and materials used in growing annual crops.• Describing the uses of tools, equipment and materials used in growing annual crops.• Drawing and labeling garden tools and equipment.• Naming the crop

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
<p>practices.</p> <ul style="list-style-type: none"> • Describes crop growing practices. • Demonstrates some of the crop growing practices. • Identifies some common signs of pest and disease damage in crops. • Describes some signs of pest and disease damage in crops and ways of controlling them. 	<p>practices.</p> <ul style="list-style-type: none"> • Reads and writes the words correctly. • Acts a dialogue about crop growing. • Describes common signs of pest and disease damage in crops. • Reads and writes sentences correctly. • Writes a short story about pest and disease damage in crops and ways of controlling them. 	<p>beans, cotton</p> <ol style="list-style-type: none"> Garden tools, equipment and materials: <ul style="list-style-type: none"> - hoe, spade, rake, wheel barrow, pegs, shovel, pick axe, pot, hand folk, pangas, watering can, string, garden fork, trowel, secateur pruner, axe, pail, jerrican, sprayer, knives. Crop growing practices <ul style="list-style-type: none"> - Land clearing, digging / ploughing, seed selection, planting, gap filling, weeding, thinning, mulching, manuring, drying, transplanting, pruning, spraying, harvesting, record keeping, storing, watering Common signs of pest and disease damage in crops <ul style="list-style-type: none"> - Holes in leaves, fruits, seeds, roots and stems of crops 	<p>growing practices.</p> <ul style="list-style-type: none"> • Describing what is done at each stage. • Demonstrating some of the crop growing practices. • Acting a dialogue about crop growing practices. • Describing some signs of pest and disease damage in crops and the ways of controlling them.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
		<ul style="list-style-type: none"> - Spots on leaves, fruits, seeds, roots and stems of crops. - Change of colour in leaves, fruits and stems. - Rotten plant parts. - Deformed plant parts. <p>6. Ways of controlling pests and diseases in garden</p> <ul style="list-style-type: none"> - Spraying - Planting clean seeds - Uprooting diseased crops - Timely weeding - Early planting - Use of scare crows. 	

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> • Effective communication • Creative thinking • Critical observation • Decision making • Problem solving 	<ul style="list-style-type: none"> • Fluency • Confidence • Responsibility • Appreciation • Making right choices • Taking decisions • Care 	<ol style="list-style-type: none"> 1. Draw and label common tools and equipment used for growing annual crops. 2. Demonstrate some crop growing practices e.g. mulching, pruning, weeding. 3. Describe signs of pest and disease damage in crops

THEME: Our Environment

Topic: Weather changes around us

General Background

This theme has been studied from P.1 – 3. At this level learners should be guided to study weather changes, record weather measurements and focus on simple study on rain formation. Changes in weather and climate affect our environment. In this topic, learner's scientific skills of making observations, recording and interpreting are developed by measuring these changes in rainfall and temperature as developed changes in weather. The learner must also become aware of the variation of climate conditions in different parts of Uganda. The importance of the water cycle should be emphasized. Experiments carried out to measure rainfall during the rainy season and to measure temperature using a thermometer should be related to daily experiences of learners.

Although each school is encouraged to have weather instrument corner, If possible a visit to a weather station should be arranged. You should note that this topic will be more meaningfully taught when the weather changes actually exist. You should be flexible enough to change the lessons to a more suitable time.

Learning Outcomes:

- Make and interpret weather records accurately.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Describes the changes in the weather throughout the year.• Describes weather patterns and climate changes in different parts of Uganda.• Makes accurate measurements of rainfall• Uses a thermometer to	<ul style="list-style-type: none">• Describes the changes in weather orally.• Reads, spells and writes the words related to weather and draws pictures to illustrate it.• Explains orally the water cycle.• Names the parts of a thermometer.• Distinguishes between	<ol style="list-style-type: none">1. Changes in the weather.<ul style="list-style-type: none">- sunshine- clouds- rain- wind- temperature2. The water cycle<ul style="list-style-type: none">- sources- water in air3. Rainfall<ul style="list-style-type: none">- rain clouds- effects of rain	<ol style="list-style-type: none">1. Making a weather chart.2. Recording the daily weather changes on the charts.3. Reporting on their findings.4. Drawing and labelling the rain cycle5. Draw and label a thermometer.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
measure temperature. • Draws a simple weather chart.	rain and rainfall, weather and climate, sky and atmosphere.	- importance of rainfall 4. Simple weather chart	

Life Skills	Values	Assessment Activities
• Effective communication • Critical thinking • Creative thinking • Decision making • Coping with stress • Problem solving	• Logic • Patience • Endurance • Taking decision • Fluency • Evaluating facts • Prediction • Self awareness	• Draw the rain cycle • Record the daily weather changes in your school • Draw a rain gauge and a weather thermometer • Describe the rain cycle (for learners with visual impairments and those with severe motor problems).

THEME: Human Health
Topic: Personal Hygiene

General Background

Personal hygiene is a very important element in one's life. It is all about keeping clean in every aspect of our lives. Learners need to increase their awareness of personal hygiene, i.e. keeping the body, clothing and bedding clean. At this level you need to encourage the learners to continue to develop desirable habits for good personal hygiene. Simple health messages can be displayed in the classroom and around the compound to encourage good health habits. Practical health parades were done in P1-2. The teacher needs to devise a means of ensuring regular checking on learners' personal hygiene. Build on what was done in P1-2 to ensure personal hygiene.

Learning Outcomes:

- Demonstrate good practice of keeping clean.
- Appreciate the importance of keeping clean.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none"> • States why we keep clean. • Identifies ways of keeping clean. • Demonstrates keeping clean. • Discuss what can go wrong if we do not keep clean 	<ul style="list-style-type: none"> • Discusses orally why we keep clean. • Listen to stories on keeping clean. • Reads and writes words, related to why we keep clean. • Reads and writes structured story of how to keep clean • Draws and labels things we use to keep clean 	<ol style="list-style-type: none"> 1. Importance of keeping our bodies clean <ul style="list-style-type: none"> - Remove dirt, remove germs, avoid bad smell, keep healthy, be smart. 2. Ways of keeping clean 3. Things used for keeping our bodies clean 4. Keeping bedding and clothing clean 	<ol style="list-style-type: none"> 1. Talking about what we do each day to keep clean 2. Listing things we use to keep clean. 3. Collecting and displaying materials used to keep clean 4. Practicing activities for keeping ourselves clean, e.g. <ul style="list-style-type: none"> - Cutting the nails, brushing the teeth, washing the body and washing clothes. - Discussing what can go wrong if we do not keep clean

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> • Self awareness • Self esteem • Assertiveness • Problem solving • Creative thinking 	<ul style="list-style-type: none"> • Care • Responsibility • Concern • Appreciation • Acceptance 	<ol style="list-style-type: none"> 1. Discuss how and why to keep clean 2. Draw and name materials for keeping clean 3. Write short sentences on what, how and why we keep clean.

TERM II

THEME: Human Health

Topic 1: Our Food

General Background

Food is important for the growth and development of living things. We need food with various food values. We need to feed on a variety of foods. The learners should be encouraged to carry out practical activities such as collecting, talking about and grouping foods of different food values. This will help them to understand what their bodies require to be healthy and the diseases that occur when there are deficiencies in their diet. They should also be aware of how food becomes contaminated and how to prevent this. If possible you should arrange for learners to visit nutritional centers and to observe pictures of children with diseases caused by deficiency in diet.

Learning Outcomes:

- Show scientific knowledge and demonstrate skills of handling food safely
- Identify classes, appreciate different types and know the importance of proper food values.
- Recognize diseases caused by food deficiency

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Identifies classes of food and their values.• Describes the uses of food values to the body.• Describes how food gets contaminated• Practices proper handling of food• Identifies some deficiency diseases.• Prepares local dishes	<ul style="list-style-type: none">• Names classes of food and their values.• Reads and write words, sentences and stories concerning food values• Recites rhymes about uses of food to us.• Draws and labels diagrams of the different foods.• Writes names of different dishes• Writes and reads a story	<ol style="list-style-type: none">1. Classes of food – the 3Gs<ul style="list-style-type: none">- go foods- glow foods- grow foods2. Food values<ul style="list-style-type: none">- Carbohydrates- Vitamins and minerals- Proteins3. Uses of food values to the body<ul style="list-style-type: none">- growth- energy- protection4. Deficiency diseases	<ol style="list-style-type: none">1. Using a collection of everyday foods name and label their values2. Describing how to handle food properly3. Describing signs and symptoms of deficiency diseases and those caused by eating contaminated food.4. Preparing local dishes

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
using common foods in the community.	about food preparation. <ul style="list-style-type: none"> Writes stages of preparation of different local dishes. 	<ul style="list-style-type: none"> Night blindness Kwashiorkor Marasmus Goiter Beriberi Scurvy rickets 5. How food gets contaminated <ul style="list-style-type: none"> dirty hands dirty containers dusty/dirty surrounding flies 6. Prevention of food contamination <ul style="list-style-type: none"> cooking well covering food serving in clean containers serving in clean environment 7. preparation of simple dishes using local foods <ul style="list-style-type: none"> - 	

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> Effective communication Critical thinking Empathy Decision making Creative thinking 	<ul style="list-style-type: none"> Responsibility Care Sympathy Appreciation Concern 	1. Name classes of food 2. Explain how food gets contaminated 3. Talk about the diet chart displayed in the class.

THEME: Human Body

Topic 2: Human Body Organs

General Background

Learners now know the external parts of their bodies. This topic describes the major organs of the human body, their location and how they work. You should make sure learners understand the use of each organ and the role it plays in the working of the human body.

Learning Outcome:

- Locate and name the major organs of the human body.
- Appreciate the importance of the major organs of the human body.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Names different organs of our body.• States the function of the different organs of our body.• States four ways in which our body works.• Draws and labels the different human body.	<ul style="list-style-type: none">• Reads and writes the names of the major organs in local language and English.• Reads and answers simple comprehension questions on how the human body works.• Tells a story about body organs• Recites a rhyme about how the body works.	<ol style="list-style-type: none">1. Major organs of the human body<ul style="list-style-type: none">- eyes- brain- ears- stomach- urinary bladder- heart- lungs- liver- kidneys2. How the human body works<ul style="list-style-type: none">- takes in food and oxygen- uses food and oxygen to get energy- carries food and oxygen to different parts of the body- removes wastes.	<ul style="list-style-type: none">• Naming different organs of our body.• Drawing a diagram of human body showing the major organs.• Labelling the major organs of the human body.• Matches the labels to a diagram of the major organs of our body.• Drawing / modelling a human body in clay.• Story telling• Reciting a rhyme about body functions

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> • Critical thinking • Creative thinking • Effective communication • Self-esteem • Decision making • Self awareness 	<ul style="list-style-type: none"> • Logic • Care • Responsibility • Acceptance • Confidence • Fluency 	<ul style="list-style-type: none"> • Name different organs of the body • Match the labels to major organs of a diagram of the body • State the functions of the different organs of the human body.

THEME: Human Body

Topic 3: The Teeth

General Background

Oral health is important in maintaining our health. Learners of P4 age may have had an experience with their oral health. You should develop in the learners the skills and practices that promote their oral health. You should help the learners to identify and describe the different types of teeth and their functions. Learners should also know how to care for their teeth and the simple diseases which can affect them if not cared for properly.

Learning Outcome:

- Identify the characteristics and functions of different types of teeth.
- Take care of teeth
- Describe different diseases of teeth.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Identifies the different sets of teeth.• Describes the different types of teeth and their functions.• Identifies the diseases and disorders of the teeth.• Demonstrates how to brush teeth correctly.• Practices habits that promote oral health.• Draws different types of teeth with correct	<ul style="list-style-type: none">• Names different types of teeth.• Reads and writes words, sentences and stories about oral health.• Draws and labels the different types of teeth.• Tells stories in proper sequence about their experiences on removing a bat teeth.	<ol style="list-style-type: none">1. Sets of teeth<ul style="list-style-type: none">- milk teeth- permanent teeth2. Types of teeth<ul style="list-style-type: none">- canines- incisors- pre-molars- molars3. Functions<ul style="list-style-type: none">- cutting- tearing- grinding- chewing4. Teeth structure<ul style="list-style-type: none">- enamel- crown	<ol style="list-style-type: none">1. Matching different types of teeth to diagrams.2. Drawing and labelling teeth structure.3. Drawing diagrams of different types of teeth and labelling them.4. Practising correct brushing of teeth and correct maintenance of the mouth.

labellings.		<ul style="list-style-type: none"> - neck - root <p>5. Care of our teeth</p> <ul style="list-style-type: none"> - brushing - flossing - regular dental check up - eating correct food - use tooth paste <p>6. Teeth diseases and disorders</p> <ul style="list-style-type: none"> - dental cavity - dental caries - tooth cracks - dental plaque - improper growth - broken teeth 	
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Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> • Effective communication • Self awareness • Critical thinking • Problem solving • Decision making • Self-esteem • Empathy 	<ul style="list-style-type: none"> • Logic • Confidence • Acceptance • Care • Responsibility 	<ol style="list-style-type: none"> 1. Name the different types of teeth in the jaw. 2. Name the diseases and disorders of the teeth. 3. Describe types of teeth and their functions.

Theme: Human Health

Topic 4: Sanitation

General Background

Sanitation is all about keeping our surroundings clean. We need a clean environment to maintain our hygiene. Sanitation concerns in our communities should be addressed aggressively if diseases have to be reduced. Communities should be equipped with skills to handle sanitation challenges. Learners should be aware that they too, can help and make a difference by being aware of the importance of good sanitation and carrying out activities of keeping the environment clean. In this topic the learners will also learn about germs and diseases, building on the knowledge they gained in P1-3 on how to keep our homes clean.

Learning Outcome:

- Understand the importance of proper sanitation and practise basic habits to avoid germs and diseases.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• States what sanitation is.• Discusses the importance of proper sanitation• Explains what germs are.• Discusses how the germs spread.• Describes the different ways of maintaining proper sanitation.	<ul style="list-style-type: none">• Describes in English what good sanitation is• Reads and writes words, sentences, stories, recite rhymes about keeping the local environment clean• Draws pictures about activities to keep the environment clean	<ol style="list-style-type: none">1. What sanitation is2. Importance of good sanitation in our environment3. Germs and diseases<ul style="list-style-type: none">- What they are- Where they are found- How they are spread- The 4Fs germ path- How they cause rotting4. Ways of protecting against germs and diseases in the environment: school, on the way and homes.	<ol style="list-style-type: none">1. Surveying the sanitation situation in our environment.2. Writing a list of identified sanitation concerns.3. Drawing and labelling diagrams of how they spread.4. Describing the germ path.5. Carrying out activities of keeping the environment clean.6. Experimentation on rotting

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> • Effective communication • Self-awareness • Self-esteem • Critical thinking • Creative thinking • Problem solving • Decision making 	<ul style="list-style-type: none"> • Responsibility • Care • Love • Appreciation • Respect 	<ol style="list-style-type: none"> 1. Name the breeding places for germs. 2. List ways of keeping the environment clean. 3. Describe the 4Fs germ path.

Term III

THEME: Human Health

Topic: Communicable intestinal diseases & worm infestation

General Background

Learners have learnt about personal hygiene and sanitation. Diseases and worm infestations are some of the things which can cause ill health. Learners should be made aware of the types of worms and diseases and their modes of spread. Guide them to develop basic skills of managing the diseases where prevention has failed. They should appreciate the importance of avoiding diseases and worm infestations especially through proper sanitation and proper personal hygiene.

Learning Outcome:

- Identify and explain how intestinal diseases and worm infestations are spread and managed.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none"> • Identifies diarrhoeal diseases. • Describes the causes of diarrhoeal diseases and how they can spread. • Demonstrates how to mix and administer oral rehydration solution (ORS) and make salt, sugar, solution (SSS). • Identifies types of worms. • Explains how worms enter the body. • Describes signs and 	<ul style="list-style-type: none"> • Names diarrhoeal diseases. • Describes the steps of making oral rehydration solution (ORS). • Reads, writes words, sentences, stories, recites rhymes, poems and acts dialogues related to vectors and diseases. • Draws and labels different types of worms. 	<ol style="list-style-type: none"> 1. Diarrhoeal diseases <ul style="list-style-type: none"> - Diarrhoea - Dysentery - Cholera - Typhoid 2. Causes of intestinal common communicable diseases <ul style="list-style-type: none"> - Bacteria - Virus - Protozoa - Worms 3. How some common intestinal communicable diseases are spread through 4Fs. 4. Signs and symptoms of common intestinal communicable 	<ol style="list-style-type: none"> 1. Naming common communicable diseases. 2. Prevention activities: cleaning a latrine, boiling water. 3. Drawing and labelling different types of worms. 4. Describing the mode of spread. 5. Making SSS. 6. Mixing ORS.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
<p>symptoms of worm infestations.</p> <ul style="list-style-type: none"> Describes treatment of worms and intestinal diseases. 		<p>diseases, diarrhoea, dysentery, cholera and typhoid.</p> <p>5. Treatment and prevention of common communicable diseases.</p> <ul style="list-style-type: none"> - mixing and administering ORS - eating well prepared foods - drinking boiled water - proper personal and food hygiene - seek medical advice <p>6. Worm infestation</p> <ul style="list-style-type: none"> - tape worms - round worms (hookworms, askaris) - thread worms (pin worms) <p>7. Describe signs and symptoms of worm infestation.</p> <p>8. Treatment and prevention of worm infestations.</p> <ul style="list-style-type: none"> - well cooked meat - wear shoes and sandals - wash all foods eaten raw 	

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> Critical thinking Creative thinking Effective communication Self-awareness 	<ul style="list-style-type: none"> Care Sharing Responsibility Appreciation 	<ol style="list-style-type: none"> Name common diarrhoeal diseases and worm infestations. Describe the steps of preparing oral rehydration solution

<ul style="list-style-type: none"> • Problem solving • Self-esteem • Empathy • Decision making 	<ul style="list-style-type: none"> • Concern • Sympathy • Taking decisions 	3. Describe prevention and treatment of worm infestations
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Theme: Human Health

Topic: Vectors and Diseases

General Background

Disease vectors play an important role in the spread of disease and learners must recognize the common vectors in their environment. Disease vectors include common insects like house flies, mosquitoes and animals like rates. They spread dangerous diseases. To prevent the diseases caused by these vectors, learners should know their characteristics, their life cycles and the disease they spread.

Learning Outcome:

- Identify, prevent and control disease vectors for good health.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Names some disease vectors• States characteristics of some disease vectors• Describes the life cycle of some vectors.• Explains how vectors spread disease.• Identifies the diseases spread by the vectors.• Practices correct prevention and control of diseases spread by disease	<ul style="list-style-type: none">• Names disease vectors in local language and English• Reads and writes stories about vectors.• Acts dialogues about preventing the diseases spread by the vectors• Draws and labels diagrams of different disease vectors• Matches names of diseases with their vectors.	<ol style="list-style-type: none">1. Common vectors: bed bugs, cockroaches, ticks, fleas, house flies, mites, rats, lice, mosquitoes and tsetse flies.2. Characteristics of disease vectors.<ul style="list-style-type: none">- Their body structure- Their habitat- Their feeding habits- The life cycle of mosquitoes, cockroaches and houseflies, tsetse fly.3. How vectors spread diseases.<ul style="list-style-type: none">- bites, dirty body, dirty environment.4. Prevention and control.<ul style="list-style-type: none">- proper hygiene- covering food- spraying	<ol style="list-style-type: none">1. Naming diseases, vectors and their life cycles2. Identifying and naming the feeding habits of some disease vectors3. Drawing and labelling different stages of the life cycle of disease vectors.4. Demonstrating activities to prevent the spread of common vectors in the environment.5. Tabulating to show vectors, the germs they carry and the diseases

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
vectors.		<ul style="list-style-type: none"> - biological control - sleeping under mosquito nets. 	spread.

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> • Critical thinking • Creative thinking • Effective communication • Self-awareness • Problem solving • Self-esteem • Empathy • Decision making 	<ul style="list-style-type: none"> • Responsibility • Sharing • Appreciation • Care • Concern • Sympathy • Taking decision 	<ol style="list-style-type: none"> 1. Name vectors and the diseases they spread. 2. Describe ways of preventing and controlling disease vectors. 3. Draw and label different stages of the life cycles of <ol style="list-style-type: none"> a) Housefly b) Cockroach c) Mosquito

THEME: Human Health

Topic: Accidents, Poisoning and First Aid.

General Background

Accidents are sudden bad happening which result in injuries. They include traffic accidents, cuts, falls and snake bits at home, poisoning and burns. Many accidents are caused by carelessness and poor conditions in which we live, walk or work. Schools should provide suitable conditions for learners. Learners should be aware of what should be done when an accident occurs and the different types of injuries that can happen. Each school should have a First Aid Kit and the teacher should show this to the learners explaining that is contains and how it is used. A study of poisoning is included in this topic, its causes, types and how to manage it.

Learning Outcome:

- Identify and manage common accidents and poisoning.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• Names common accidents and poisoning at home, on the way to, from and at school.• States causes of accidents and poisoning.• Demonstrates correct practices to avoid accidents.• Practices habits which help to avoid accidents and poisoning at home, on the way and at school.• Demonstrates how to care for an injured person.• Describes how to take care for a person who has taken poison.	<ul style="list-style-type: none">• Talks about a common accident which happened in the community• Reads and writes words, sentences and stories about accidents.• Recites rhymes and poems on accidents and poisoning.• Draws an accident scene.	<ol style="list-style-type: none">1. Accidents at home, on the way and at school.<ul style="list-style-type: none">- Types of injuries- Causes- Ways of preventing accidents- Safety rules on the road.2. Poisoning<ul style="list-style-type: none">- Causes of poisoning.- Prevention of poisoning.3. First Aid Kit<ul style="list-style-type: none">- Components- Uses of components- Giving First Aid.	<ul style="list-style-type: none">• Role play how to behave safely when walking on a busy street.• Role play a road accident and how one should act.• Discuss effects of accidents and poisoning and the First Aid care necessary.• Demonstrate how to administer Firsts Aid using the First Aid Kit.• Describe what to do after a person has been bitten by a snake.

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> • Critical thinking • Creative thinking • Problem solving • Empathy • Coping with stress • Coping with emotions 	<ul style="list-style-type: none"> • Care • Concern • Responsibility • Sympathy • Acceptance • Patience 	<ol style="list-style-type: none"> 1. Identify common accidents and their causes. 2. Describe different types of injuries. 3. Demonstrate administering First Aid.

THEME: World of Living Things

Topic: Animal Life

General Background

Animal life is an important topic which helps learners to develop interest and basic skills for managing simple projects like keeping rabbits. Note that caring for rabbits will involve, studying the external features, feeding them, identifying some of their diseases, and treating them when they are sick, housing them and controlling diseases that affect them.

Learners have already learnt about things in the environment and plant life. Animals are among the living things in the environment. Learners need to be guided to acquire basic scientific knowledge and skills to study about animals taking a rabbit as a example animal. Animals are important in the environment and our lives. Study of a rabbit will help learners to develop their production skills.

Learning Outcome:

- Understand, appreciate, the contribution of rabbits in homes.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
The learner; <ul style="list-style-type: none">• List names of external parts of a rabbit.• Names different types of rabbits and their uses.• Compares the different types of rabbits.• Constructs a hutch for rabbits.• Describes breeding habits of rabbits.• Names common diseases of rabbits.	<ul style="list-style-type: none">• Listens to stories about rabbits.• Spells the words related to rabbit keeping correctly.• Draws and labels the external parts of a rabbit.	<ol style="list-style-type: none">1. External parts of a rabbit<ul style="list-style-type: none">• head• eyes• ears2. Types and uses<ul style="list-style-type: none">• Types<ul style="list-style-type: none">- Local- Exotic• Uses<ul style="list-style-type: none">- Meat- Manure	<ul style="list-style-type: none">• Studying a live rabbit writing down some of its habits• Drawing and labeling the external structure of rabbit.• Describing how rabbits can be kept healthy• Writing down the common diseases of rabbits.

SUBJECT COMPETENCES	LANGUAGE COMPETENCES	CONTENT	SUGGESTED ACTIVITIES
<ul style="list-style-type: none"> Practices the control, prevention and treating of rabbit diseases. Demonstrates skills in keeping rabbits. 		<ul style="list-style-type: none"> Money Skin for making bags and belts <ol style="list-style-type: none"> Construction of rabbit hutch (housing) Management practices (keeping Rabbits) <ul style="list-style-type: none"> Feeding rabbits Breeding of rabbits Hygiene Common diseases <ul style="list-style-type: none"> Ear canker, Flue Cold Coccidiosis Pneumonia Snuffles Fleas Mites Ticks Control and treatment of diseases of rabbits Keeping rabbit records. 	<ul style="list-style-type: none"> Demonstrating activities of preventing and controlling diseases and parasites. Keeping records on rabbits.

Life Skills	Values	Assessment Activities
<ul style="list-style-type: none"> Effective communication Critical thinking Creative thinking 	<ul style="list-style-type: none"> Responsibility Care Logic 	<ol style="list-style-type: none"> Name the different types of rabbits. Describe common diseases of rabbits. Draw and label external structures of rabbits.

<ul style="list-style-type: none"> • Decision making • Problem solving 	<ul style="list-style-type: none"> • Appreciation • Fluency • Patience 	
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