**INTEGRATED PRIMARY SCIENCE ABRIDGED CURRICULUM**

**P.4 INTEGRATED SCIENCE ABRIDGED CURRICULUM**

**TERM ONE**

## THEME: THE WORLD OF LIVING THINGS

### TOPIC 1: PLANT LIFE (20 PERIODS)

**Overview**

This is topic 1, term 1, in the standard P.4 curriculum. It provides learners with an understanding of different plants in the environment and their habitats, identifying different parts of a flowering plant, functions of different parts such as leaves, roots, flowers, stems and seeds, caring for different plants and garden tools.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Names types of living things<br>• Explains the characteristics of living things<br>• Names/signs plants<br>• Identifies characteristics of plants<br>• Describes habitats of plants<br>• Classifies plants<br>• Identifies the external parts of a flowering plant<br>• Labels parts of a flowering plant | • **Living things**<br>-Types of living things<br>-characteristics<br>• Plants and their habitats<br>• Examples of plants; maize, yams, cactus, sisal<br>• Characteristics of plants; they; grow, eat, reproduce, breath<br>• Plant habitats; garden, water, wetlands, dry areas, rocky places<br>• Parts of the flowering plant<br>• (Roots, stems, leaves, flowers)<br>• Functions of parts of a flowering plant e.g. roots (holds plants firmly into the ground, absorbs water and mineral salts)<br>• Stem; (holds branches, holds flowers, caries food to all parts of the plant) | • Using a field visit, the leaners identify the different plants in the environment<br>• Collecting samples of plants from preserving in the class<br>• Grouping plants according to where they grow e.g. in water, in dry areas, in swamps, on rocks etc<br>• Observing and naming/signing the different parts of a plant in their local language and in English<br>• Explaining the functions of the different parts of the plant to the plant<br>• Matching names with functions for the different parts of a flowering plant<br>• Demonstrating the usefulness of plants to humans e.g. preparing flower bouquets, preparing leaves as food, |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Discusses the uses of a plant<br>• Discusses the function of the different parts of the flowering plant<br>• Describes the structure of a seed<br>• Demonstrates how to plant<br>• Describing the process of planting<br>• Investigates the conditions necessary for germination<br>• Explains the uses of the different parts of a flowering plant to people<br>• Discusses the dangers of plants in the environment<br>• Naming garden tools<br>Explaining the uses of garden tools | • Seeds<br>• Seed structure<br>• Uses of plants to people<br>• Food<br>• Medicinal<br>• Sold for money<br>• Construction<br>• Firewood<br>• Uses of the different parts of a flowering plant to us e.g. food, medicine, fuel, decoration, money<br>• Dangers of some plants<br>• Experiment; observing and recording the growth of a plant.<br>• Crop growing practices<br>• Clearing land (slashing, digging, ploughing)<br>• Planting (seed selection/seedlings, row planting, broadcasting, transplanting)<br>• Caring for crops (weeding, pruning – root, branch; thinning; mulching; spraying; watering; drying; storing; harvesting; marketing; staking<br>• Crop rotation<br>• Garden tools e.g. hoe, slasher, panga<br>• Conditions necessary for germination | making medicinal extracts from roots etc.<br>• Demonstrates practices in plant propagation either by the use of seeds or other vegetative parts<br>• Carrying out an experiment to find out the conditions for germination.<br>• Participating in a debate about the usefulness and dangers of plants to man and the environment. a topic like “The environment is nothing without plants”, “Plants are a problem in the environment”.<br>• Demonstrating the use of the different garden tool used at home.<br>• Demonstrating how to care for garden tools.<br>• Establishing mini gardens and backyard gardens on the schools compound to learn about crop growing practices. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | • Seed germination project | |

**Assessment guidelines**

1. Assess learners' ability to demonstrate practices of caring for plants in the environment.
2. Assess as learners' ability to investigate the conditions for germination.
3. Assess learners' competence of using and caring for different garden tools.

## THEME: THE WORLD OF LIVING THINGS

## TOPIC 2: ANIMALS LIFE (25 PERIODS)

**Overview**

This topic is created from Theme 5, term 2 of P.3 thematic curriculum. Animals are components of the environment. Some animals are kept at home while others live in the bush. Some walk, others crawl. Others swim while others fly. Some eat grass while others eat flesh. However, each animal is important in the environment, and we need to protect and take good care of them. This topic aims at making learners identify the different animals in their environment, their uses and how to care for them.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Explains characteristics of animals (including birds and insects<br>• Identifies examples of animals and their habitats.<br>• Classifies animals (including birds and insects) | • Characteristics of animals e.g. the number of legs, type of feet, type of skin etc.<br>• classes of animals<br>-In air e.g. birds, bats<br>-In water e.g. fish<br>-On land e.g. cows<br>• Types of animals<br>-Domestic and wild animals<br>• Examples of domestic animals e.g. cows, goats, rabbits<br>• Examples of wild animals e.g. elephant, zebra, lion, hyena, giraffe<br>• Homes (habitats) of domestic animals e.g. pig (sty); cattle | • Through nature walk, learners identify and group (where they live, whether they are wild or domestic etc) different animals in the environment.<br>• Using whole class approach, learners explain the usefulness of the different animals in the environment.<br>• Individually learners demonstrate ways of caring for animals in the environment. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Identifies ways of caring for animals<br>• Demonstrates ways of caring for birds and other animals | (shed/kraal); dogs (kennels/dens/homes)<br>• Wild animals; forest, burrow (underground), nest etc.<br>• Birds and insects<br>• Domestic birds e.g. hen, turkey, duck, pigeon.<br>• Wild birds e.g. crow, kite, weaver bird, eagle, sparrow, crested crane (as a national emblem)<br>• Bat (is not a bird); fly, has no feathers, does not lay eggs<br>• Characteristics of birds; lay eggs, have wings, and feathers, some fly<br>• Habitats e.g. nests, burrows<br>• Insects e.g. white ants, black ant, termite, bee, wasp, butterfly<br>• **Characteristics of insects e.g.**<br>-some move in groups (e.g. bees, black ants);<br>-Some have wings e.g. locusts, butterfly; Some sting e.g. bees, wasps;<br>-Some bite e.g. black ants;<br>-Some do not wings e.g. termites, ants<br>-they have six legs<br>**care for insects and birds and other animals**<br>-caring for bees<br>provide a hive; plant flowers; provide water, provide something sweet | |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | -caring for domestic birds and other animals<br>protecting nests<br>-protecting their eggs<br>treating birds<br>-preparing birds habitats<br>-protecting birds<br>- keeping bird records<br>- being kind to birds;<br>-participating in grooming;<br>-feeding birds; cleaning animal habitats; preparing animal habitats; identifying signs and symptoms of ill health; being kind to animals; keeping animal records<br>• care for wild birds and other animals<br>-protection from hunters-<br>- discourage bush burning<br>-avoid destroying forests and swamps<br>-provide food, protection and medication for animals in protected areas like zoos<br>- avoid poaching and unnecessary killings (hunting) | |

**Assessment guidelines**

1. Assess learners' ability to correctly group animals using identified criteria.
2. Assess learners' competences of demonstrating ways of caring for animals in the environment.
3. Assess individual learners' competence to identify different types of animals.

## THEME: THE ENVIRONMENT

## TOPIC 3: MANAGING RESOURCES IN OUR SUB COUNTY / DIVISION (20 PERIODS)

**Overview**

This topic is created from Theme 7, term 3 of the standard P.3 curriculum. This content was not covered due to COVID 19 lockdown. This topic will equip learners with knowledge on how to utilize, manage and conserve resources in the environment.

Resources need to be used in a sustainable way for our own benefit and that of the future generation. This topic intends to increase the awareness of the learners and develop their skills in sustainable use of resources. There is need for the teacher to organise more remedial lessons to enhance understanding and mastery of this content by the learners.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Names/signs basic resources<br>• Explains ways of saving resources<br>• Discusses why we save<br>• Explains how we keep and use records<br>• Names/signs things we spend on<br>• Discusses ways of spending wisely<br>• Identifies possible activities that generate knowledge, skills, and money<br>• Explains importance of projects | • Saving resources<br>• Concept of resources<br>• Basic resources i.e. water, time, money, food,<br>• Fuel e.g. firewood, charcoal, gas, petrol, diesel<br>• Meaning of saving<br>• Ways of saving – in the bank, in safe boxes, proper use of materials, repairing, recycling, planting, preparing enough food, switching off power when not in use, proper budgeting<br>• Why we save – meeting needs, improving standards, avoiding wastage, for future use<br>• Keeping records on e.g. things used at home, school daily etc.<br>• Spending resources | • By brainstorming learners, identify things that they need daily to survive.<br>• By working in groups, learners cost the materials that they need daily and comparing them to the earnings of their guardians.<br>• Individually, learners demonstrate record keeping of what they use daily for one week. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Demonstrates establishing and managing projects | • Meaning of spending wisely e.g. budgeting, negotiating, prioritizing, comparing quality, comparing prices<br>• Keeping records<br>• Projects<br>• Projects – activities carried out in order to get knowledge, skills or money<br>• Examples of projects e.g. bee keeping, tree planting, poultry keeping, brick making<br>• Preparing for a project – money, time, space, knowledge / skills<br>• Managing a project – recording, recording, commitment, checking, maintenance | • Using whole class approach, learners discuss ways of saving the resources that they use daily like (firewood, charcoal, food, fuel, electricity, water, cooking gas, Clothes, books, money etc.<br>• Establishing a sample project in the school and demonstrating record keeping, saving etc. |

**Assessment guidelines**

1. Assess learners' competence to keep records of their daily activities and practices for one week.
2. Using written exercises, assess learners' competence to explain ways of saving resources.
3. Using whole group approach assess learners' competence to describe possible activities of saving resources in the environment.

## THEME: MATTER AND ENERGY

### TOPIC 4: BASIC TECHNOLOGY IN OUR SUB COUNTY / DIVISION (20 PERIODS)

**Overview**

This is theme 1 term three P.3 in the standard curriculum. It provides learners with an understanding of the different things that exist in their environment, their sources and uses. The topic also enlightens them about the usefulness and the challenges in using these materials. This helps the leaners to take appropriate care for these made items.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Names/signs artificial and natural materials<br>• Describes characteristics of natural and artificial materials according to colour, size, weight, texture<br>• Identifies sources of natural materials<br>• Compares natural and artificial materials<br>• Describes how to make different thing from natural and artificial materials.<br>• Discusses uses of materials<br>• Identifies sources of artificial materials<br>• Classifies materials as natural and artificial | • The concept of technology<br>• Natural and artificial materials<br>• Natural materials e.g. banana fibres, palm leaves<br>• Artificial materials e.g. wire, plastics, straws,<br>• Characteristics of materials in terms of; texture, size, colour, weight (heavy/light)<br>• Collecting and displaying materials for use.<br>• Processing and making things from natural materials e.g. food, fibre, leaves<br>• Source e.g. swamps, plantation, bush<br>• Products e.g. mats, ropes, juice, salads<br>• Purpose e.g. selling, eating, playing, learning<br>• Practical on making some materials e.g.<br>• Ropes from sisal<br>• Balls and mats from banana fibres<br>• Models from clay<br>• Mats from papyrus<br>• Juice from oranges, lemon, pineapples, passion fruit etc.<br>• Making things from artificial materials<br>• Source e.g., recycling | • Through nature walk learners collect different materials in the environment.<br>• Using small groups, leaners classify the collected materials as artificial and natural materials<br>• Using pair work, learners compare different natural and artificial materials according to durability, difficulty in getting, ease of use, number of uses etc.<br>• Making different things from natural and artificial materials e.g. decorations, play materials, containers, etc.<br>• Demonstrating how to use the materials made above |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | • Product e.g., toy cars, toy bicycles, flowers, candles, bags<br>• Use e.g., for children's play, for selling, for decoration, for wearing / ornaments<br>• Practical on making some materials e.g., toy cars, toy bicycles | |

**Assessment guidelines**

1. Assess learners' ability to identify natural and artificial resources in the environment.
2. Using written work, assess learners' ability to describe uses of natural/artificial materials.
3. Using project work, assess learners' competence to develop materials from natural/artificial materials.

## THEME: MATTER AND ENERGY

### TOPIC 5: ENERGY IN OUR SUB COUNTY / DIVISION (18 PERIODS)

**Overview**

This is the topic is derived from Theme 12, term 3 in the standard thematic P.3 curriculum. It is intended to develop appreciation and in-depth understanding of the learners on the different energy resources in their environment with the aim of enabling them to make good use of the available resources. Energy is a costly resource and a major source of environmental degradation. Therefore, learners need to understand where they get their energy from and how to reduce wastage of and environmental effects of energy use.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Explains the meaning of energy.<br>• Identifies different types of energy.<br>• Describes the different sources of energy. | • Meaning of energy<br>• sources of energy.<br>- natural sources e.g. wind (for sailing boats, driving, windmill), water | • Identifying the common sources of energy in their community.<br>• Classifying energy sources as artificial and natural |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Demonstrates that air moves objects.<br>• Discusses ways of saving energy.<br>• Discusses the importance of saving energy, dangers of energy and ways of avoiding these dangers. | - artificial sources e.g. fuel (diesel, petrol, wood, charcoal, paraffin etc.)<br>Their uses;<br>- Electricity (in home, battery)<br>- Uses: diesel / petrol – in cars and generators<br>- Paraffin – lighting and cooking, in refrigerators<br>- Wood / charcoal – cooking<br>- Hydroelectricity – factories, cars, lighting, homes/ hospitals<br>• Ways of saving energy<br>- Using energy saving stoves and bulbs.<br>- Switching off electricity and appliances when not in use.<br>- Putting out fire after use<br>- Planting trees<br>- Following instructions on proper use of energy etc<br>• Importance of saving energy<br>- minimizing costs<br>- avoid waste<br>• Dangers of energy and ways of avoiding them<br>- Live wire<br>- Fire<br>- Strong wind | Experiments to show that air moves things e.g. kites, propellers.<br>• Demonstrating practices of saving energy resources.<br>• Making functional models of toys and other play materials that use different energy resources to function.<br>• In small groups, learners discuss ways of saving energy. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | - Storm<br>- Drought<br>- accidents<br>• Ways of avoiding dangers<br>-planting trees to act as wind breaks<br>- avoid playing with fire<br>-Pushing nails into sockets<br>-playing with electric wires<br>-using fire extinguishers<br>-making posters with warning messages or safety symbols. | |

**Assessment guidelines**

1. Individually, assess learners' competence to describe the different ways of saving energy resources.
2. Using written test, assess learners' competence to name and categorize energy resources

## TERM TWO

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

## TOPIC 6: GROWING CROPS (12 PERIODS)

**Overview**

This is topic 2, term 1 in the standard P.4 curriculum. The topic is intended to develop leaner's appreciation for and competences in crop growing. The learners are exposed to appropriate practices in crop growing. The teacher is urged to adopt a practical approach to the teaching of this lesson. Learners need to be provided with small plots of land where they demonstrate proper practices in crop growing. Co-curricular activities like the Young farmers club can help reinforce the competences developed in the classroom.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner.<br>• Identifies common crops in the community | 1. Common crops (Maize, sorghum, peas, ground nuts, bananas, beans, cassava, coffee, tea, cotton)<br>2. Groups of crops | • Using excursion, identifying the common crops grown in their community. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Groups the common crops as perennials and annuals<br>• Draws and labels annual crops<br>• Identifies common tools, equipment and materials used in growing annual crops<br>• Describes the uses of common tools, equipment and materials<br>• Identifies and describes crop growing practices<br>• Demonstrates some of the crop growing practices<br>• Identifies some common signs of disease damage in crops<br>• Describes some signs of pests and diseases and pest damage in crops and ways of controlling them | - Perennial crops: coffee, tea, bananas.<br>- Annual crops: maize, sorghum, peas, ground nuts, cassava, beans, cotton.<br>3. Garden tools, equipment, and materials.<br>(hoes, spade, rake, wheelbarrow, pegs, shovel, pickaxe, hand fork, pangas, watering can, string, garden fork, trowel, secateurs, pruner, axe, pail, jerry can, sprayer and knives).<br>4. Crop growing practices<br>(Land clearing, ploughing, seed selection, planting, gap filling, weeding, thinning, mulching, manuring, drying, transplanting, pruning, spraying, record keeping, harvesting, storing, watering).<br>5. Common signs of pest and disease damage in crops<br>- Holes in leaves, fruits and stems of crops<br>- Spots on leaves, fruits, seeds, roots and stems of crops<br>- Change of colour in leaves, fruits and stems<br>- Rotten plant parts<br>- Deformed plant parts | • Making a visit to a nearby market to identify the common crops sold in the market (distinguishing between those grown locally and those imported from other parts of the country).<br>• Demonstrating how to use the garden tools that are commonly used in the community.<br>• Demonstrating ways of caring for garden tools<br>• Setting up a project of growing vegetables in the school garden.<br>• Demonstrating correct crop growing practices on the demonstration farms.<br>• Demonstrating correct practices of pest control. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | 6. Ways of controlling pests and diseases in the garden (spraying, cleaning seeds, planting clean seeds, uprooting diseased crops, timely weeding, early planting, use of scarecrows) | |

**Assessment guidelines**

1. Assess individual learner's ability to demonstrate practices in crop growing.
2. In small groups, assess learners' competences in setting up vegetable gardens within the school – this can be using urban farming strategies.

## THEME: THE ENVIRONMENT

## TOPIC 7: WEATHER IN OUR SUB COUNTY / DIVISION (20 PERIODS)

**Overview**

This is topic was in term one, P.4 standard curriculum and has been retained the content from theme 4 of P.3 term one has been integrated in it. Therefore, there is need for learners to learn about weather, weather changes, and activities during particular weather conditions, weather forecast, weather instruments, rain formation, uses and dangers of the elements of weather etc.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Describes weather and seasons<br>• Elements of weather (rainfall, wind, cloud, sunshine)<br>• Describes the changes in the weather through the year | • What weather and seasons are<br>• Changes in the weather (sunshine, clouds, rain, wind, temperature)<br>• Air and the sun<br>• Air; concept of air and properties of air – weight, moves things (force), occupies space, can be felt | • Observing the skies of the day and describing what they see in the skies<br>• Referring to their memory to state other conditions of the skies on other days (weather conditions).<br>• Identifying topics and conducting debates on the different elements of weather e.g. "Rain is life", |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Describes weather patterns and climate changes in different parts of the country<br>• Discusses the importance of weather<br>• Explains the dangers of weather changes<br>• Uses a thermometer to measure temperature<br>• Demonstrates that air is needed for burning<br>• Names the types of clouds<br>• Describes types of clouds<br>• Describes a weather chart<br>• Describes the rain cycle<br>• Makes accurate measurements of rainfall<br>• Naming sources of water<br>• Discusses importance of water sources | • Importance of air; for burning, for breathing<br>• Dangers of strong wind<br>• Experiments e.g. how air occupies space, properties of air, air is needed for burning (oxygen)<br>• The sun: importance of the sun – dries things, gives light, warmth, helps living things to grow<br>• Dangers of the sun; dries up water, destroys crops<br>• Experiments e.g., why plants need light<br>• Water<br>• How rain is formed (the water cycle) – water cycle; formation of rain drops (evaporation and condensation); types of clouds – how clouds affect the environment; how clouds bring changes in temperature.<br>• Monitoring weather change<br>• Process of water cycle; measuring rainfall<br>• How rain affects the environment; importance of rain on soil, animals; dangers of rain on soil, animals, plants<br>• Managing water | "wind is a threat to the environment"<br>• Carrying out an experiment to show that air is needed for burning – closing a burning candle in a glass jar.<br>• Observing clouds and describing their characteristics<br>• Carrying out and observing the demonstration of the rain cycle<br>• Establishing projects in the school to harvest and properly manage water<br>• Making and using a weather chart<br>• Recording daily weather over a period like one month and using this information to describe the weather, economic activities etc., for that month. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Discusses ways of proper management of water | • Importance of water; sources of water; water harvesting; maintenance of water sources. | |

**Assessment guidelines**

1. Assess individual learner's ability to record weather of their homes over a period of one month. They should use this information to identify the best economic activities for that month.
2. Assess learners improvise instruments for determining the elements of weather e.g. a shadow clock, a wind shock, wind vane etc.
3. Assess as learners design and carry out projects in conservation and management of water resources in the school

## THEME: HUMAN HEALTH

### TOPIC 8: PERSONAL HYGIENE (10 PERIODS)

**Overview**

This is a term one P.4 topic in the standard curriculum. It provides learners with an understanding of how to keep their bodies clean, why they keep their bodies clean, things they need to clean the body, clothes and beddings. At this level you need to encourage the learners to continue to develop desirable habits for good personal hygiene.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner;<br>• explain why we need to keep clean.<br>• Identifies ways of keeping clean.<br>• Demonstrates keeping clean.<br>• Discusses what can go wrong if we do not keep clean. | 1. Importance of keeping our bodies clean (Remove dirt, remove germs, avoid bad smell, keep healthy, keep smart)<br>2. Ways of keeping clean<br>3. Things used for keeping our body clean | • Learners share their experiences on how they keep their bodies clean.<br>• Learners brainstorm on the importance of keeping the body clean.<br>• Learners demonstrates the best practices for keeping the body clean with the guidance of their teachers.<br>• Using whole class approach, learners brainstorm about the |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | 4. Keeping bedding and clothing clean | materials for keeping the body clean and ways of keeping them clean and safe. |

**Assessment guidelines**

1. Orally/ using written test, assess individual competence on explaining the importance of keeping clean.
2. Using a skit, assess learner's ability to demonstrate correct practices in keeping their bodies clean.
3. Assess individual learners' ability to identify materials used in keeping the body clean.

## THEME: HUMAN HEALTH

### TOPIC 9: OUR FOOD (12 PERIODS)

**Overview**

This is topic 1, term 2, in the P.4 standard curriculum. 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. This topic provides learners with an understanding of classes of food, food values, uses of food in the body, deficiency diseases, and preparing different dishes, how food gets contaminated and how to prevent food from contamination.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner;<br>• Identifies classes of food and their values.<br>• Describes the uses of food values to the body.<br>• Describes how food gets contaminated<br>• Practices proper handling of food. | 1. Classes of food-3G's (Go food, Glow food, Grow food)<br>2. Food values (Carbohydrates, Vitamins and mineral salts, Proteins)<br>3. Uses of food values to the body (growth, energy, protection)<br>4. Deficiency diseases (Night blindness, Kwashiorkor, Marasmus, Goitre, Beriberi, Scurvy, Rickets) | • Learners collect and bring samples of the foods they eat to school. These can be used and displayed in the nature section.<br>• Grouping foods into the different classes of foods.<br>• Making a guided tour of the nearest market to collect information on the foods sold in the markets.<br>• In small groups, learners discuss how food gets contaminated and possible ways of preventing it. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Identifies some deficiency diseases.<br>• Prepares local dishes using common foods in. the community | 5. How food gets contaminated (dirty hands, dirty containers, dusty or dirty surrounding, flies)<br>6. Prevention of food contamination (Cooking well, covering food, Serving in clean containers, Serving in clean environment, Preparation of simple dishes using local food) | • Demonstrating practices to keep food safe from contamination<br>• Making materials that help keep food safe e.g. food covers.<br>• Preparing at least one local dish using indigenous technology<br>• Relating the different food values to their deficiency diseases. |

**Assessment guidelines**

1. Using group work, assess learners' ability to demonstrate correct practices in keeping food safe from contamination.
2. Using the project method, assess learners' ability to prepare local dishes.
3. Using a written/brailled exercise, assess learners understanding of deficiency diseases (their cause, signs and symptoms).

## THEME: HUMAN BODY

### TOPIC 1: MAJOR BODY ORGANS (10 PERIODS)

**Topic overview**

This is topic 2, term 2, in the standard P.4 curriculum. It provides learners with an understanding of their internal organs and the functions of each organ. This helps the leaners to take appropriate care for these organs.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner.<br>• Names/signs different organs of our body.<br>• States the function of the different organs of our body. | 1. Major organs of the human body (eyes, brain, ears, stomach, bladder, heart, lungs, liver, kidneys)<br>2. How the human body works | • Using think-pair-share, learners identify the eternal parts of their bodies.<br>• Using a model or a chart, learners identify the internal parts of the body. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Describes ways in which our body works.<br>• Draws and labels the different human body organs. | - takes in food and oxygen<br>- uses food and oxygen to get energy<br>- remove wastes | • Learners identify the approximate positions of the internal organs from an external perspective<br>• In groups, learners explain the functions of their internal organs<br>• Using preserved organ specimens, learners identify internal organs. |

**Assessment guidelines**

1. Assess learners' ability to identify internal organs of the human body.
2. Assess learners' ability to explain how the human body works.

## THEME: HUMAN BODY

### TOPIC 11: THE TEETH (10 PERIODS)

**Overview**

This is a term two, P.4 third topic in the standard curriculum. Oral health is important in maintaining our health. The learners of P.4 should be taught on how to maintain oral health (oral hygiene). In this topic, learners will have an understanding of sets of teeth, types of teeth, functions of each type of teeth, the teeth structure (parts), care for teeth, teeth diseases and disorders.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner.<br>• Names the sets of teeth<br>• Describes the different types of teeth and their function<br>• Explains the functions of each type of tooth. | • Sets of teeth (milk teeth, permanent teeth)<br>• Types of teeth<br>(Canines, incisors, premolars and molars)<br>• Functions of types of teeth.<br>(Cutting, tearing, grinding, chewing)<br>• Teeth structure | • Observing the jaws of a mammal and how the teeth are fixed<br>• Observing and classifying the different types of teeth<br>• Drawing and labeling the structure of different types of teeth. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Draws different types of teeth with correct labelling<br>• Identifies the diseases and disorders of the teeth<br>• Demonstrates how to brush the teeth correctly<br>• Practices habits that promote oral health | (Enamel, crown, neck, root)<br>• Care of our teeth (Brushing, flossing, regular dental check-up, eating correct food, use toothpaste)<br>• Teeth diseases and disorders (Dental cavity, dental carries, tooth cracks, dental plaque, improper growth, broken teeth) | • Identifying the diseases and disorders of teeth.<br>• Practicing correct way of brushing teeth and maintaining good oral hygiene. |

**Assessment guidelines**

1. Using a practical approach, assess as the learners classify the different types of teeth.
2. Using written test, assess learners' ability to explain the functions of each type of tooth.
3. Assess learners' ability to demonstrate some of the best practices of caring for the teeth

## TERM THREE

### THEME: HUMAN HEALTH

### TOPIC 12: SANITATION (10 PERIODS)

**Overview**

This is topic 4, term 2 in the standard P.4 curriculum. It provides learners with an understanding of keeping the surroundings clean, the different reasons for keeping the environment clean, learners should be equipped with skills to handle sanitation challenges. In this topic the learners will also learn about germs and diseases, building from the knowledge learnt from primary three.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner;<br>• States what sanitation is. | 1. What sanitation is<br>2. Importance of good sanitation in our environment<br>3. Germs and diseases | • Learners share their experiences of waste disposal in their communities. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Discusses the importance of proper sanitation<br>• Explain what germs are.<br>• Discusses how the germs are spread<br>• Describes the different ways of maintaining proper sanitation. | - what they are<br>- where they are found<br>- how they are spread<br>- the 4Fs germ path<br>- How they cause rotting<br>4. Ways of protecting against germs and diseases in the environment, school, on the way and in the homes | • Making a tour around the school to identify areas for disposal of waste, the toilets, the urinals etc.<br>• Learners observe and record the uses of these areas.<br>• Learners identify whether or not these areas are properly used<br>• Show a video of the 4Fs germ pathway e.g. https://www.youtube.com/watch?v=YBGsoimPXZg<br>• Learners demonstrate ways of protecting themselves against germs especially, proper hand washing procedures, smoking latrines, burning rubbish, spraying suing insecticides, sweeping the compound.<br>• Using the whole class approach, learners describe ways diseases spread. |

**Assessment guidelines**

1. Set up projects within the school where learners take part in maintaining sanitation. Observe and record the success of these projects and the participation of individual learners in the projects.
2. Assess learners' competence on explaining how diseases are spread and importance of sanitation through written/brailed assessment.

## THEME: HUMAN HEALTH

## TOPIC 13: COMMUNICABLE INTESTINAL DISEASES AND WORM INFESTATION (20 PERIODS)

**Overview**

This is topic 1, term 3 in the standard P.4 curriculum. It provides learners with an understanding of diarrhoeal diseases, causes of intestinal communicable diseases and how they are spread, different kinds of worms, their signs and symptoms and how they can be prevented.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The Learner;<br>▪ Identifies diarrhoeal diseases.<br>▪ Describes the causes of diarrhoeal diseases and how they can spread.<br>▪ Demonstrates how to mix and administer oral rehydration solution (ORS) and make salt-sugar solution (SSS).<br>▪ Identifies types of worms.<br>▪ Explains how worms enter the body.<br>▪ Describes signs and symptoms or worm infestations.<br>▪ Describes treatment of worms and intestinal | • Diarrhoeal diseases;<br>- Diarrhoea, Dysentery, Cholera, Typhoid<br>• Causes of intestinal communicable diseases;<br>- Bacteria, Virus, Protozoa , Worms<br>• How some common intestinal communicable diseases are spread through 4Fs.<br>• Signs and symptoms of common intestinal communicable diseases, diarrhoea, dysentery, cholera and typhoid.<br>• Treatment and prevention of common communicable diseases.<br>- Mixing and administering ORS.<br>- Easting well-prepared foods.<br>- Drinking boiled water.<br>- Proper personal and food hygiene.<br>- Seek medical advice.<br>• Worm infestation<br>- Tape worms<br>- Round worms (hookworms, askaris).<br>- Thread worms (pin worms) | • Learners share their experiences of diarrhoeal diseases (stories about diarrhoeal diseases)<br>• Learners watch videos of diarrhoeal diseases<br>• Demonstrating how to make an Oral Rehydration Solution and Salt Sugar Solution<br>• Demonstrating practices that prevent the entry of worms in the body<br>• Learners act/signs a skit on how worms enter the body, their effects on the body and |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | • Describe signs and symptoms of worm infestation.<br>• Treatment and prevention of worm infestations.<br>- Well cooked meat<br>- Wear shoes and sandals<br>- Wash and foods eaten raw | how to treat worm infestations. |

**Assessment guidelines**

1. Observe and record as learners prepare Oral Rehydration Solution and / or Salt Sugar Solution
2. Assess learners individual ability to identify diarrhoeal diseases and their causes.
3. Assess individual learners' participation in the skit about prevention of diarrhoeal and intestinal diseases.

## THEME: HUMAN HEALTH

### TOPIC 14: VECTORS AND DISEASES (20 PERIODS)

**Overview**

This is a topic 2, term 3 in the standard P.4 curriculum. The topic helps learners to identify common vectors in their communities. It is intended to increase learners' awareness about disease vectors and how to control/prevent them.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The Learner;<br>▪ Names/signs some disease vectors.<br>▪ States characteristics of some disease vectors.<br>▪ Describe the life cycle of some vectors. | • Common vectors: bed bugs, cockroaches, ticks, fleas, house, flies, mites, rates, lice, mosquitoes, and tsetse flies.<br>• Characteristics of disease vectors:<br>• Their body structures<br>• Their habitat<br>• Their feeding habits | • Learners capture vectors in their environment<br>• Learners observe external parts of vectors they captured or brought to the classroom by the teacher<br>• Drawing and labeling the external parts of the common vectors<br>• Learners share their experiences about common |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| ▪ Explain how vectors spread disease.<br>▪ Identifies the diseases spread by the vectors.<br>• Practices correct prevention and control of diseases spread by vectors.<br>• Names/signs what causes HIV/AIDS<br>• Explains ways in which HIV/AIDS spreads<br>• Discusses the effects of HIV/AIDS<br>• Explains ways of caring for HIV/AIDS patients. | • The life cycle of mosquitoes, cockroaches, houseflies, and tsetse flies.<br>• How vectors spread diseases:<br>• Bites, dirty body, dirty environment.<br>• Prevention and control:<br>• Proper hygiene<br>• Covering food<br>• Spraying<br>• Biological control<br>• Sleeping under mosquito nets.<br>• HIV/AIDS the concept of HIV/AIDS; causes and spread of HIV/AIDS; effects of HIV/AIDS ; ways of caring for HIV/AIDS patients e.g. not sharing sharp objects, using gloves when helping HIV/AIDS patients<br>• Control measures e.g. blood test, taking medicine, feeding well (balanced diet)<br>• PIASCY Messages. | vectors (houseflies, mosquitoes, cockroaches etc.)<br>• Observing, recording and reporting about common vectors and their habits at home<br>• In whole class approach, learners discuss the diseases spread by the vectors (name, signs and symptoms)<br>• Learners demonstrate ways of controlling the diseases spread by common vectors e.g. spraying insecticide, proper use of a mosquito net etc.<br>• Acting/signs a skit on the causes, prevention of HIV/AIDS in the community |

**Assessment guidelines**

1. Assess learners' ability to identify and describe the life cycles of different common vectors.
2. Assess learners' ability to demonstrate effective methods of controlling the diseases spread by the common vectors. Assess learners' participation in the skit and their understanding of the skit.
3. Using the project method, assess learners' ability to participate in activities that control the spread of diseases spread by common vectors.

## THEME: HUMAN HEALTH

## TOPIC 15: ACCIDENTS, POISONING AND FIRST AID (18 PERIODS

**Overview**

This is topic 3, term 3 in the standard P.4 curriculum. Accidents are common occurrences in the lives of children; this is partly due to their poor coordination of body organs, playfulness and their inadequate experiences in the harmful effects of objects in their surroundings. This topic intends to increase the awareness of the learners about the causes and effects of accidents and equip them with skills of supporting victim of accidents.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner;<br>▪ Names/signs the common accidents and poisoning at home, on the way to, from and at school.<br>▪ States causes of accidents and poisoning.<br>▪ Demonstrates correct practices to avoid accidents.<br>▪ Practices habits, which help to avoid accidents and poisoning at home, on the way and at school.<br>▪ Demonstrates how to care for an injured person.<br>▪ Demonstrates how to care for an injured person.<br>▪ Describes how to take care for a person who has taken poison. | 1. Accidents at home, on the way and at school:<br>- Types of injuries<br>- Causes<br>- Ways of preventing accidents<br>- Safety rules on the road.<br>2. Poisoning<br>- Causes of poisoning<br>- Prevention of poisoning<br>3. First Aid Kit<br>- Components<br>- Uses of components<br>- Giving First Aid | • Brainstorm about accidents and poisoning at home, on the way to, from and at school.<br>• Demonstrating ways of preventing accidents at home, way and at school<br>• Demonstrating ways of administering first aid to a casualty.<br>• Establish projects in schools to reduce accidents at school.<br>• Collecting local materials that can be used to carry out first aid in the community. |

**Assessment guidelines**

1. Assess individual learners' ability to identify common accidents, causes and prevention.
2. Assess learners' competence to demonstrate how to administer first aid to an accident casualty.

3. Design and allow learners to carry out activities to ensure that the homes and schools are safe from accident

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

### TOPIC 16: KEEPING RABBITS (12 PERIODS)

**Overview**

This is the last topic in the standard P.4 curriculum. The topic develops learners' competences and appreciation of keeping rabbits as a viable livelihood activity. Where possible, the teacher needs to establish a demonstration farm in schools for learners to practice rabbit keeping practices like feeding, sanitation, vaccination, treatment etc.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The Learner;<br>▪ Names of external parts of a rabbit.<br>▪ Names different types of rabbits and their uses.<br>▪ Compares the different types of rabbits.<br>▪ Constructs a hutch for rabbits.<br>▪ Describes breeding habits of rabbits.<br>▪ Names/signs common diseases of rabbits.<br>▪ Practices the control, prevention and treating of rabbit diseases.<br>▪ Demonstrates skills in keeping rabbits. | 1. External parts of a rabbit<br>▪ Head<br>▪ Eyes<br>▪ Ears<br>2. Types and uses<br>- Types; Local, Exotic<br>- Uses; Meat, Manure, Money, Skin for making bags and belts<br>3. Construction of rabbit hutch (housing)<br>4. Management practices (Keeping rabbits)<br>- Feeding rabbits<br>- Breeding of rabbits<br>- Hygiene<br>- Common diseases; Ear canker, Flu, Cold, Coccidiosis, Pneumonia, Snuffles, Fleas, Mites, Ticks<br>5. Control and treatment of diseases of rabbits.<br>Keeping rabbit records | • Visiting a rabbit farm within the school's community<br>• In case the school has a rabbit farm, the learners should visit the farm<br>• Constructing a rabbit hutch<br>• Demonstrating correct practices in rabbit keeping<br>• Setting up projects of rabbit keeping<br>• Demonstrating practices of control of pests and diseases of rabbits |

**Assessment guidelines**

1. In groups, assess learners' ability to construct hutches for rabbits
2. Individually, using the schools farm, assess learners' ability to take care of rabbits
3. Using the project method, assess learners' ability to establish and manage rabbit farms (either in school or at home) - this may involve home visits by the teacher

## TERM 1

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

### TOPIC 1: KEEPING RABBITS (12 PERIODS)

**Overview**

This is the last topic in the standard P.4 curriculum. The topic develops learners' competences in and appreciation of keeping rabbits as a viable livelihood activity. Where possible, the teacher needs to establish a demonstration farm in schools for learners to practice rabbit keeping practices like feeding, sanitation, vaccination, treatment etc. The teacher should organise more remedial lessons to ensure mastery of the content by learners through revision activities.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The Learner.<br>▪ Lists names of external parts of a rabbit.<br>▪ Names different types of rabbits and their uses.<br>▪ Compares the different types of rabbits.<br>▪ Constructs a hutch for rabbits.<br>▪ Describes breeding habits of rabbits.<br>▪ Names common diseases of rabbits.<br>▪ Practices the control, prevention and treating of rabbit diseases.<br>▪ Demonstrates skills in keeping rabbits. | 6. External parts of a rabbit<br>▪ Head<br>▪ Eyes<br>▪ Ears<br>7. Types and uses<br>- Types; Local, Exotic<br>- Uses; Meat, Manure, Money, Skin for making bags and belts<br>8. Construction of rabbit hutch (housing)<br>9. Management practices (Keeping rabbits)<br>- Feeding rabbits<br>- Breeding of rabbits<br>- Hygiene<br>- Common diseases; Ear canker, Flu, Cold, Coccidiosis, Pneumonia, Snuffles, Fleas, Mites, Ticks | • In case the school has a rabbit farm, the learners should visit the farm<br>• Constructing a rabbit hutch<br>• Demonstrating correct practices in rabbit keeping<br>• Setting up projects of rabbit keeping<br>• Demonstrating practices of control of pests and diseases of rabbits<br>• Learners in groups participate in a debate on the advantages of keeping rabbits to other farm animals<br>• Learners make models of hutches for display from local materials. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | 10. Control and treatment of diseases of rabbits.<br>11. Keeping rabbit records | • Learners formulate samples of records that can be kept on a rabbit farm. |

**Assessment guidelines**

- In groups, assess learners' ability to construct hutches for rabbits.
- Individually, using the schools farm, assess learners' ability to take good care of rabbits.
- Using the project method, assess learners' ability to establish and manage rabbit farms (either in school or at home) - this may involve home visits by the teacher.

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS.

## TOPIC 2: KEEPING POULTRY AND BEES (20 PERIODS)

**Overview**

This is topic 1, term 1 in the standard P.5 curriculum. The topic is intended to develop learners' awareness and equip them with survival skills of keeping poultry and bees as a viable livelihood activity. The topic should largely expose learners to actual farm practices like feeding, sanitation, vaccination, and treatment where possible. There is need to use real poultry during the teaching intensively and field study to avoid abstract learning.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The Learner;<br>• Identifies different types of poultry.<br>• Describes the external parts of a domestic fowl.<br>• Identifies the different types of chicken.<br>• Describes the breeds of chicken.<br>• Explains the uses of poultry.<br>• Describes the systems of keeping poultry: chicken. | ▪ Types of poultry (chicken, turkey, guinea fowls, ducks, pigeons).<br>▪ External features of a domestic fowl (male and female)<br>comb, beak, wing, legs, feathers, claws, wattle and scales.<br>▪ Types of chicken<br>-broilers<br>-layers<br>-dual purpose<br>▪ Breeds of chicken<br>▪ Systems of keeping poultry (chicken) | ▪ Learners visit a nearby poultry farm. Individually identify and take note of different types and breeds of poultry.<br>▪ Working in groups, learners describe the external parts of a domestic fowl.<br>▪ In groups, learners explain the different uses of poultry farming.<br>▪ Demonstrate some of the management practices of poultry on a farm for |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Explains how to manage a poultry farm.<br>• Describes the life history of bees.<br>• States the different types of bees.<br>• States the importance of bees.<br>• Explains the conditions and reasons of swarming.<br>• Identifies the types of beehives.<br>• Describes the different methods of harvesting honey.<br>• Explains the importance of bee farming as a business | -free range, deep litter, fold pen, battery<br>▪ Management of poultry:<br>▪ Chicken<br>-Proper feeding, housing, pest and disease control and treatment e.g. spraying and vaccination.<br>▪ Types of bees<br>-drones, workers, queen<br>▪ Importance of bees to plants and people.<br>-Pollination, honey, bee wax and propolis.<br>▪ Conditions and reasons for swarming<br>-Leakage in the hive, excessive heat, attack be enemies, bad smell, noise, looking for a new hive.<br>▪ Types of hives<br>-Traditional beehives e.g. Kigezi, dug out log, tin.<br>-Modern beehives e.g. box hive, top bar hive.<br>▪ Harvesting honey<br>-traditional and modern methods<br>▪ Bee farming as a business<br>▪ money, food, candles, plastics, and employment. | example feeding, cleaning etc.<br>▪ Watch a video demonstrating bee keeping and make observation of types of beehives, and basic requirements and practices in bee keeping<br>(if available)<br>In groups, learners discuss the different types of honey bees, structures and roles of each in a hive.<br><br>With the guidance of the teacher, learners in groups, discuss the likely causes to swarming in bees and prevention measures.<br><br>Learners in groups of four, make models of beehives.<br>With their teachers, learners make a study tour to a nearby a piary and note the different practices involved in keeping of honey bees. |

**Assessment guidelines**

1. Observe and assess the individual learners' interests and abilities of taking care of poultry and bees, using the schools farm, or contextualized environment of the lesson
2. Using the project method, assess learners' ability to establish and manage poultry or bee keeping project (either in school or at home) - this may involve home visits by the teacher

## THEME: MATTER AND ENERGY

### TOPIC 3: MEASUREMENTS (12 PERIODS)

**Overview**

This is topic 2, term 1 in the standard P.5 curriculum. The topic is designed to equip learners with basic knowledge about standard measurements of quantities like mass, weight, and volume. The proper use and the rightful instruments/ apparatus should be emphasised. There is need for the teacher to use real measurement instruments to make the learning real to the learners.

| COMPETENCES | CONTENT | |
|---|---|---|
| The Learner;<br>▪ States the different measurements of objects.<br>▪ Explains the need for standard measures of mass, weight and volume.<br>▪ Uses the correct instruments and apparatus to take measurements | ▪ Measuring<br>-mass and weight<br>-capacity and volume<br>▪ Behaviour of objects with water<br>-floating and sinking<br>-displacement methods<br>▪ Finding density of different objects in relation to mass and volume. | ▪ Individual learners collect different objects/ substances/liquids and discuss in groups about the quantities to be measured.<br>▪ Discuss about the descriptions of quantities and related key concepts.<br>▪ Demonstrate measurement of different instruments/apparatus to determine the quantities measured using correct units.<br>▪ Using whole class approach, learners discuss about the different behavior of objects when in water<br>▪ Individually calculate the density of different objects in relation to mass and volume. |

**Assessment guidelines**

1. In small groups, learners determine measurements of given objects.

2. Use practical work to assess learners' knowledge competences about behaviour of objects when in water. Allow them to bring a variety of materials or objects and measurement apparatus.
3. Using written tests, assess individual learner's competence on the behaviour of different objects when in water and calculations about density of different objects.

## THEME: HUMAN HEALTH

## TOPIC 4: COMMUNICABLE INTESTINAL DISEASES WORM INFESTATIONS AND VECTORS (25 PERIODS)

**Overview**

These are topics 1 and 2 of term 3 in the standard P.4 curriculum and are intended to guide learners gain an understanding of communicable diseases and intestinal infestations, their causes, treatment, and prevention. The topic also presents aspects of diseases and vectors. You should guide learners to gain the understanding of how such diseases can be prevented.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The Learner;<br>▪ Identifies diarrhoeal diseases.<br>▪ Describes the causes of diarrhoeal diseases and how they can spread.<br>▪ Demonstrates how to mix and administer oral rehydration solution (ORS) and make salt-sugar solution (SSS).<br>▪ Identifies types of worms.<br>▪ Explains how worms enter the body. | • Diarrhoeal diseases.<br>- Diarrhoea, Dysentery, Cholera, Typhoid<br>• Causes of intestinal common communicable diseases.<br>- Bacteria, Virus, Protozoa, Worms<br>• How some common intestinal communicable diseases are spread through 4Fs.<br>• Signs and symptoms of common intestinal communicable diseases, diarrhoea, dysentery, cholera, and typhoid.<br>• Treatment and prevention of common communicable diseases.<br>- Mixing and administering ORS.<br>- Easting well-prepared foods. | • Learners share their experiences of diarrhoeal diseases (stories about diarrhoeal diseases).<br>• Demonstrating how to make an Oral Rehydration Solution and Salt Sugar Solution.<br>• Demonstrating practices that prevent the entry of worms in the body.<br>• Learners act a skit on how worms enter the body, their effects on the body and how to treat worm infestations.<br>• Learners identify/capture vectors in their environment. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| ▪ Describes signs and symptoms or worm infestations.<br>▪ Describes treatment of worms and intestinal<br>▪ Names some disease vectors.<br>▪ States characteristics of some disease vectors.<br>▪ Describes the life cycle of some disease vectors.<br>▪ Explain how the vectors spread diseases.<br>▪ Identifies the diseases spread by the vectors.<br>• Demonstrates correct prevention and control of diseases spread by vectors.<br>• Names what causes HIV/AIDS<br>• Explains ways in which HIV/AIDS spreads<br>• Discusses the effects of HIV/AIDS | - Drinking boiled water.<br>- Proper personal and food hygiene.<br>- Seek medical advice.<br>• Worm infestation<br>- Tape worms<br>- Round worms (hookworms, askaris).<br>- Thread worms (pin worms)<br>• Describe signs and symptoms of worm infestation.<br>• Treatment and prevention of worm infestations.<br>- Well cooked meat<br>- Wear shoes and sandals<br>- Wash and foods eaten raw<br>• Common vectors: bed bugs, cockroaches, ticks, fleas, house, flies, mites, rates, lice, mosquitoes, and tsetse flies.<br>• Characteristics of disease vectors:<br>• Their body structure<br>• Their habitat<br>• Their feeding habits<br>• The life cycle of mosquitoes, cockroaches, houseflies, and tsetse flies.<br>• How vectors spread diseases:<br>• Bites, dirty body, dirty environment.<br>• Prevention and control:<br>• Proper hygiene<br>• Covering food<br>• Spraying | • Learners observe external parts of vectors they captured or brought to the classroom by the teacher.<br>• Drawing and labeling the external parts of the common vectors.<br>• Learners share their experiences about common vectors (houseflies, mosquitoes, cockroaches etc.).<br>• Observing, recording, and reporting about common vectors and their habits at home.<br>• In whole class approach, learners discuss the diseases spread by the vectors (name, signs, and symptoms).<br>• Learners demonstrate ways of controlling the diseases spread by common vectors e.g. spraying insecticide, proper use of a mosquito net etc.<br>• Acting a skit on the causes, prevention of HIV/AIDS in the community. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Explains ways of caring for HIV/AIDS patients. | • Biological control<br>• Sleeping under mosquito nets.<br>• HIV/AIDS the concept of HIV/AIDS; causes and spread of HIV/AIDS; effects of HIV/AIDS; ways of caring for HIV/AIDS patients e.g., not sharing sharp objects, using gloves when helping HIV/AIDS patients<br>• Control measures e.g., blood test, taking medicine, feeding well (balanced diet)<br>• PIASCY Messages. | |

**Assessment guidelines**

1. Observe and record as learners prepare Oral Rehydration Solution and / or Salt Sugar Solution.
2. Assess individual learners' participation in the skit about prevention of diarrhoeal and intestinal diseases.
3. Using a written test, assess learners understanding of prevention of worm infestations Assess learners' ability to demonstrate effective methods of controlling the diseases spread by the common vectors.
4. Assess learners' participation in the skit and their understanding of the skit about disease vectors.
5. Using the project method, assess learners' ability to develop activities to control the spread of diseases spread by common vectors.

## THEME: HUMAN HEALTH

### TOPIC 5: IMMUNISATION (10 PERIODS)

**Overview**

This is topic 3, term 1 of the P.5 standard curriculum. The topic enhances learners' awareness of immunity and immunisable diseases. It also equips learners with knowledge about preventive measures for the different immunisable diseases, appreciate and be able to take part in the immunisation activities willingfully.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Identifies the different types of immunity.<br>• Explains the importance of immunity.<br>• Identifies different vaccines and relates them to immunisable diseases.<br>• Identifies signs and symptoms of different immunisable diseases.<br>• Identifies other immunisable diseases.<br>• Relates the vaccines to diseases.<br>• Identifies immunization centres in the area.<br>• Describes treatment for immunizable diseases. | Immunity<br>-What is<br>-Types of immunity<br>• Natural<br>• Acquired<br>2. Importance of immunity<br>3. Immunisable childhood diseases<br>-Polio<br>-Tuberculosis<br>-Diphtheria<br>-Measles<br>-Whooping cough<br>-Tetanus<br>-Hepatitis B<br>-Haemophilia influenza<br>4. Causes, spread, signs, symptoms and effects.<br>5. Vaccines<br>-What they are<br>-Storage<br>6. Types of vaccines<br>-Measles vaccine<br>-Polio vaccine<br>-DPT<br>-BCG, Hep B., Heb<br>7. Administration of vaccines<br>-Orally<br>-By injection<br>Other immunisable diseases<br>8. Other immunisable diseases.<br>-Cholera<br>-Yellow fever<br>-Meningitis | • Learners through brainstorm about immunity and the different types of immunity.<br>• Learners think-pair share about the importance of immunity.<br>• Learners study the immunization card samples and identify different vaccines.<br>• Learners study charts with illustrations of children suffering from different immunisable diseases and share the observable signs.<br>• Working in groups, learners identify the immunisation centres in the area.<br>• Learners individually share about prevention and treatment for the different immunisable diseases.<br>• Learners perform a short drama highlighting the cause, signs and symptoms as well as prevention of the immunisable diseases |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | -Signs, symptoms, and effects of other immunisable diseases | • In small groups, learners make mini presentations about immunity and the different types of immunity |

**Assessment guidelines**

1. Assess learners' ability to identify the immunisable childhood diseases.
2. Assess individual learners' competence in describing the common signs and symptoms of the different immunisable diseases.
3. In groups, assess learners' knowledge/understanding of preventive measures of the six immunisable diseases using a quiz.

## TERM 2

### THEME: HUMAN HEALTH

### TOPIC 6: ACCIDENTS, POISONING AND FIRST AID (10 PERIODS)

**Overview**

This is topic 3, term 3 of the P.4 standard curriculum. Accidents are common occurrences in the lives of children; this is partly due to their poor coordination of body organs, playfulness, and their inadequate experiences in the harmful effects of objects in their surroundings. This topic intends to increase the awareness of the learners about the causes and effects of accidents and equip them with skills of supporting casualties of accidents. The teacher should create more remedial lessons through open revision tests and discussions to enhance understanding of this topic by learners.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner;<br>▪ Names the common accidents and poisoning at home, on the way to, from and at school.<br>▪ States causes of accidents and poisoning. | 1. Accidents at home, on the way and at school:<br>- Types of injuries<br>- Causes<br>- Ways of preventing accidents<br>- Safety rules on the road. | • Learners brainstorm about common accidents at home, school, on the way to and from school. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| ▪ Demonstrates correct practices to avoid accidents.<br>▪ Practices habits, which help to avoid accidents and poisoning at home, on the way and at school.<br>▪ Demonstrates how to care for an injured person.<br>▪ Demonstrates how to care for an injured person.<br>▪ Describes how to take care for a person who has taken poison. | 2. Poisoning<br>- Causes of poisoning<br>- Prevention of poisoning<br>3. First Aid Kit<br>- Components<br>- Uses of components<br>- Giving First Aid | • Demonstrating ways of preventing accidents at home, way and at school.<br>• Demonstrating ways of administering first aid to a casualty.<br>• Establish projects in schools to reduce accidents at school.<br>• Collecting local materials that can be used to carry out first aid in the community. |

**Assessment guidelines**

4. In groups assess learners' ability to demonstrate how to administer first aid to casualties of different accidents.
5. Assess learners' practical ability on ensuring safety at home and school.
6. Using written test, assess learners' knowledge about causes and preventive measures of common accidents.

## THEME: HUMAN BODY

### TOPIC 7: THE TEETH AND DIGESTIVE SYSTEM (20 PERIODS)

**Overview**

'The Teeeth' is topic 3, term two, in the P.4 standard curriculum and 'The Digestive System' is topic 4, term 1, in the P.5 standard curriculum. They have been merged because 'The Teeth' had not been covered when schools closed due to COVID 19 lockdown and to provide continuity and understanding of the process of digestion right from the time food is in the mouth up to the time when the undigested remains of food leave the body through the anus. The content is intended to enhance learners' knowledge about the functions of each type teeth

and the functions of the different organs of the digestive system. This helps the leaners to take appropriate care for their teeth and the digestive system.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Describes the different types of teeth and their function<br>• Identifies the diseases and disorders of the teeth<br>• Demonstrates how to brush the teeth correctly<br>• Practices habits that promote oral health<br>• Draws different types of teeth with correct labelling<br>• Explains what the digestive system is.<br>• Identifies parts of the digestive system.<br>• Describes the functions of the different parts of the digestive system.<br>• Describes signs and symptoms of diseases and disorders of the digestive system. | • Types of teeth<br>(Canines, incisors, premolars and molars)<br>• Functions<br>(Cutting, tearing, grinding, chewing)<br>• Teeth structure<br>(Enamel, crown, neck, root)<br>• Care of our teeth<br>(Brushing, flossing, regular dental check-up, eating correct food, use toothpaste)<br>• Teeth diseases and disorders<br>(Dental cavity, dental carries, tooth cracks, dental plaque, improper growth, broken teeth)<br>• Digestive system<br>What it is<br>• Parts of the digestive system<br>• Functions of the different parts of the digestive system<br>• Diseases and disorders of the digestive system (causes, signs and symptoms)<br>• Prevention and management of diseases | • Observing the jaws of a mammal and how the teeth are fixed<br>• Observing and classifying the different types of teeth<br>• Drawing and labeling the structure of different types of teeth.<br>• Identifying the diseases and disorders of teeth.<br>• Demonstrating the correct way of brushing teeth and maintaining good oral hygiene.<br>• Naming the different parts of the digestive system.<br>• Explaining the functions of the different parts of the digestive system.<br>• Drawing and labeling the different parts of the digestive system.<br>• Discussing ways of preventing and management of diseases and disorders of the digestive system. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | and disorders of the digestive system | |

**Assessment guidelines**

1. Using a practical approach, assess as the learners' knowledge about classification of the different types of teeth.
2. Using a written test, assess learners' knowledge competences about the structure and functioning of the digestive system.
3. Assess learners' ability to demonstrate some of the best practices of caring for the teeth and the digestive system.

## THEME: THE ENVIRONMENT

### TOPIC 8: SOIL (15 PERIODS)

**Overview**

This is topic 1 term 2 of the P.5 standard curriculum. This will enable learners to study about soil as a major component of the environment. Learners should be helped to find out how soil helps people to survive and its relationship with other components of the environment. Experiments on soil should be intensively used to enhance understanding of the content by the learners and avoid abstract learning.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Identifies the different types of soil.<br>• Describes composition of soils<br>• Discusses uses of soil<br>• Describes the different ways soil is formed. | 1. Soil<br>What it is<br>• Uses of soil<br>Types of soil<br>• Loam<br>• Clay<br>• Sand<br><br>2. Soil formation<br>-Weathering of rock<br>-Decomposition of matter<br>3. Components of soil | • Individually learners identify and describe the types of soil.<br>• Learners collect samples of soil and carry out experiments to show the different properties of soil as guided by the teacher.<br>• Divide learners in small groups to carryout experiments on the different components of soil with guidance by the teacher.<br>• In small groups of 4-5, learners discuss the importance of soil. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Investigates to show properties of different soils.<br>• Analyses the importance of soil.<br>• Describes the types and causes of soil erosion.<br>• States the effects of harmful materials on soil.<br>• Demonstrates methods of soil conservation.<br>• Discusses ways of improving soil fertility.<br>• Investigates the advantages and disadvantages of artificial fertilisers and manure.<br>• Demonstrates best ways of making compost manure. | -Rock particles (mineral)<br>-Air<br>-Water<br>-Humus/ organic matter<br>-Bacteria and fungi (living things)<br>4. Importance of soil<br>– -Plant growth<br>– -Construction<br>– -Pottery<br>– -Animal habitat<br>– -Mining<br>5. Soil erosion<br>-What it is<br>-Types of soil erosion<br>-Causes of erosion<br>-Agents of erosion<br>6. Effects of harmful materials on soil<br>-Broken glasses/ tins<br>-Plastics<br>-Polythene<br>-Chemicals/ oils<br>7. Soil conservation<br>-What it is<br>-Methods of soil conservation<br>8. Soil fertility<br>-What it is<br>-Ways of improving soil fertility<br>-Artificial fertilizers (in-organic) | • Demonstrate an experiment to investigate soil erosion (use a wooden box, nails and wire mesh and watering can).<br>• Use whole class discussion for learners to discuss types and causes of soil erosion.<br>• Make field visits and the teacher guides learners to identify harmful materials in and on the soil.<br>• Individually learners state effects of harmful materials on soil.<br>• Teacher guides the learners to watch the video on the link below. https://www.youtube.com/watch?v=G8MO_8Zfu3Q<br>• Let learners practice methods of soil conservation in the school compound such as, planting trees, grass and mulching<br>• Individually learners identify ways of improving soil fertility.<br>• Makes farm visits to investigate the advantages and disadvantages of artificial fertilizers and manure (in farms where such fertilizers are used).<br>• Learners participate in making compost manure near the school garden.<br>• Learners participate in compaigns on how to promote soil conservation in their communities |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Writes poems on the different ways of conserving soil.<br>• Participate in the activities that conserve soil. | -Natural fertilizers (organic)<br>e.g.<br>• Compost manure<br>• Farmyard manure<br>• Green manure<br>• Organic mulches<br>9. Advantages and disadvantages of artificial and natural fertilizers (manure).<br>10. Making compost manure (project). | • Learners participate in the different activities that help to conserve soil |

**Assessment guidelines**

- Using a written test, assess each learner's ability to identify and name different types of soil.
- Observe and assess learner's competence on comparing drainage in different types of soil as they work in groups on the practical activity of soil drainage and capillarity.
- Assess each learner's competence about methods of conserving soil as they carry out related activities around the school gardens/compound
- Using project method and working groups, assess leaners' ability to prepare organic or compost manure for the school/home garden.

## THEME: MATTER AND ENERGY

### TOPIC 9: HEAT ENERGY (20 PERIODS)

**Overview**

This is topic 2 term 2 of the P.5 standard curriculum. This builds on the terms learnt in earlier classes such as mass, volume, and density. Build on this experience to introduce state of matter and forms of energy. Learners should be helped to identify the difference between types and forms of energy. Expose learners practically to the effect of heat in matter. Learners should be

helped to acquire scientific knowledge on effects of heat on things in the environment and demonstrate skills of investigating effects of heat on matter.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Analyses what matter is<br>• Investigates the three states of matter<br>• Differentiates between solutes and solvents<br>• Identifies the differences between types and forms of energy<br>• Identifies different sources of heat<br>• Describes the effect of heat on matter<br>• Investigates methods of heat transfer | 1. Matter<br>• What it is<br>• Weight/mass<br>• Properties of matter (experiments)<br>-Has weight<br>-Occupies space<br>-Exerts pressure<br>2. States of matter<br>• Solids<br>• Liquids<br>• Gases<br>3. Solutes, solvents, and solutions.<br>4. Energy<br>• What it is<br>• Types of energy<br>o Kinetic energy<br>o Potential energy<br>5. Forms of energy e.g. heat, sound, electric, magnetic, light (no details of each needed)<br>• Characteristics of forms of energy (make work possible, transformation).<br>6. Heat energy<br>• What it is<br>• Sources of heat e.g. sun, food, candle light, hot flat iron, hot charcoal, burning wood or coal, and so on. | • Through brainstorming, learners name different states of matter.<br>• In groups, learners experiment the mixing and separation of mixtures.<br>• Through brainstorming learners discuss the different solutes and solvents commonly used.<br>• Through think-pair-share, learners describe types and forms of energy.<br>• Through demonstration, the class carries out experiments to show the effects of heat on matter.<br>• Individually learners state the effects of heat on matter.<br>• Through think-pair-share learners discuss what energy is.<br>• Individually, learners draw and label the vacuum flask and explains how it works<br>• Under the teacher's guidance learners measure and record temperatures of different objects. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • States the difference between heat energy and temperature<br>• Relate heat to temperature<br>• Explains the types and uses of the thermometer<br>• Converts degrees appropriately | • Uses of heat e.g. to cook, dry clothes, warm things.<br>7. Effects of heat gain and heat loss<br>• Change of size/length<br>• Expansion (experiments on the expansion).<br>• Contraction (experiments on contraction)<br>• Change of state e.g. melting, evaporation, freezing, condensation and sublimation.<br>• Increase in temperature<br>• Heat transfer (how heat travels)<br>• Conduction in solids<br>• Convection in liquids and gases<br>• Radiation in vacuum<br>8. Uses of different methods of heat transfer in our surrounding e.g.<br>• The thermos flask<br>• The charcoal stove<br>9. Heat and temperature<br>• What temperature is<br>10. Thermometers and measure of temperature<br>• Types and uses of thermometers<br>• Celsius scale<br>• Fahrenheit scale<br>• Six's (minimum and maximum)<br>• The clinical thermometer<br>• Differences between different thermometers<br>11. Conversion from Celsius to Fahrenheit and vice versa | • Individually learners draw and label different thermometers.<br>• Through guided discovery, learners work out calculations involving conversions in °C *and* °F.<br>• Learner's practice measuring and recording temperature using an infrared thermometer (temperature gun) correctly.<br>• Learners watch a video on conversion of degrees https://www.youtube.com/watch?v=beNbdYc6_7o |

**Assessment guidelines**

- Using written tests, assess each learner's ability to describe the characteristics of different states of matter.
- Assess each learner's competence in explaining how heat energy affects the environment.
- Using group work and mini presentations, assess each learner's ability in drawing and labelling different thermometers.
- Using practice exercises, assess each learner's competence in converting from Celsius to Fahrenheit and vice versa.
- Using project work, assess each learner's competence in differentiating between the forms of energy by researching about uses of the different forms of energy.

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

## TOPIC 10: OCCUPATIONS IN OUR COMMUNITY: CROP GROWING (10 PERIODS)

**Overview**

This is topic 3, term 2 in the P.5 standard curriculum. In this topic the learners are guided on how grow and care for common tuber crops in the community. Most of the activities should be done practically to enhance understanding and development of the intended knowledge, skills, and values.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Identifies the characteristics of common tuber crops.<br>• Discusses ways of growing and caring for tuber crops.<br>• Identifies pests and diseases of tuber crops.<br>• Describes the characteristics of common | • Common tuber crops<br>- Root tubers e.g.<br>-Sweet potatoes<br>-Carrots<br>-Cassava<br>- Stem tubers e.g.<br>-Irish potatoes<br>- yams<br>• Growing and caring for tuber crops<br>• Common pests and diseases of tuber crops | A field visit to the nearest market to observe the common tuber crops sold in the market.<br>Identifying the common tuber crops.<br>Grouping tuber crops as root tubers and stem tubers.<br>Discussing the ways of growing and caring for tuber crops.<br>Trapping and observing some |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| tuber crop pests and their effects on crops.<br>• Discusses methods of controlling pests and disease of tuber crops.<br>• Describes ways of harvesting, processing and storing tuber crops.<br>• Practices growing tuber crops (project by the Young Farmer's Club). | • Characteristics of common tuber crop pests<br>• Effects of pests and diseases on tuber crops:<br>-Rotting of tubers<br>-Holes on tubers and leaves<br>-Leaf yellowing<br>-Leaf curling<br>• Methods of controlling pests and diseases of tuber crops.<br>• Harvesting, processing and storage of tuber crops<br>• Science oriented clubs<br>-Young farmers club | of the common pests of tuber crops.<br>Describing the characteristics of common tuber crop pests.<br>Discussing the effects of pests and diseases on tuber crops.<br>Demonstrating methods of controlling pests and diseases of tuber crops.<br>Describing ways of harvesting, processing and storing tuber crops.<br>Practicing growing tuber crops as a project. |

### Assessment guidelines

1. Assess individual learners' exhibition of the different types of tuber crops.
2. Take learners to the school gardens and observe them practice planting tuber crops.
3. Observe and take notes as learners working in groups, demonstrate and discuss the ways of harvesting, processing, and storing tuber crops.

## TERM 3

## THEME: THE WORLD OF LIVING THINGS

## TOPIC 11: FUNGI AND BACTERIA (10 PERIODS)

**Overview**

This is topic 4, term two in the P.5 standard curriculum. The topic helps learners to be aware of bacteria and fungi as disease agents. It is designed to equip learners with knowledge on how some bacteria and fungi are useful and harmful in our day-to-day life. Learners are also guided to discuss about bacteria and fungi as agents of diseases.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Describes bacteria, where they are | 1. Bacteria<br>• What they are.<br>• Where they are found | • In groups, learners discuss places where bacteria can be found in a home or school. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| found and where they breed<br>• Describes characteristics of bacteria<br>• Discusses ways of preventing, controlling, and treating bacterial diseases<br>• Describes fungi as harmless and harmful organisms<br>• Identifies dangers of fungi<br>• Discusses ways of preventing and controlling bacterial and fungal diseases | • Where they breed<br>2. Nature of bacteria<br>• Harmful<br>• Harmless/ useful<br>3. Prevention, control, and treatment of bacterial diseases<br>4. Fungi<br>• What they are<br>• Where they are found<br>• Examples of fungi<br>• Harmful<br>• Harmless/ useful<br>• Uses of fungi (mushroom for food, mould for penicillin drug, in brewing).<br>5. Dangers of fungi<br>6. Prevention and control of diseases causes caused by fungi.<br>7. Facts about bacteria and fungi<br>• They can cause diseases.<br>• They can cure diseases<br>• They last for a long time | • Teacher guides learners on describing the nature of bacteria.<br>• Through brain storming, learners discuss possible ways of preventing, controlling and treatment of bacterial diseases.<br>• Learners research on fungi, what they are, where they are found, and they present their work during class discussion.<br>• Individually learners mention examples of fungi<br>• In groups learners identify dangers and usefulness of fungi.<br>• Learners in small groups of 4-5, discuss ways of preventing, controlling, and treating fungal diseases.<br>• Through think-pair-share, learners state the facts about bacterial and fungi. |

**Assessment guidelines**

- Assess each learner's ability to describe (orally, pictorial or written) what bacteria/fungi are, how they breed and feed.
- Assess each learner's ability to identify the diseases caused by bacteria/fungi, how they can be prevented, controlled, and treated.
- Assess each learner's ability to describe the usefulness/harmfulness of bacteria/fungi.

## THEME: MANAGING CHANGES IN THE ENVIRONMENT

## TOPIC 12: TYPES OF CHANGES – BIOLOGICAL, PHYSICAL AND CHEMICAL CHANGES (10 PERIODS)

**Overview**

This is topic 1, term 3 in the P.5 standard curriculum. In this topic, learners will be guided to study about the different changes in their environment. The learners will be guided to classify the changes under; Biological, Physical and Chemical. The learners will be encouraged to perform simple experiments on changes of matter.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Describes how changes take place in the environment.<br>• Describes the different changes in the environment.<br>• Describes the different effects/ consequences of various changes in the environment. | - Types of Changes in the environment<br>- Biological changes<br>- What they are<br>- Growth in plants and animals.<br>- Physical changes in plants and animals<br>- Managing body changes<br>-body care<br>-guidance<br>- Chemical changes<br>- What they are<br>-rusting<br>-fermentation<br>-respiration<br>-rotting and decaying<br>- Physical changes<br>- What they are<br>- Changes in weather<br>- Changes in the<br>states of matter<br>-land slides<br>-earthquakes<br>- Placement faulting/volcanic actions<br>- Characteristics of various | • Naming the different types of changes in the environment.<br>• Classifying the changes under biological, physical, and chemical.<br>• Carrying out experiments on changes in different states of matter. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | types of changes in the environment<br>- Consequences of various types of changes to people, animals and plants<br>- Increases in size<br>- Increases in temperature<br>- Mountain formation<br>- Rain formation<br>- Change of state<br>- New things are formed<br>- Placement of things<br>- Natural causes of changes in the environment e.g. Floods, drought, earthquake, hailstones, landslides, storms, lightening, thunder<br>- Effects of changes; Hunger, destruction of homes and property, plants, animals<br>- Soil erosion, Diseases / epidemics, migrations<br>- Ways of managing changes<br>- Changes in the environment through human activities | |

**Assessment guidelines**

1. Name different changes that happen to living things.
2. Group learners and guide them to discuss about changes in the environment. Assess learners' knowledge competences about categorized changes in the environment under:
    a) Biological
    b) Physical
    c) Chemical
3. Using written exercises, assess learners understanding about the different ways of managing changes that happen in our environment.

4. Use project work to assess learners' demonstration of different ways of managing changes in the environment.

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

## TOPIC 13: KEEPING GOATS, SHEEP AND PIGS (20 PERIODS)

**Overview**

This is topic 2, term 3 in the P.5 standard curriculum. The learners will be guided to use scientific knowledge and skills to keep goats, sheep, and pigs. The learners should be taken to visit nearby animal farms to observe the skills of keeping goats, sheep, and pigs practically.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Identifies names of external parts of goats, pigs and sheep.<br>• Describes uses of goats, sheep and pigs.<br>• Discusses the causes, signs, symptoms, prevention and control measures of diseases in goats, sheep and pigs. | Goats, sheep and pigs keeping<br>• External parts of goats, sheep and pigs.<br>• Housing and management of goats, sheep and pigs.<br>• Products from goats, sheep and pigs:<br>- Meat<br>- Skins<br>- Wool<br>- Milk<br>Diseases and parasites of goats, sheep and pigs<br>- Causes<br>- Signs and symptoms<br>- Prevention and control. | – Drawing and labelling external parts of goats, sheep, and pigs.<br>– Identifying products got from goats, sheep and pigs.<br>– In small groups, learners describe the management practices of goats, sheep and pigs.<br>– Using whole class approach, learners discuss how to control parasites and diseases of goats, sheep and pigs. |

**Assessment guidelines**

1. Assess the individual learner's ability to draw and label the external parts of a goat, a sheep and a pig.

2. Assess individual learners' competence to identify the products got from goats, sheep and pigs.
3. In groups, assess learners' competences to discuss how you can control the parasites and diseases of goats, sheep and pigs.

## THEME: HUMAN HEALTH

### TOPIC 14: FOOD AND NUTRITION (20 PERIODS)

**Overview**

This is topic 3, term 3 in the P.5 standard curriculum. The content under this topic facilitates learners' understanding of advantages and disadvantages of breastfeeding, bottle feeding, traditional customs, and taboos. Learners are guided to determine the importance of giving a balanced diet to vulnerable groups of people and people with different needs.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• The learner explains what breastfeeding is, its advantages and disadvantages.<br>• Explains what bottle-feeding is, its advantages and disadvantages.<br>• Identifies vulnerable groups of people.<br>• Explains traditional customs and their advantages | • Breastfeeding<br>- What it is<br>- Advantages and disadvantages to:<br>-Mother<br>-Baby<br>-Family<br>• Bottle-feeding<br>- What it is<br>- Advantages and disadvantages to:<br>-Mother<br>-Baby<br>-Family<br>• The vulnerable groups and people who need special care<br>-Weaning babies<br>-Sick<br>-Elderly<br>-Convalescents<br>-Breastfeeding | • Learners, using think-pair-share explain breast feeding and bottle feeding.<br>• Sharing their experiences on breastfeeding (their own or children they have observed breastfeeding).<br>• Telling folk stories related to breastfeeding .<br>• Telling myths about breastfeeding.<br>• Brainstorming on the advantages and disadvantages of breastfeeding to; mother, baby and family.<br>• Explaining instances in their community when bottle feeding may be necessary. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| to the community. | -Pregnant mothers and their unborn children.<br>• Food for the vulnerable and people who need special care<br>- Soft drinks<br>- Soft foods<br>- Balanced diet<br>• Traditional customs and food taboos in communities<br>-Examples of food taboos; women should not eat chicken, eggs and so on.<br>-Effects of food taboos in nutrition.<br>Food consumption patterns in the community<br>-staple food of different communities<br>-other foods of different communities | • Listing different vulnerable groups of people and the food they need.<br>• Sharing their experiences of caring for vulnerable persons in their communities – identifying the specific challenges in caring for them.<br>• Debating on the customs and food taboos in their community.<br>• Using whole-class approach, learners discuss on why vulnerable people need special feeding.<br>• In groups learners discuss how to care for people with special needs<br>• Under the guidance of the teacher, learners identify food consumption patterns of the communities. |

**Assessment guidelines**

- In small groups, learners demonstrate making foods for specific groups of vulnerable persons.
- In form of written tests, assess learners' competences about identifying vulnerable persons and foods for each group; advantages and disadvantages of breast feeding and bottle feeding.
- Organize a debate and assess learners' ability of effective communication on a topic about food taboos in their community (e.g. "women should not eat chicken").

## THEME: HUMAN HEALTH

## TOPIC 15: PRIMARY HEALTH CARE (PHC) (10 PERIODS)

**Overview**

Sanitation is topic 4, term two in the standard P.4 curriculum, and PHC is topic 4, term 3, in the P.5 standard curriculum. Both topics are under the theme "Human health". They have been merged because 'Sanitation and its importance' had not been covered when schools closed due to COVID 19 lockdown and to provide continuity. Under sanitation the learners are guided to appreciate and encouraged to grow good sanitation habits to protect themselves against germs and diseases. PHC on the other hand is set to broadly guide learners to explore and learn about the different elements and principles of PHC. The topic will support learners to carry out activities which aim at improving community hygiene and health of the people. The content on people who need special care and how to care for them has been left out because it has been shifted to be covered under the topic "Food and Nutrition".

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• States what sanitation is<br>• Discusses the importance of proper sanitation<br>• Explain what germs are<br>• Discusses how the germs are spread<br>Describes the different ways of maintaining proper sanitation<br>• Describes what PHC is, its | • What sanitation is<br>• Importance of good sanitation in our environment<br>• Germs and diseases<br>- what they are<br>- where they are found<br>- how they are spread<br>- the 4Fs germ path<br>- How they cause rotting<br>• Ways of protecting against germs and diseases in the environment, school, on the way and in the homes | • Learners share their experiences of waste disposal in their communities.<br>• Making a tour around the school to identify areas for disposal of waste, the toilets, the urinals etc.<br>• Learners observe and record the uses of these areas.<br>• Learners identify whether or not these areas are properly used.<br>• Show a video of the 4Fs germ pathway e.g. https://www.youtube.com/watch?v=YBGsoimPXZg<br>• learners demonstrate ways of protecting themselves against germs especially, proper hand washing procedures, smoking latrines, burning rubbish, spraying using insecticides, sweeping the compound.<br>• Using the whole class approach, learners describe ways diseases they are spread. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| elements and principles.<br>• Demonstrates activities of PHC in promotion of community hygiene.<br>• Explains the responsibilities of individuals, families and the community in health promotion. | • Primary Health Care<br>- What it is<br>- Elements and principles of PHC<br>• Activities in PHC in promotion of community hygiene e.g.<br>- Rubbish and excreta disposal<br>- protecting water sources<br>• Responsibility of individuals, family, and community in health promotion.<br>• Suitable lifestyles and good health practices. | • Making a visit to a health Centre to observe the PHC elements of immunization, treatment of diseases, family planning, and health education among others.<br>• Learners identifying the PHC practices in the health centre – these are also referred to as Elements.<br>• Using the field observations to define PHC – affordable, effective, socially acceptable, with community participation.<br>• Describing PHC, its elements and principles.<br>• Practicing activities of PHC in the school.<br>• Demonstrating the responsibilities of individuals, families, and community in health promotion. |

**Assessment guidelines**

1. Set up projects within the school where learners take part in maintaining sanitation. Observe and record the success of these projects and the participation of individual learners in the projects.
2. Test learners understanding of how diseases are spread and importance of sanitation through written assessment.
3. Assess learners' ability to explain the concept of PHC and discuss the responsibilities of individuals, families, and community in the provision of PHC.
4. Assess learners' competences in preparing messages that promote PHC in schools.

**P.6 INTEGRATED SCIENCE ABRIDGED CURRICULUM**

**TERM 1**

## THEME: THE WORLD OF LIVING THINGS

### TOPIC 1: BACTERIA AND FUNGI (15 PERIODS)

**Overview**

This is a topic for P.5 term 2 in the standard curriculum. It has been shifted to P.6 in the abridged curriculum because it had not been covered by the time schools closed due to the COVID 19 lockdown. The learners will be guided to understand that bacteria and fungi are germs but there are some which are harmful and others useful. The learners should be guided to demonstrate how to prevent, control and treat diseases caused by bacteria and fungi. Use videos where possible when teaching this topic. The teacher should organise more remedial lessons on this topic to enhance mastery and understanding of the concepts by the learners.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Describes bacteria, where they are found and where they breed.<br>• Describes characteristics of bacteria.<br>• Discusses ways of preventing, controlling and treating bacterial diseases.<br>• Describes bacteria and fungi as harmless and harmful organisms.<br>• Discusses ways of preventing and controlling bacterial and fungal diseases. | • Bacteria<br>- What they are.<br>- Where they are found<br>- Where they breed<br>- Harmful<br>- Harmless/ useful<br>• Prevention, control and treatment of bacterial diseases<br>• Fungi<br>- What they are<br>- Where they are found<br>- Examples of<br>- Harmful<br>- Harmless/ useful<br>- Uses of fungi (mushroom for food, moulds for penicillin drug, in brewing).<br>• Dangers of | • Describing bacteria and fungi, where they are found and breed.<br>• Identifying harmful and harmless bacteria and fungi.<br>• Discussing ways of preventing, controlling and treating bacterial and fungal diseases.<br>• Carry out field visits to rubbish pits and other dirty places where bacteria can breed from.<br>• Use dramatization to demonstrate prevention and control of bacterial and fungal diseases. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | • Prevention and control of diseases causes caused by fungi. | |

**Assessment guidelines**

Assess individual learner's ability to;

- Name forms of bacteria and fungi.
- State the uses of bacteria and fungi.
- Describe ways of preventing, controlling and treating bacterial and fungal diseases.
- Demonstrate good practices for prevention and control of bacterial and fungal disease.

## THEME: THE WORLD OF LIVING THINGS

## TOPIC 2: CLASSIFICATION OF ANIMALS (20 PERIODS)

**Overview**

This is topic 1 Term 1 in the P.6 standard curriculum and it has been maintained. This topic is meant to help learners to differentiate between animals which are vertebrates and invertebrates. The learners will classify the animals using their characteristics. The topic should be taught using child centred approaches like carrying out observations in the environment and naming the animals therein. The competences on "Caring and Protecting animals have been left out because it is part of environmental protection.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner;<br>• Gives examples of vertebrates and invertebrates<br>• Describes different classes of vertebrates and invertebrates.<br>• Describes mode of reproduction in vertebrates and invertebrates. | • Classification of vertebrates and invertebrates.<br>E.g., (i) Vertebrates; warm blooded (mammals and birds) and cold blooded (reptiles, fish and amphibians)<br>(ii) Invertebrates; arthropods (insects, arachnids, myriapods, crustaceans), molluscs (snails and slugs) and worms (flat worms, segmented worms and round worms). | • Carry out field visits to help learners observe different vertebrates and invertebrates in the environment and let them record their findings.<br>• Use group work to let learners classify different vertebrates and invertebrates according to their characteristics.<br>• Using whole class discussion, let learners discuss how the different classes of vertebrates |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | • Description of the different classes of vertebrates and invertebrates according to their characteristics.<br>• Mode of reproduction in different classes of vertebrates and invertebrates. | and invertebrates reproduce feed and move.<br>• Learners in groups, write poems about the ways of caring and protecting of the different classes of vertebrates and invertebrates. |

**Assessment Guidelines**

Assess individual learner's ability to;

- Differentiate between vertebrates and invertebrates.
- Classify different animals according to their characteristics.
- Mention examples of animals under the different classes of invertebrates.
- Describe the mode of reproduction and feeding of the different classes of vertebrates and invertebrates.

## THEME: MATTER AND ENERGY

### TOPIC 3: SOUND ENERGY (20 PERIODS)

This is topic 2 Term 1 in the standard P.6 curriculum and has been maintained. Learners should be guided to explore about the different sounds in their environment and how it is produced. Learners should be practically involved with hands on activities to produce and experiment with sound. Use of resource persons in musical instruments would be ideal for this topic.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Experiments on sound as a form or energy<br>• Identifies the sources of sound.<br>• Describes how sound travels in different materials<br>• States the different ways through which sound is | • Sound energy<br>-what it is<br>• Sources of sound:<br>-natural and artificial,<br>• musical instruments e,g<br>-Percussion<br>-Wind<br>-String<br>• Pitch, frequency and volume of sound. | • Learners carry out experiments on sound as a form of energy.<br>• Individually, learners identify different sources of sound.<br>• Using class discussion, learners describe the movement of sound in different materials. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| produced, stored and reproduced.<br>• Carries out experiments on behaviour of sound with different materials.<br>• Names the different parts of the human ear.<br>• Draws and labels the structure of a human ear'<br>• States the functions of the human ear.<br>• Names diseases and disorders of the human ear.<br>Compares the human ear with organs of hearing in other animals. | • How sound travels<br>• Echo:<br>-what it is and its importance.<br>• How sound is produced, stored and reproduced.<br>• The human ear (the structure and functions).<br>• Ways of caring for the human ear. | • In groups, learners discuss different ways of producing, storing and reproducing sound.<br>• With help of a resource person, learners experiment production of sound with different materials in the environment.<br>• Individually learners draw and label the structure of the human ear.<br>• Using think-pair-share learners state the functions of the human ear.<br>• Learners are tasked to carry out their own research on diseases and disorders of the human ear.<br>• Through brain storming, learners discuss ways of caring for the human ear.<br>• Using class discussion, teacher guides learners to compare the human ear with organs of hearing in other animals.<br>• Teacher guides learners in making a model of the human ear (individually). |

**Assessment guidelines**

- Assess each learner's competence in identifying different sources of sound.
- Assess each learner's competence in storing and reproducing sound.
- Assess each learner's competence to demonstrate how to care for the human ear.

- Assess learner's ability to demonstrate the variations of pitch in different classes of musical instruments.
- Assess learners' ability to make functional musical instruments.

## THEME: THE HUMAN BODY

## TOPIC 4: THE CIRCULATORY SYSTEM (10 PERIODS)

**Overview**

This is topic 3, Term 1 in the standard P.6 curriculum. In this topic, learners will be guided to explain how blood flows in the body, the functions of blood and importance of blood circulation. The learners will also identify the functions of the heart and blood vessels involved in blood circulation. Learners will be guided by use of models of the heart and blood vessels to avoid abstract learning. Content and competence about "Increasing amount of blood in circulation" and "HIV/AIDS and blood" have been merged with describing ways of preventing and managing diseases and disorders of the circulatory system.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>▪ Describes blood circulation.<br>▪ Describes the structure and functions of the heart.<br>▪ Identifies blood vessels.<br>▪ Describes composition of blood.<br>▪ Describes way of preventing and managing diseases and disorders of the circulatory system. | ▪ Blood circulation<br>-what it is.<br>▪ Structure and functions of the heart<br>-parts of the heart.<br>-functions of the parts of the heart.<br>▪ Blood vessels:<br>-veins and arteries attached to the heart<br>-capillaries<br>▪ Composition and functions of blood:<br>-Plasma.<br>-Red blood cells<br>-White blood cells<br>-Platelets.<br>▪ Diseases and disorders of the circulatory system. | ▪ Describing blood circulation.<br>▪ Drawing and labelling the heart.<br>▪ Stating functions of the parts of the heart.<br>▪ Naming the blood vessels.<br>▪ Describing composition of blood.<br>▪ Describing how to prevent and manage diseases and disorders of the circulatory system.<br>▪ In groups, learners make a model of the human heart showing the major parts from local materials with the guidance of the teacher. |

**Assessment guidelines**

1. **Assess individual learner's competence in,**
    - Drawing and labelling the heart.
    - Stating functions of the parts of the heart.
    - Naming the blood vessels.
    - Describing composition of blood.

2. Assess individual learner's ability to describe how to prevent and manage diseases and disorders of the circulatory system.

## THEME: HUMAN HEALTH

### TOPIC 5: FOOD AND NUTRITION (10 PERIODS)

**Overview**

This is Topic 3, Term 3 in the standard P.5 curriculum. It has been shifted to P.6, term 1 in this abridged curriculum because it had not yet been covered by the time schools closed due to COVID 19 lockdown. The content under this topic is intended to support learners' understanding of advantages and disadvantages of breastfeeding, bottle feeding, traditional customs and taboos. Learners will be guided to determine the importance of giving a balanced diet to vulnerable groups of people and people with different needs. The teacher should organise more remedial lessons for learners to grasp well this content.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• The learner explains what breastfeeding is, its advantages and disadvantages.<br>• Explains what bottle-feeding is, its advantages and disadvantages. | • Breastfeeding<br>- What it is<br>- Advantages and disadvantages to:<br>-Mother<br>-Baby<br>-Family<br>• Bottle-feeding<br>- What it is<br>- Advantages and disadvantages to:<br>-Mother<br>-Baby<br>-Family<br>• The vulnerable groups and people who need special care. | • Sharing their experiences on breastfeeding<br>• Telling folk stories related to breastfeeding.<br>• Telling myths about breastfeeding.<br>• Brainstorming on the advantages and disadvantages of breastfeeding to; mother, baby and family.<br>• Explaining instances in their community when bottle feeding may be necessary. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Identifies vulnerable groups of people.<br>• Explains traditional customs and their advantages to the community. | -Weaning babies<br>-Sick<br>-Elderly<br>-Convalescents<br>-Breastfeeding<br>-Pregnant mothers and their unborn children.<br>• Food for the vulnerable and people who need special care<br>- Soft drinks<br>- Soft foods<br>- Balanced diet<br>• Traditional customs and food taboos in communities<br>-Examples of food taboos; women should not eat chicken, eggs and so on.<br>-Effects of food taboos in nutrition. | • Listing different vulnerable groups of people and the food they need.<br>• Sharing their experiences of caring for vulnerable persons in their communities – identifying the specific challenges in caring for them.<br>• Debating on the customs and food taboos in their community. |

**Assessment guidelines**

- In small groups, assess learners' ability to demonstrate how to prepare foods for specific groups of vulnerable persons in their communities.
- In form of written tests, assess learners understanding of the concept of vulnerable persons and foods for each group, advantages and disadvantages of Breast feeding and Bottle feeding
- Organize a debate and assess learners ability of effective communication on a topic about food taboos in their community (e.g. "women should not eat chicken")

## HUMAN HEALTH

### TOPIC 6: ALCOHOL, SMOKING AND DRUGS IN SOCIETY (10 PERIODS)

This is the last topic of Term 1 in the standard P.6 curriculum, and it has been maintained. In this topic, learners should be guided to explore the dangers of smoking, alcoholism, and drug dependence. You are advised to use examples in the society to guide learning.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner.<br>• Describes alcohol and alcoholism.<br>• Discusses factors that lead to alcoholism, smoking, drug abuse and misuse.<br>• States the effects of alcoholism to an individual, family and community.<br>• Describes smoking.<br>• Mentions effects of smoking to an individual, family and community.<br>• Discusses the effects of drugs to an individual, family and community. Identifies essential drugs.<br>• Mentions ways of storing drugs.<br>• States life skills to safe guard against alcoholism, smoking and drug dependency.<br>• Participates in campaigns against alcohol, smoking and drugs | • Alcohol and Alcoholism:<br>– What they are.<br>– How alcohol is made.<br>– Factors that lead to alcoholism.<br>• Effects of alcoholism to an individual, family and community.<br>• Smoking: – what it is. – Factors that lead to smoking. – Effects of smoking to an individual, family and community.<br>• Drugs:<br>– What they are.<br>– essential drugs:<br>– What they are.<br>–storage of drugs.<br>– Characteristics (uses) of essential drugs.<br>• Drug Abuse, Misuse and Dependency – Factors that lead to drug abuse/ misuse and dependency – Effects of drug abuse to an individual, family and community.<br>• Life Skills to Safeguard against Alcoholism, Smoking and Drug Dependence | • Learners mention different kinds of alcohol<br>• Carry out experiments on how alcohol is made.<br>• Dramatizing causes and effects of factors alcoholism, smoking, drug abuse and misuse.<br>• Using Think pair share, learners describe smoking.<br>• Using brainstorming, learners mention effects of smoking to an individual, family and community.<br>• Using Individualized learning, learners discuss the effects of drugs to an individual, family and community.<br>• Identifying essential drugs.<br>• Mentioning ways of storing drugs. States life skills to safeguard against alcoholism, smoking and drug dependency.<br>• Participating in campaigns against alcohol, smoking and drugs used in their areas<br>• Writing words, sentences and stories about drugs, drug abuse and misuse.<br>• Acting out a dialogue about life skills to safeguard against alcoholism, |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | | smoking and drug dependence.<br>• Writing effective campaign messages against alcohol, smoking and drugs.<br>• Describing drug abuse, misuse and dependence. |

**Assessment guidelines**

**1.** Assess individual learner's ability to:

- List the effects of smoking and alcoholism to an individual, family and community.
- Explain how essential drugs can be stored.
- Describe the life skills to safeguard against alcoholism, smoking and drug dependence.

2. Assess individual learner's competence in writing and displaying campaign messages against smoking, alcoholism and drug dependence.

## TERM II

## THEME: THE WORLD OF LIVING THINGS

### TOPIC 7: CLASSIFICATION OF PLANTS (12 PERIODS)

**Overview**

This is Topic 1, Term 2 in the standard P.6 curriculum and it has been maintained. In this topic, learners will be guided to classify plants from their immediate environment according to their characteristics. The content on flowering plants i.e. legumes and cereals was left out because it was handled in P.4. There is need for the teacher to use real plants from the immediate environment to enhance understanding and avoid abstract learning

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Describes characteristic of flowering and non-flowering plants. | • Non-flowering plants<br>-spores bearing plants (mosses, ferns, lichens)<br>-conifers<br>-Algae<br>• Seed dispersal | • Conduct a nature walk and classify plants into flowering and non-flowering plants.<br>• Identifying non-flowering plants |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Classifies plants into flowering and non-flowering.<br>• Names examples of non-flowering plants and flowering plants.<br>• Label parts of the non-flowering plants and non-flowering.<br>• Describes the mechanisms of seed dispersal.<br>• Describes plant propagation.<br>• Participate in plant conservation activities | -mechanism<br>-agents<br>-importance.<br>• Plant propagation<br>-Seeds<br>-suckers<br>-cuttings<br>-leaves<br>-budding<br>-layering<br>-Marcotting<br>-bulbs | • As individuals, learners draw and label flowering and non-flowering plants.<br>• In small groups, learners describe the mechanisms of seed dispersal.<br>• Describing plant propagation for different plants.<br>• Learners make a simple classification table using real plants from the environment. |

**Assessment guidelines**

- Assess individual learner's competence in using characteristics to classify flowering and non-flowering plants.
- Assess individual learner's competence in describing seed dispersal mechanisms.
- Assess individual learner's ability to demonstrate some of the different propagation methods.
- Assess individual learner's ability to participate efficiently in conservation of plants in the environment.

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

## TOPIC 8: OCCUPATIONS IN OUR COMMUNITY: CROP GROWING (10 PERIODS)

**Overview**

This is Topic 3, Term 2 in the standard P.5 curriculum. It has been shifted to P.6 in this abridged curriculum because it had not been completed when schools closed due to COVID 19 lockdown. In this topic the learners will be guided on how grow and care for common tuber crops in the community. Most of the activities should be done practically to enhance understanding and development of the intended knowledge, skills, and values.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Identifies the characteristics of common tuber crops.<br>• Discusses ways of growing and caring for tuber crops.<br>• Identifies pests and diseases of tuber crops.<br>• Describes the characteristics of common tuber crop pests and their effects on crops.<br>• Discusses methods of controlling pests and disease of tuber crops.<br>• Describes ways of harvesting, processing and storing tuber crops.<br>• Practices growing tuber crops (project by the Young Farmer's Club). | • Common tuber crops<br>- Root tubers e.g.<br>-Sweet potatoes<br>-Carrots<br>-Cassava<br>- Stem tubers e.g.<br>-Irish potatoes<br>- white yams<br>• Growing and caring for tuber crops<br>• Common pests and diseases of tuber crops<br>• Characteristics of common tuber crop pests<br>• Effects of pests and diseases on tuber crops:<br>-Rotting of tubers<br>-Holes on tubers and leaves<br>-Leaf yellowing<br>-Leaf curling<br>• Methods of controlling pests and diseases of tuber crops.<br>• Harvesting, processing and storage of tuber crops<br>• Science oriented clubs<br>-Young farmers club | • A field visit to the nearest market to observe the common tuber crops sold in the market.<br>• Identifying the common tuber crops.<br>• Grouping tuber crops as root tubers and stem tubers.<br>• Discussing the ways of growing and caring for tuber crops.<br>• Trapping and observing some of the common pests of tuber crops.<br>• Describing the characteristics of common tuber crop pests.<br>• Discussing the effects of pests and diseases on tuber crops.<br>• Demonstrating methods of controlling pests and diseases of tuber crops.<br>• Describing ways of harvesting, processing and storing tuber crops.<br>• Practicing growing tuber crops as a project. |

**Assessment guidelines**

4. Assess individual learner's competence in naming the different types of tuber crops.
5. Assess each learner's ability in describing the ways of growing and caring for tuber crops.
6. Assess learners' ability in discussing the ways of harvesting, processing and storing tuber crops.

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

## TOPIC 9: KEEPING GOATS, SHEEP AND PIGS (12 PERIODS)

**Overview**

This is Topic 2, Term 3 in the standard P.5 curriculum. It has been shifted to P.6, term 2 in this abridged curriculum because it had not yet been covered by the time schools closed due to COVID 19 lockdown. The learners will be guided to use scientific knowledge and skills in keeping goats, sheep and pigs as a source of livelihood. The learners should be taken to visit nearby animal farms to observe the skills of keeping goats, sheep and pigs practically.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Identifies names of external parts of goats, pigs and sheep.<br>• Describes uses of goats, sheep and pigs.<br>• Discusses the causes, signs, symptoms, prevention and control measures of diseases in goats, sheep and pigs. | Goats, sheep and pigs keeping<br>• External parts of goats, sheep and pigs.<br>• Housing and management of goats, sheep and pigs.<br>• Products from goats, sheep and pigs:<br>- Meat<br>- Skins<br>- Wool<br>- Milk<br>• Diseases and parasites of goats, sheep and pigs<br>- Causes<br>- Signs and symptoms<br>- Prevention and control. | • Use field visits for learners to observe different farm animals.<br>• Make learners to draw and label external parts of goats, sheep and pigs.<br>• In small groups let learners identify products got from goats, sheep and pigs.<br>• Using whole class discussion, let learners describe housing and management of goats, sheep and pigs.<br>• Let learners make research on how to control parasites and diseases of goats, sheep and pigs.<br>• Use videos to show different animal rearing practices. |

**Assessment guidelines**

Assess individual learner's ability to;

- Describe the uses of a goat, a sheep and a pig.
- Identify the products got from goats, sheep and pigs.

- Discuss how to control the parasites and diseases of goats, sheep and pigs.

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

### TOPIC 10: KEEPING CATTLE (20 PERIODS)

**Overview**

This is topic 2 Term 2 in the standard P.6 curriculum. In this abridged curriculum, some of the competences have been left out or merged with others to cover for the lost time of learning. In this topic learners will be guided to build on the knowledge and skills which they already have on how to keep goats, sheep and pigs. Learners will be guided to keep cattle for commercial purposes, care for the cattle well to prevent pests and diseases. Learners will identify the products got from cattle and the products got from milk. Teachers are advised to take learners to nearby cattle farms or invite resource persons to talk to learners to consolidate the concept of keeping cattle.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Identifies the different types of cattle<br>• Identifies the different breeds of cattle<br>• Names the external features of a cow and a bull<br>• Mentions ways of grazing, watering and housing cattle<br>• Describes heat period, mating, gestation period and calving in cattle.<br>• Describes milking process in a farm<br>• Names milk products<br>• Identifies common pests and diseases in cattle; the causes, spread, signs, symptoms, prevention, control and treatment of cattle pests and diseases. | ▪ Types off cattle, e.g.<br>- Dairy<br>- Beef<br>- Dual purpose<br>- Work type<br>▪ Breeds of cattle: Indigenous and exotic<br>▪ External features of a cow and a bull<br>▪ Caring for cattle<br>- Grazing and watering cattle<br>- Feeding cattle<br>- Housing cattle<br>- Heat period, mating, gestation period and calving.<br>▪ Milking and milk products, e.g., butter, cheese, ghee, yoghurt, whey.<br>▪ Cattle pests and diseases: | • Conduct field visits for learners to observe and identify different types of cattle in the community.<br>• In groups, learners discuss the different breeds of cattle.<br>• A visit to a nearby cattle farm and observes different activities carry out.<br>• Demonstrating grazing, watering, feeding and housing cattle.<br>• Using Think pair share, learners describe the milking process and the products of milk.<br>• Use whole class discussion, learners identify common cattle pests and diseases, their causes, spread, signs |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | - Causes, spread, signs/symptoms, prevention, control and treatment.<br>- Practices that harm cattle and other domestic animals ( in transit, abattoir, in the field)<br>- Starting a livestock farm | and symptoms, prevention, control, and treatment. |

**Assessment guidelines**

Assess individual learner's competence on;

- Naming the types of cattle
- Identifying the common breeds of cattle in the community.
- Describing different ways of grazing cattle.
- Naming milk products.

2. Assess each learner's ability to explain how to manage common cattle pests and diseases.

## THEME: MANAGING CHANGES IN THE ENVIRONMENT

## TOPIC 11: TYPES OF CHANGES – BIOLOGICAL, PHYSICAL AND CHEMICAL CHANGES (10 PERIODS)

**Overview**

This is topic 1Term 3 in the standard P.5 curriculum. It has been shifted to P.6 Term 2 in this abridged curriculum because it had not been taught by the time schools closed due to COVID 19 lockdown. In this topic, learners will be guided to understand the different changes in their environment. The learners will be guided to classify the changes under; Biological, Physical and Chemical. The learners will be encouraged to perform simple experiments on changes of matter. The teacher should organise more remedial lesson to enhance understanding of this topic by the learners.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Describes how changes take place in the environment.<br>• Describes the different changes in the environment. | 1. Types of Changes in the environment<br>i. Biological changes<br>• What they are<br>• Growth in plants and animals. | • Naming the different types of changes in the environment using outdoor activities.<br>• In small groups, learners classify the changes under |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| • Describes the different effects/ consequences of various changes in the environment. | • Physical changes in plants and animals<br>• Managing body changes<br>-body care<br>-guidance<br>ii. Chemical changes<br>• What they are<br>-rusting<br>-fermentation<br>-respiration<br>-rotting and decaying<br>iii. Physical changes<br>• What they are<br>• Changes in weather<br>• Changes in the states of matter<br>-land slides<br>-earthquakes<br>• Placement faulting/volcanic actions<br>2. Characteristics of various types of changes in the environment<br>3. Consequences of various types of changes to people, animals and plants<br>- Increases in size<br>- Increases in temperature<br>- Mountain formation<br>- Rain formation<br>- Change of state<br>- New things are formed | biological, physical and chemical.<br>• Carrying out experiments on changes in states of matter. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | - Placement of things | |

**Assessment guidelines**

- Assess individual learner's competence in naming different changes that happen to living things.
- Assess each learner's competence in categorising the changes in the environment under:
    i. Biological
    ii. Physical
    iii. Chemical
- Assess individual learner's ability to describe ways of managing different changes that happen in our environment.
- Assess each learner's ability to describe the effects of various changes in the environment.

## THEME: THE ENVIRONMENT

### TOPIC 12: RESOURCES IN THE ENVIRONMENT (10 PERIODS)

**Overview**

This is topic 3, Term 2 in the standard curriculum and it has been maintained. The topic provides an understanding of the resources in the environment. This is intended to create awareness of how valuable these resources are to living things so that the learners can appreciate them, take care of them, and use them sparingly for future generations to benefit as well.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>• identifies resources from living and non-living things<br>• Groups examples of resources under living and moon living things.<br>• Describes ways of harvesting resources. | ▪ Non-Livings as Resources e.g. soil, minerals, fuel, sun, water and air.<br>▪ Living things as resources e.g.<br>-plants: fibres, wood, food and medicine.<br>-animals: meat, skins/hides, horns, milk, honey, and medicine.<br>• Harvesting resources. | • Through filed tour, learners identify resources from living and non-living things.<br>• In groups of four members, learners state examples of resources under living and non-living things, describe ways of harvesting resources. |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| • Participates in campaigns for sustainable use of available resources in the environment.<br>• Describes renewable and non-renewable resources.<br>• Participates in different ways of conserving resources.<br>• Explains ways of caring for animals as resources. | • How people make use of available resources.<br>• Renewable resources e.g. wind, water, sunshine and non-renewable resources(minerals)<br>• Caring for and conserving of animal resources | • Using music, dance and drama, learners participate in a campaign for sustainable use of available resources in the environment.<br>• Using brainstorming, learners describe renewable and non-renewable resources and explain ways of caring for animals as resources.<br>• Practically, learners participate in different ways of conserving resources. |

**Assessment guidelines**

1. Assess each learner's ability to identify resources from living and non-living things.
2. Assess each learner's ability to describe renewable and non-renewable resources and explain ways of caring for animals as resources.
3. Assess each learner's ability to participate in the campaign of conservation of resources.

## THEME: THE HUMAN BODY

### TOPIC 13: RESPIRATORY SYSTEM (10 PERIODS)

**Overview**

This is topic 4, term 2 in the standard P.6 curriculum and it has been maintained. The content under this topic gives an understanding of respiratory system, diseases and disorders of the system and the learner's role in preventing such disorders. It is significant for them to have such knowledge to appreciate the role of the respiratory system in their bodies, be able to avoid risky behaviour that compromise the health of the respiratory system and take part in the campaigns to promote awareness on such risky behaviour hence prevent diseases and promote health.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>• Identifies respiratory organs.<br>• Describes lungs and breathing.<br>• Demonstrates an experiment on human respiration.<br>• Identifies diseases and disorders of the respiratory system.<br>• Participates in campaigns to keep the system in a healthy working condition.<br>• Draws the respiratory organs | ▪ Respiration<br>- What it is<br>▪ Respiratory organs<br>▪ Lungs and breathing<br>▪ Respiration in relation to food and oxygen<br>▪ Diseases and disorders of the system<br>▪ Keeping the system in a healthy working condition | • In groups of four members, learners identify the parts of the respiratory system and describe lungs and breathing.<br>• Guided by the teacher, learners demonstrate an experiment on human respiration.<br>• Using brainstorming, learners identify diseases and disorders of the respiratory system.<br>• Using megaphones, learners participate in campaigns to keep the system in a healthy working condition.<br>• Referring to a chart, learners draw the respiratory organs. |

**Assessment guidelines**

1. Assess each learner's competence to identify the respiratory organs and describe the lungs and the breathing process.
2. Assess each learner's competence to demonstrate an experiment on human respiration.
3. Assess each learner's competence to identify diseases and disorders of the respiratory system and actively engage in the campaign to create awareness.
4. Assess each learner's ability to draw and label the respiratory organs.

**TERM III**

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

## TOPIC 17: SCIENCE AT HOME AND IN OUR COMMUNITY (10 PERIODS)

This is Topic 2, Term 3 in the standard P.6 curriculum and it has been maintained. Learners should be guided to discuss activities that might benefit them and help to solve common problems. To remain healthy, we need clean and safe water for drinking and washing. Guide learners on how to prepare clean and safe water for drinking and washing. Use practical demonstrations in class to make learning meaningful, real and interesting. Making use of resource persons will be of great importance.

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| The learner.<br>• Describes ways of preparing clean and safe water for drinking and washing.<br>• Discusses ways of cleaning clothes in a home.<br>• Participates in preparing clean and safe water for drinking and washing.<br>• Constructs a simple water purifying system | • Preparation of Clean and Safe Water for Drinking and Washing:<br>– boiling<br>– filtering<br>– treating<br>– distilling<br>– decanting<br>• Water impurities<br>– human wastes<br>– animal wastes<br>– pollutants from farm chemical<br>– silt from erosion<br>• Cleaning Clothes in a Home<br>– sorting<br>– soaking<br>– washing<br>– rinsing<br>-wringing<br>– drying<br>– ironing | • Carrying out experiments on different ways of preparing clean and safe water for drinking and washing.<br>• Discussing ways of cleaning clothes in a home.<br>• Preparing clean and safe water for drinking and washing.<br>• Discuss what makes water unsafe<br>• Words and sentences about getting local salt from ash.<br>• Preparing clean and safe water for drinking.<br>• Constructing a simple water purifying system. |

**Assessment guidelines**

Assess individual pupil's ability to:

- Describe what safe drinking water is.
- Outline ways of preparing clean and safe water for drinking and washing.
- Describe the steps people should follow to clean clothes in a home.
- Carry out an activity on preparation of clean and safe water during science show/fair.

## THEME: HUMAN HEALTH

## TOPIC 16: ACCIDENTS AND FIRST AID (15 PERIODS)

**Overview**

The is Topic 2, Term 3 of standard P.6 curriculum and it has been maintained. This topic is intended to create awareness of the accidents that happen in day today situations and their respective first aid. The topic aims at promoting safety in schools, homes, on the roads and other means other transport and generally everywhere. It promotes vigilance and ensures health.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>▪ Describes burns and scalds.<br>▪ Describes near drowning.<br>▪ Describes causes of fainting, and how to give first aid.<br>▪ Mentions causes, prevention and first aid for near drowning.<br>▪ Identifies foreign bodies in the passage.<br>▪ Participates in activities which prevent accidents.<br>▪ Gives effective first aid to burns, fevers, fainting and removal of foreign body | • Burns and scald<br>• Fever and convulsions:<br>-what they are<br>-causes,<br>prevention and first aid<br>• Near drowning:<br>-what it is<br>-causes,<br>prevention and first aid.<br>• Fainting:<br>-causes,<br>conditions and first aid.<br>• Foreign bodies in passages (mouth, nose, ears, anus, eyes, throat and vagina): | • Working in groups, learners describe what burns and scalds are.<br>• Using case scenarios/ storytelling, the teacher guide learner into telling their own stories about near drowning, fainting, and how first aid can be offered in either situation.<br>• Using brainstorming, the learners state the causes, prevention and first aid for near drowning and fainting.<br>• Using pictorial / image interpretation, the learners in groups of four members identify foreign bodies in various passages.<br>• Learners dramatize how to prevent accidents. |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| | -first aid | • Using demonstration, learners pair up with members of the same sex to give effective first aid to burns, fevers, fainting and removal of foreign body |

**Assessment guidelines**

1. Assess each learner's ability to describe different forms of accidents, and their causes.
2. Assess each learner's competence to offer effective first aid in case of fainting or near drowning.

## THEME: HUMAN HEALTH

### TOPIC 14: PRIMARY HEALTH CARE (PHC) (10 PERIODS)

**Overview**

This is the last Topic in the standard P.5 curriculum. In this abridged curriculum, it has been shifted to P.6 Term 3 because it had not been taught by the time of the lockdown due to COVID 19. In this topic, the learners will be guided to carry out activities which aim at improving community hygiene and health of the people. The content on people with special care and how to care for them has been left out because it has been shifted to be covered under the topic "Food and Nutrition". There is need for the teacher to organise more remedial lessons on this topic for proper mastery of the topic by the learners.

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| The learner:<br>• Describes what PHC is, its elements and principles.<br>• Demonstrates activities of PHC in promotion of community hygiene.<br>• Explains the responsibilities of individuals, families and the community in health promotion. | • Primary Health Care<br>- What it is<br>- Elements and principles of PHC<br>• Activities in PHC in promotion of community hygiene e.g.<br>- Rubbish and excreta disposal<br>- protecting water sources | • Making a visit to a health Centre to observe the PHC elements of immunization, treatment of diseases, family planning, and health education among others.<br>• Earners identifying the PHC practices in the health centre – these are also referred to as Elements. |

| COMPETENCES | CONTENT | SUGGESTED ACTIVITIES |
|---|---|---|
| | • Responsibility of individuals, family and community in health promotion.<br>• Suitable lifestyles and good health practices. | • Using the field observations to define PHC – affordable, effective, socially acceptable, with community participation<br>• Describing PHC, its elements and principles.<br>• Practicing activities of PHC in the school.<br>• Demonstrating the responsibilities of individuals, families and community in health promotion. |

**Assessment guidelines**

5. Using a written test, assess learners' ability to explain the concept of PHC and discuss the responsibilities of individuals, families and community in the provision of PHC.
6. Using the project method, observe and assess learners' competence in establishing PHC projects in the school.
7. Assess individual learners' ability to prepare messages that promote PHC in schools.

## THEME: HUMAN HEALTH

## TOPIC 15: SANITATION ((15 PERIODS)

**Overview**

This is Topic 3, Term 3 in the standard P.6 curriculum and has been maintained. The topic provides learners with an understanding of the whole concept of sanitation with an intention to equip learners with skills to take care of their environment, and maintain its cleanliness to avert possible disease outbreaks such as cholera, diarrhoea, dysentery and many others.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>▪ Identifies toilets, latrines and potty.<br>▪ Name types of latrines.<br>▪ Describes the importance of using a latrine /toilet correctly. | • Toilets and Latrines:<br>-what they are<br>• The VIP latrine and Ecosan | • In groups of four members, learners identify and explain different toilets and latrines. |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| ▪ Demonstrates proper use of latrines and toilets.<br>▪ Draws the different types of latrines.<br>▪ Uses local resources to make tools for cleaning latrines and toilets.<br>▪ Participates in maintaining the cleanliness of latrines and toilets. | • Conventional (ordinary) Latrine and Potty -characteristics and differences<br>• The water closet /borne toilets<br>• Proper use and maintenance of toilets and latrines. | • Teacher asks a volunteer to demonstrate proper use of latrines and toilets.<br>• Using guided questions, learners brainstorm on the importance of using a toilet or a latrine.<br>• Referring to a chart or a textbook, the learner draws the different types of toilets.<br>• In pairs, learners use locally available resources to make cleaning tools such as brooms, scrubbing brushes, cobweb remover and others.<br>• In turns, each learner gets an opportunity to clean the toilet during the term. |

**Assessment guidelines**

1. Assess each learner's competence in identifying toilets and latrines and describing their proper use.
2. Assess each learner's ability to maintain the toilet/latrine clean.
3. Assess each learner's practical ability to make cleaning tools.

## THEME: HUMAN BODY

## TOPIC 18: REPRODUCTIVE SYSTEM (20 PERIOD)

**Overview**

This is the last Topic in the standard P.6 curriculum and it has been maintained. Content under this topic provides an understanding of the reproductive system, reproduction, primary and secondary sexual characteristics, and issues of teenage pregnancy and how they can be prevented. This topic is critical as it addresses the process of procreation, growth and development, and socio-cultural challenges such as teenage pregnancy. It provides awareness of sexuality, respect for one another, reproductive health rights and promotes freedom from sexual violence.

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| The learner:<br>▪ Describes growth and development in human beings<br>▪ Identifies primary and secondary sex characteristics<br>▪ Describes social and emotional changes<br>▪ Describes reproductive organs and cells in human males and females<br>▪ Discusses fertilisation, conception and pregnancy in humans<br>▪ Prepares effective messages on reproductive health<br>▪ Mentions problems in pregnancy | • Growth and Development in human beings<br>• Puberty and Adolescence<br>-what they are<br>• Primary and secondary sex characteristics<br>• Social and emotional changes<br>• Reproductive organs and cells (male and female)<br>• Fertilisation, conception and pregnancy<br>• Reproductive health<br>-problems in pregnancy<br>-teenage pregnancy: meaning and consequences. | ▪ In groups, learners describe the process of growth and development in human, identify primary and secondary sexual characteristics and<br>▪ Describe social and emotional changes in relation sexuality.<br>▪ Learners watch a video (where available) on reproductive organs and cells in human males and females, after watching, learners in manageable groups to;<br>Discuss the process of fertilisation, conception and pregnancy in humans.<br>▪ In pairs, learners prepare effective messages on reproductive health; they discuss the challenges of teenage pregnancy as well as the consequences.<br>▪ Teacher works with the school nurse/ senior woman and senior |

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| ▪ Discusses consequences of teenage pregnancy<br>▪ Demonstrates proper and mentions ways of caring for reproductive organs<br>▪ Identifies diseases and disorders of the system<br>▪ Describes the importance of family planning, uses, methods and family spacing<br>▪ Discusses myths and misconceptions about family planning<br>▪ Draws the reproductive organs | • Care for reproductive organs<br>• Common diseases and disorders of system (STI's)<br>• Family planning<br>-Importance, methods (natural and artificial), myths and misconceptions about family planning<br>-Child spacing<br>-PIASCY (messages about reproductive health) | man to demonstrate proper ways of caring for reproductive organs.<br>▪ Through brainstorming, learners identify diseases and disorders of the system, describes the importance of family planning, uses, methods and family spacing, discuss the myths and misconceptions about family planning<br>• Draws the reproductive systems for both males and females.<br>• Write reproductive health messages to peers in campaign to control and prevention of teenage pregnancies and its consequences. |

**Assessment guidelines**

1. Assess each learner's competence to describe the process of growth and development in human, identify primary and secondary sexual characteristics and describe social and emotional changes in relation sexuality.

2. Assess the ability of each learner to describe the reproductive organs and cells in human males and females.

3. Assess the ability of each learner to describe the process of fertilisation, conception and pregnancy in humans.

4. Assess the ability of each learner to prepare an effective message on reproductive health.

5. Assess the ability of each learner explain the challenges of teenage pregnancy as well as the consequences.

**PRIMARY SEVEN INTEGRATED SCIENCE ABRIDGED SYLLABUS**

**TERM ONE**

THEME**: HUMAN HEALTH**

**TOPIC:1 SANITATION (10 PERIODS)**

**Overview**

This topic is meant for P.6, Term 3 in the standard curriculum, however, it has been extended to P.7, Term 1 given the P.6 curriculum was not yet complete before the COVID-19 lockdown set in. The topic provides learners with an understanding of the whole concept of sanitation with an intention to equip learners with skills to take care of their environment, and maintain its cleanliness to avert possible disease outbreaks such as cholera, diarrhoea, dysentery and many others. The teacher should organise a lot of remedial lessons on this topic to enhance understanding of the concepts well by the learners.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>▪ Identifies toilets, latrines and potty.<br>▪ Names types of latrines.<br>▪ Describes the importance of using a latrine /toilet correctly.<br>▪ Demonstrates proper use of latrines and toilets.<br>▪ Draws the different types of latrines.<br>▪ Uses local resources to make tools for cleaning latrines and toilets.<br>▪ Participates in maintaining the cleanliness of latrines and toilets | • Toilets and Latrines:<br>-what they are<br>• The VIP latrine and Ecosan<br>• Conventional (ordinary) Latrine and Potty<br>-characteristics and differences<br>The water closet /borne toilets | -In groups of four members, learners identify and explain different toilets and latrines.<br>-Using guided questions, learners brainstorm on the importance of using a toilet or a latrine.<br>-Teacher asks a volunteer to demonstrate proper use of latrines and toilets.<br>-With the help of a chart or a textbook, the learner draws the different types of toilets.<br>-In pairs, learners use locally available resources to make cleaning tools such as brooms, scrubbing brushes, cobweb remover and others.<br>-In turns, each learner gets an opportunity to clean the toilet in the course of the term. |

**Assessment guidelines**

1. Assess each learner's competence in identifying toilets and latrines and describing their proper use.
2. Assess each learner's ability to maintain the toilet/latrine clean.
3. Assess each learner's practical ability to make cleaning tools that can be used for cleaning toilets/latrines from local materials.

## THEME: SCIENCE IN HUMAN ACTIVITIES AND OCCUPATIONS

## TOPIC 2: SCIENCE AT HOME AND IN OUR COMMUNITY (10 PERIODS)

**Overview**

This topic on Science at Home and in Our Community is meant for P.6, Term 3 in the standard curriculum; however, it has been extended to P.7, Term 1 given the P.6 curriculum was not yet complete before the COVID-19 lockdown set in. The topic is critical in developing insights in biotic and abiotic components of the environment. With such knowledge, learners are expected to respect nature, to be innovative and utilize available resource sustainably.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>▪ Describes ways of preparing clean and safe water for drinking and washing.<br>▪ Discusses the steps taken when cleaning clothes in a home.<br>▪ Participates in preparing clean and safe water for cleaning and washing clothes.<br>▪ Constructs a simple water purifying system using local materials in their areas. | ▪ Preparation of Clean and safe water for drinking and washing<br>▪ -boiling<br>-filtering<br>-treating<br>-distilling and decanting.<br>• Water impurities<br>-human wastes<br>-animal wastes<br>-pollutants from farm chemical<br>-silt from erosion<br>• Cleaning clothes in a home.<br>-sorting | Using experimentation method, the teacher facilitates learners to prepare clean and safe water for drinking and washing.<br>▪ In groups of four members, learners discuss the steps taken when cleaning clothes in a home.<br>▪ Following a procedure provided by the teacher, learners in groups of four members, construct a simple water purification system. |

| | | |
|---|---|---|
| | -soaking<br>-washing<br>-rinsing.<br>-wringing<br>-drying<br>-ironing | |

**Assessment guidelines**

1. Assess each learner's ability to prepare clean and safe water for drinking and washing.
2. Assess each learner's competence to describe steps taken when cleaning clothes.
3. Assess each learner's competence to construct a simple water purification system.

## THEME: HUMAN HEALTH

## TOPIC 3 : ACCIDENTS AND FIRST AID (12 PERIODS)

**Overview**

The topic on accidents is in Term 3 of P.6 standard curriculum, however, due to the abrupt COVID-19 pandemic lockdown, this topic had not been covered. Therefore, it should be covered in P.7, Term 1 and it is intended to create awareness the accidents that happen in day today situations and their respective first aid. The topic aims at promoting safety in schools, homes, on the roads and generally everywhere. It promotes vigilance and ensures health. There is need for remedial lessons for learners to master the topic very well.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>▪ Describes burns and scalds.<br>▪ Describes near drowning.<br>▪ Describes causes of fainting, and how to give first aid.<br>▪ Mentions causes, prevention and first aid for near drowning.<br>▪ Identifies foreign bodies in the passage. | • Burns and scalds<br>• Fever and convulsions:<br>-what they are<br>-causes, prevention and first aid<br>• Near drowning:<br>-what it is<br>-causes, prevention and first aid.<br>• Fainting:<br>-causes, conditions and first aid. | • In groups of four members, learners describe what burns and scalds are.<br>Using case scenarios/ storytelling, the teacher guide learner into telling their own stories about near drowning, fainting, and how first aid can be offered in either situation.<br>• Using brainstorming, the learners state the causes, prevention and first aid for near drowning and fainting. |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| ▪ Participates in activities which prevent accidents.<br>▪ Gives effective first aid to burns, fevers, fainting and removal of foreign body | • Foreign bodies in passages (mouth, nose, ears, anus, eyes, throat and vagina):<br>-first aid | • Using pictorial / image interpretation, the learners in groups of four members identify foreign bodies in various passages.<br>• Learners dramatize how to prevent common accidents.<br>• Using demonstration, learners pair up with members of the same sex to give effective first aid to burns, fevers, fainting and removal of foreign body |

**Assessment guidelines**

1. Assess each learner's ability to describe different forms of accidents, and their causes.
2. Assess and record as learners demonstrate ways of preventing cases of accidents at home
3. Assess each learner's competence to offer effective first aid in case of fainting or near drowning.

## THEME: THE HUMAN BODY

## TOPIC: MUSCULAR AND SKELETAL SYSTEMS ( 17 PERIODS)

**Overview**

This topic is for Term 1, P.7 in the standard curriculum. The topic on Muscular and Skeletal System provides an understanding of different types of muscles, the skeletal system, their functions to the human beings, disorders and their prevention. Such knowledge is critical to learners to appreciate the role these systems play in their lives, be able identify the disorders in case they or their neighbours suffer from them and to be able to take necessary precaution to prevent such disorders.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner;<br>▪ Identifies different bones and muscles of the human body. | Muscular and skeletal systems<br>▪ Structure of the human skeleton | ▪ In groups, learners are guided to identify the different bones and muscles of the human body, identify the different joints found |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| ▪ Identifies different joints found in the human body.<br>▪ Discusses functions of the muscular skeletal system.<br>▪ States disease and disorders of the bones, muscles and the system.<br>▪ Explains ways of preventing skeletal and muscular diseases.<br>▪ Demonstrates correct body postures.<br>▪ Describes good health habits for the system.<br>▪ Draws and labels the skeleton and voluntary muscle. | ▪ Names of different bones<br>▪ Joints<br>- Movable joints (hinge, ball and socket, pivot and gliding joints)<br>- Immovable joints (skull)<br>▪ Muscles<br>-Voluntary muscles<br>-Involuntary muscles<br>▪ Functions of the muscular and skeletal system<br>▪ Diseases and disorders of bones, muscular and the skeletal system.<br>▪ Prevention of the diseases and disorders of the muscular system<br>▪ Importance of correct posture.<br>▪ Health habits that help to keep the system in a healthy working condition | in the human body and discuss the functions of the muscular skeletal system.<br>▪ Learners are tasked to research either from textbooks or from resource persons in their communities about diseases and disorders of the bones, muscles and ways of preventing those diseases and disorders and thereafter submit a report.<br>▪ Teacher demonstrates correct body postures, which should be experimented by each learner.<br>▪ In pairs, learners describe good health habits for the skeletal and muscular systems.<br>▪ Each learner refers to the chart to draw and label the skeleton and voluntary muscle. |

**Assessment guidelines**

1. Assess each learner's competence to identify different bones, joints and muscles of the human body.
2. Assess each learner's competence to discuss the functions of the muscular skeletal system.
3. Assess each learner's competence to demonstrate the correct body postures and
4. Describe good health habits for the system.
5. Assess each learner's ability to draw and label the parts of a human skeleton correctly.

## THEME: THE HUMAN BODY

## TOPIC 5: RESPIRATORY SYSTEM (10 PERIODS)

**Overview**

This topic on Respiratory system would be for P.6, Term 2 in the standard curriculum; however, it has been extended to P.7, Term 1 given the P.6 curriculum was not yet complete before the COVID-19 lockdown set in. The content under this topic gives an understanding of respiratory system, diseases and disorders of the system and the learner's role in preventing such disorders. It is significant for them to have such knowledge to appreciate the role of the respiratory system in their bodies, be able to avoid risky behaviour that compromise the health of the respiratory system and take part in the campaigns to promote awareness on such risky behaviour hence prevent diseases and promote health.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>• Identifies respiratory organs.<br>• Describes lungs and breathing.<br>• Demonstrates an experiment on human respiration.<br>• Identifies diseases and disorders of the | ▪ Respiration<br>- What it is<br>▪ Respiratory organs<br>▪ Lungs and breathing<br>▪ Respiration in relation to food and oxygen<br>▪ Diseases and disorders of the respiratory system<br>▪ Keeping the respiratory system in a healthy working condition | • In groups of four members, learners identify the parts of the respiratory system and describe lungs and breathing.<br>• Guided by the teacher, learners demonstrate an experiment on human respiration.<br>• Using brainstorming, learners identify diseases and disorders of the respiratory system.<br>• Using megaphones, learners participate in campaigns to keep the system in a healthy working condition. |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| respiratory system.<br>• Participates in campaigns to keep the system in a healthy working condition.<br>• Draws the respiratory organs | | • Referring to a chart, learners draw the respiratory organs |

**Assessment guidelines**

1. Assess each learner's competence to identify the respiratory organs and describe the lungs and the breathing process.
2. Assess each learner's competence to demonstrate an experiment on human respiration.
3. Assess each learner's competence to identify diseases and disorders of the respiratory system and actively engage in the campaign to create awareness.
4. Assess each learner's ability to draw and label the respiratory organs.

## THEME: HUMAN BODY

## TOPIC 6: REPRODUCTIVE SYSTEM (20 PERIOD)

**Overview**

This topic on Reproductive system would be for P.6, Term 3 in the standard curriculum; however, it has been extended to P.7, Term 1 given the P.6 curriculum was not yet complete before the COVID-19 lockdown set in. Content under this topic provides an understanding of the reproductive system, reproduction, primary and secondary sexual characteristics, and issues of teenage pregnancy and how they can be prevented. This topic is criti cal as it addresses the process of procreation, growth and development, and socio-cultural challenges such as teenage pregnancy. It provides awareness of sexuality, respect for one another, reproductive health rights and promotes freedom from sexual violence.

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| The learner:<br>▪ Describes growth and development in human beings<br>▪ Identifies primary and secondary sex characteristics<br>▪ Describes social and emotional changes<br>▪ Describes reproductive organs and cells in human males and females<br>▪ Discusses fertilisation, conception and pregnancy in humans<br>▪ Prepares effective messages on reproductive health<br>▪ Mentions problems in pregnancy<br>▪ Discusses consequences of teenage pregnancy<br>▪ Demonstrates proper and mentions ways of caring for reproductive organs<br>▪ Identifies diseases and disorders of the system<br>▪ Describes the importance of | • Growth and Development in human beings<br>• Puberty and Adolescence<br>-what they are<br>• Primary and secondary sex characteristics<br>• Social and emotional changes<br>• Reproductive organs and cells (male and female)<br>• Fertilisation, conception and pregnancy<br>• Reproductive health<br>-problems in pregnancy<br>-teenage pregnancy: meaning and consequences.<br>• Care for reproductive organs<br>• Common diseases and disorders of system (STI's)<br>• Family planning<br>-Importance, methods (natural and artificial), myths and misconceptions about family planning | ▪ In groups, learners describe the process of growth and development in human, identify primary and secondary sexual characteristics in humans.<br>▪ describes social and emotional changes in relation sexuality.<br>▪ Discuss the process of fertilisation, conception and pregnancy in humans.<br>▪ In pairs, learners writes effective messages on reproductive health and discuss the challenges of teenage pregnancy as well as its consequences.<br>▪ With the help of the school nurse/ senior woman and senior man, learners are guided on the proper ways of caring for reproductive organs.<br>▪ Through brainstorming, learners identify diseases and disorders of the reproductive system, describes the importance of family planning, uses, methods and family spacing, discuss the myths and misconceptions about family planning<br>• Draws the reproductive systems for both males and females |

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| family planning, uses, methods and family spacing<br>▪ Discusses myths and misconceptions about family planning<br>▪ Draws the reproductive organs | -Child spacing<br>-PIASCY (messages about reproductive health) | |

**Assessment guidelines**

1. Assess each learner's competence to describe the process of growth and development in human, identify primary and secondary sexual characteristics and describe social and emotional changes in relation sexuality.
2. Assess the ability of each learner to describe the reproductive organs and cells in human males and females.
3. Assess the ability of each learner to describe the process of fertilisation, conception and pregnancy in humans.
4. Assess the ability of each learner to prepare an effective message on reproductive health
5. Assess the ability of each learner explain the challenges of teenage pregnancy as well as the consequences.
6. Assess the ability of each learner demonstrate proper ways of caring for reproductive organs.

## TERM TWO

## THEME: THE HUMAN BODY

### TOPIC 7: THE EXCRETORY SYSTEM ( 10 PERIODS)

**Overview**

This topic on excretory system is for P.7, Term 2 in the standard curriculum. It provides an understanding of the excretory system, disorders, and practices to keep it healthy. This content is critical and makes learners to appreciate the function of this system in human life,

be able to prevent diseases that affect it, and be part of the team that advocates for good behavial change.

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| The learner;<br>▪ 1 describes excretion<br>▪ 1 names different excretory organs in the human body<br>▪ describes the function of the excretory organs in the human body<br>▪ names diseases and disorders of the excretory organs in the human body<br>▪ practices correct ways of keeping the excretory system healthy<br>▪ makes comparisons between the excretory system and the other natural environment or man-made systems | Excretion<br>▪ What it is<br>▪ Excretory organs<br>▪ The human skin<br>▪ Structure, function and care<br>▪ Diseases and disorders of the skin<br>▪ Structure, function and care<br>(a) The urinary system (kidneys, ureter and bladder)<br>▪ Structures, functions and care<br>▪ Diseases and disorders of the kidney and the urinary system | ▪ In groups of four members, learners discuss the meaning of excretion, name different excretory organs in the human body and tell the function of the different excretory organs in the human body.<br>▪ Through brainstorming, the learners name diseases and disorders of the excretory organs in the human body and mention best practices of keeping the excretory system healthy.<br>▪ Learners in groups make a comparison chart between the excretory system and the other natural environment or man-made systems.<br>▪ In groups, learners act a simple dialogue on how the excretory system works.<br>▪ With the guidance of the teacher, learners model structures of the urinary system for display. |

**Assessment guidelines**

**1.** Assess each learner's competence to describe excretion, its functions to the human body, name different excretory organs.

2. Assess the ability of each learner to name diseases and disorders of the excretory organs in the human body and mention best practices of keeping the excretory system healthy.
3. Assess the ability of each learner to make a comparison between the excretory system and the other natural environment or man-made systems

## THEME: MATTER AND ENERGY

## TOPIC 8: LIGHT ENERGY (20 PERIODS)

**Overview**

The topic on light energy is for P.7, Term 2 in the standard curriculum. It provides an understanding of the light energy, its sources, how it travels, formation of shadows, reflection and refraction. The topic is critical in appreciating the effect of light on sight, various uses of light in nature, and its conservation for future generation.

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| The learner;<br>▪ 1 names sources of light<br>▪ 1 experiments to investigate how light travels.<br>▪ 1 uses experiment results to describe effects of different materials on light<br>▪ investigates the behaviour of the light when it interacts with different surfaces and objects<br>▪ describes how different shadows are formed (eclipse and images) | ▪ Light<br>▪ What it is; Light as a form of energy:<br>▪ Natural and artificial sources of light<br>▪ How light travels:<br>▪ Rays of beams of light<br>▪ Importance of light in the environment<br>▪ Effects of different materials on market:<br>▪ Transparent<br>▪ Translucent<br>▪ Opaque<br>▪ Shadows<br>▪ Eclipse (solar and lunar)<br>▪ Reflection<br>▪ What it is<br>▪ Laws of reflection<br>▪ Types of reflection<br>▪ Characteristics of images formed by plane mirrors<br>▪ Periscope | ▪ Learners name the different sources of light,carry out experiments to investigate how light travels and use experiment results to describe effects of different materials on light.<br>Learners with the help of their teacher, carries out an experiment to investigate the behaviour of light on different materials.<br>By the guidance of the teacher, learners find out how different shadows are formed (eclipse and images).<br>▪ Guided by the teachers, learners state the laws of |

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| ▪ states the laws of reflection<br>▪ calculates simple problems on reflection<br>▪ describes images formed by plane mirrors<br>▪ explains how rainbows are formed<br>▪ carries out experiments to investigate the effects of lenses on beams of light<br>▪ names parts of lens camera<br>▪ describes the working of the human eye as an optical organ<br>▪ describes different human eye defects and their corrections<br>▪ practices the correct care of the human eye<br>▪ makes models of pin-hole camera, periscope, lens camera and the eye | ▪ Pin-hole camera:<br>  ▪ Characteristics of images formed with pin-hole camera<br>▪ Refraction<br>  ▪ What it is<br>  ▪ Principle of refraction<br>  ▪ Effects of refraction<br>  ▪ Refraction through glass, prism, spectrum<br>  ▪ Dispersion of light<br>▪ The rainbow<br>  ▪ Refraction through a rectangular glass prism<br>▪ Lenses<br>  ▪ Types<br>  ▪ Effects of lenses on beams of light<br>  ▪ The magnifying lens<br>  ▪ The lens camera<br>  ▪ Parts of the camera and their functions<br>  ▪ Characteristics of images formed by the lens camera<br>▪ The human eye<br>  ▪ Structure, Parts and functions.<br>  ▪ Characteristics of images formed by the eye<br>  ▪ Comparison between the eye and the lens camera<br>  ▪ Eye defects and their corrections.<br>▪ Diseases and disorders of the human eye: | reflection and calculate simple problems on reflection.<br>▪ Using experimentation, learners describe images formed by plane mirrors.<br>▪ Using brainstorming, learners explain how rainbows are formed.<br>▪ In groups and with the guidance of the teachers, learners carry out experiments to investigate the effects of lenses on beams of light.<br>▪ With reference to the chart, learners name parts of lens camera.<br>▪ Referring to the text books, learners in pairs describe the working of the human eye as an optical organ, describe different human eye defects and how they can be corrected, they practice how to correctly care for their eyes.<br>▪ In groups, learners make models of pin-hole camera, periscope, lens camera and the eye |

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| | ▪ Care for the human eye | |

**Assessment guidelines**

1. Assess each learner's competence to name the different sources of light and carry out experiments to investigate how light travels and use experiment results to describe effects of different materials on light.
2. Assess each learner's competence to practically investigate the behaviour of the light when it interacts with different surfaces and objects and describe how different shadows are formed.
3. Assess each learner's competence to state the laws of reflection and to calculate simple problems on reflection.
4. Assess each learner's ability to explain how rainbows are formed.
5. Assess each learner's competence to name parts of a lens camera and the functions of each part.
6. Assess each learner's competence to describe the working of the human eye as an optical organ, describe different human eye defects and how they can be corrected.

## THEME: MATTER AND ENERGY

## TOPIC 9: ELECTRICITY AND MAGNETISM ( 20 PERIODS)

**Overview**

This topic is for P.7, Term 1 in the standard curriculum. It provides an understanding of electricity and magnetism, their importance in day-to-day lives, the electric circuit, dangers of electricity and safety precautions. The topic is critical in enhancing the knowledge of electricity as an alternative source of energy, and conservation of its sources for the future generation. It provides insights into the knowledge of magnets, magnetisation and demagnetisation with intention to be promote innovation, and effectively and efficiently use them apply

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| The learner;<br>▪ identifies sources and types of electricity<br>▪ experiments with static electricity | Electricity<br>▪ What it is<br>-electricity as a form of energy<br>-types of electricity (current, static)<br>▪ Sources of electricity | • Guided by the teacher, learners brainstorm on the sources, types of electricity and carry out experiments on static electricity. |

| COMPETENCES | CONTENT | Suggested activities |
|---|---|---|
| ▪ draws and labels parts of electric circuit<br>▪ discusses the importance of electricity in solving day to day problems<br>▪ discusses the dangers and safety precautions in handling electricity and electrical appliances.<br>▪ identifies natural and artificial magnets<br>▪ demonstrates ways of keeping temporary magnets safe.<br>▪ discusses the uses electricity and magnetism in modern world of work.<br>▪ discusses the processes involved the in generation of electricity using a dynamo. | -dry cell<br>▪ Conductors and insulators<br>▪ Electric circuits (fuse, switch, bulb)<br>▪ Short circuits, causes and how to avoid them<br>▪ Importance of electricity in solving everyday problems<br>▪ Safety precautions in handling electricity and electrical appliances<br>Magnetism<br>- Magnets<br>-magnetic materials<br>-properties of magnets<br>- Types of magnets<br>-Natural magnets (lodestone and magnetite)<br>-Permanent magnets<br>- Making temporary magnets (induction, stroking, electricity)<br>- Electromagnets<br>-Electric bell<br>- Electricity and magnetism in the modern world of work<br>- Generation electricity using a dynamo | • Referring to the chart, learners draw and label parts of electric circuit.<br>▪ In groups, learners discuss the importance of electricity in solving day to day problems, discuss electricity and magnetism in modern world of work, and the dangers and safety precautions in handling electricity and electrical appliances.<br>▪ In pairs, learners identify the natural and artificial magnets and demonstrate ways of making temporally magnets.<br>▪ Through virtual experimentation, learners learn about the process involved in generation of electricity using a dynamo and they practice this thereafter.<br>▪ Developing working models that use electricity, magnetism or both. |

**Assessment guidelines**

1. Assess each learner's competence to identify the sources and types of electricity and carry out experiments on static electricity.
2. Assess each learner's competence to draw and label parts of an electric circuit.
3. Assess each learner's competence to state the importance of electricity in solving day to day problems, and the dangers and safety precautions in handling electricity and electrical appliances.
4. Assess each learner's ability to identify the natural and artificial magnets and the ability to demonstrate ways of making temporally magnets.
5. Using the project method, assess learners' ability to develop working models that use electricity, magnetism or both

## THEME: MATTER AND ENERGY

## TOPIC 10: SIMPLE MACHINES AND FRICTION (20 PERIODS)

**Overview**

This topic is for P.7, Term 2 in the standard curriculum. It provides an understanding of machines, how they perform work and friction in the process of performing work. This knowledge is necessary for the learners to be able to identify which machine to solve a given task with the highest level of efficiency, and their effective maintenance.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner;<br>▪ states the meaning of friction<br>▪ states the importance of friction<br>▪ investigates effects of friction on matter<br>▪ describes simple machines<br>▪ observes how different simple machines work<br>▪ describes different classes of levers | - Friction<br>- What it is<br>- Friction as a useful force<br>- How to increase friction<br>- Friction as a nuisance force<br>- How friction can be reduced<br>(a) The moment of a force<br>The principle of moments<br>(b) M.A, VR and efficiency as applied to machines | -Through guided discovery, learners state the meaning of friction, the importance of friction and possible effects of friction on matter.<br>- Learners in groups, describe simple machine, observe how different simple machines work. Describe different classes of levers and describe the effect of force on a lever, demonstrate how pulleys and an inclined plane work, |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| ▪ models' simple machines using local materials<br>▪ carries out experiments with different simple machines<br>▪ describes the effect of force on a lever<br>▪ demonstrates how an inclined plane<br>▪ carries out practical uses of wedges<br>▪ calculates mechanical advantage (M.A) of machines<br>▪ describes how screws are and how they work<br>▪ experiments with different types of pulleys | i. Mechanical advantage of machines<br>M.A = $\frac{Load}{Effort}$<br>ii. Velocity ratio<br>VR = $\frac{Effort\ distance}{Load\ Distance}$<br>iii. Efficiency<br>(E = $\frac{Work\ output}{Work\ Input}$ × 100%<br>- Simple machines<br>- What they are (definition)<br>- examples<br>Levers<br>▪ What they are<br>▪ Parts of a lever<br>▪ Classes of levers<br>The inclined plane (slope/ramp)<br>Wedges (double and inclined planes)<br>Screws<br>▪ Nature of screws<br>▪ Uses of screws<br>Pulleys<br>▪ Single fixed<br>▪ Single movable<br>- One fixed and one movable working together<br>Wheels and axles<br>▪ Examples<br>How they work | and carry out practical uses of wedges.<br>**-**Each learner is tasked to model a simple machine using locally available materials and describes how it is used.<br>**-**Guided by the teachers, learners calculate mechanical advantage (M.A.) of machines.<br>-Through open book research, learners in groups describe how screws are and how they work and share with the rest of the class. |

**Assessment guidelines**

1. Assess each learner's competence to state the meaning of friction, the importance of friction and possible effects of friction on matter.
2. Assess each learner's competence to manipulate various machines, describe simple machine, and different classes of levers.
3. Assess each learner's competence to calculate mechanical advantage (M.A.) of machines, and velocity ratio.

**TERM THREE**

**THEME: THE ENVIRONMENT**

**TOPIC 11: INTERDEPENDENCE OF THINGS IN THE ENVIRONMENT (12PERIODS)**

**Overview**

This topic is for P.7, Term 3 in the standard curriculum. It provides an understanding of the interdependence of things in the environment. This is intended to create awareness of the interrelationships so that the learners are able to appreciate nature and use it sustainably.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner;<br>- names the components of the environment<br>- describes how the components of the environment benefit from each other<br>- describes ways of caring for animals<br>- discusses the importance of agro-forestry<br>- starts and manages a | ▪ Components of the environment (plants, animals, water bodies, air, soils)<br>▪ Interdependence of plants and animals:<br>▪ Animals depend on plants<br>▪ Animals depend on other animals<br>▪ Plants depend on animals<br>▪ Plants depend on other plants<br>▪ Interdependence of living things and non-living things<br>• Animals depend on non-living things (air, water, soil)<br>• Plants depend on non-living things (air, water, soil)<br>• Non-living things are affected by living things | ▪ Through nature walk, learners name the components of the environment, describe how the components of the environment benefit from each other and describe ways of caring for animals.<br>▪ In groups, learners discuss the importance of agro-forestry and |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| school/home woodlot project<br>- demonstrates correct record keeping<br>- initiates experiment to illustrate interdependence of the different things in the environment | ▪ Agro-forestry:<br>• What agro-forestry is<br>• Growing crops and trees together<br>• Rearing animals and growing crops on the same land<br>• Rearing and caring for animals, growing crops and trees on the same farm<br>• Importance of agro forestry<br>• Care for trees in agro forestry<br>• Proper harvesting of trees in agro-forestry (pollarding, coppicing and lopping)<br>▪ Starting and managing a school/home woodlot project<br>▪ Record keeping | start and manage a school/home woodlot project.<br>▪ Through artistic expression, learners illustrate interdependence of the different things in the environment. |

**Assessment guidelines**

1. Assess each learner's ability to name the components of the environment and describe how the components of the environment benefit from each other.
2. Assess each learner's ability to state the importance of agro-forestry.
3. Assess each learner's ability to start and manage a school/home woodlot project and be able to keep record.s

## THEME: THE ENVIRONMENT

## TOPIC 12: RESOURCES IN THE ENVIRONMENT-(10 PERIODS)

**Overview**

This topic is for P.6, Term 2 in the standard curriculum. However, it has been brought to P.7 and merged with energy resources in the environment should be covered in term 1 of P.7. The topic provides an understanding of the resources in the environment. This is intended to create awareness of how valuable these resources are to living things so that the learners are able to appreciate them, take care of them, use them sparingly for future generations to benefit as well.

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner:<br>• identifies resources from living and non-living things<br>• Groups examples of resources under living and moon living things.<br>• Describes ways of harvesting resources.<br>• Participates in campaigns for sustainable use of available resources in the environment.<br>• Describes renewable and non-renewable resources.<br>• Participates in different ways of conserving resources.<br>• Explains ways of caring for animals as resources. | ▪ Non-Living things as Resources e.g. soil, minerals, fuel, sun, water and air.<br>▪ Living things as resources e.g.<br>-plants: fibres, wood, food and medicine.<br>-animals: meat, skins/hides, horns, milk, honey and medicine.<br>• Harvesting resources.<br>• How people make use of available resources.<br>• Renewable resources e.g. wind, water, sunshine and non-renewable resources(minerals)<br>• Caring for and conserving of animal resources | Through filed tour, learners identify resources from living and non-living things<br>▪ In groups of four members, learners state examples of resources under living and non living things, describe ways of harvesting resources.<br>Using music, dance and drama, learners participate in a campaign for sustainable use of available resources in the environment.<br>▪ Using brainstorming, learners describe renewable and non-renewable resources and explain ways of caring for animals as resources.<br>▪ Practically, learners participate in different ways of conserving resources. |
| ▪ names different energy resources and their sources<br>▪ discusses the importance of different energy resources to people and the environment | Energy resources and their sources<br>▪ the sun as a major source of energy in the environment (solar energy) | ▪ Through brainstorming, learners name different energy resources and their sources and explain |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| ▪ carries out simple experiments using energy from wind or steam<br>▪ describes how to make a:<br>▪ biogas digester<br>▪ solar equipment<br>initiates activities which cause safe and sustainable way of using energy | ▪ energy resources from water (hydro, steam engines and tidal energy)<br>▪ energy resources from fossil fuels (coal and petroleum)<br>▪ energy resources from plants (biofuel, wood fuel, food and biogas from plant residues)<br>▪ energy resources from animals (animal energy and biogas from animal wastes)<br>▪ energy resources from wind (wind energy)<br>▪ importance of energy resources | the importance of different energy resources to people and the environment.<br>▪ In groups of four members, learners carry out simple experiments using energy from wind or steam.<br>▪ The teacher demonstrates how to make a biogas digester and<br>Solar equipment /<br>Leaners could visit the nearby biogas and solar system to see how they work.<br>▪ The teacher guides learners to initiate activities which cause safe and sustainable way of using energy. |

**Assessment guidelines**

1. Assess each learner's ability to identify resources from living and non-living things.
2. Assess each learner's ability to describe renewable and non-renewable resources and explain ways of caring for animals as resources.
3. Assess each learner's ability to participate in the campaign of conservation of resources.
4. Assess each learner's ability to name different energy resources, their sources and the importance of different energy resources to people and the environment.
5. Assess each learner's ability to carry out simple experiments using energy from wind or steam.

6. Assess each learner's ability to start up an activity, which promote safe and sustainable way of using energy.

## THEME: THE COMMUNITY, POPULATION AND FAMILY LIFE

## TOPIC 13: POPULATION AND HEALTH (12 PERIODS)

**Overview**

This topic is for P.7, Term 3 in the standard curriculum. It provides an understanding of population and health. It is necessary to cover this topic to create awareness of population dynamics and its relationship with health with participate in activities that promote a productive and healthy population.

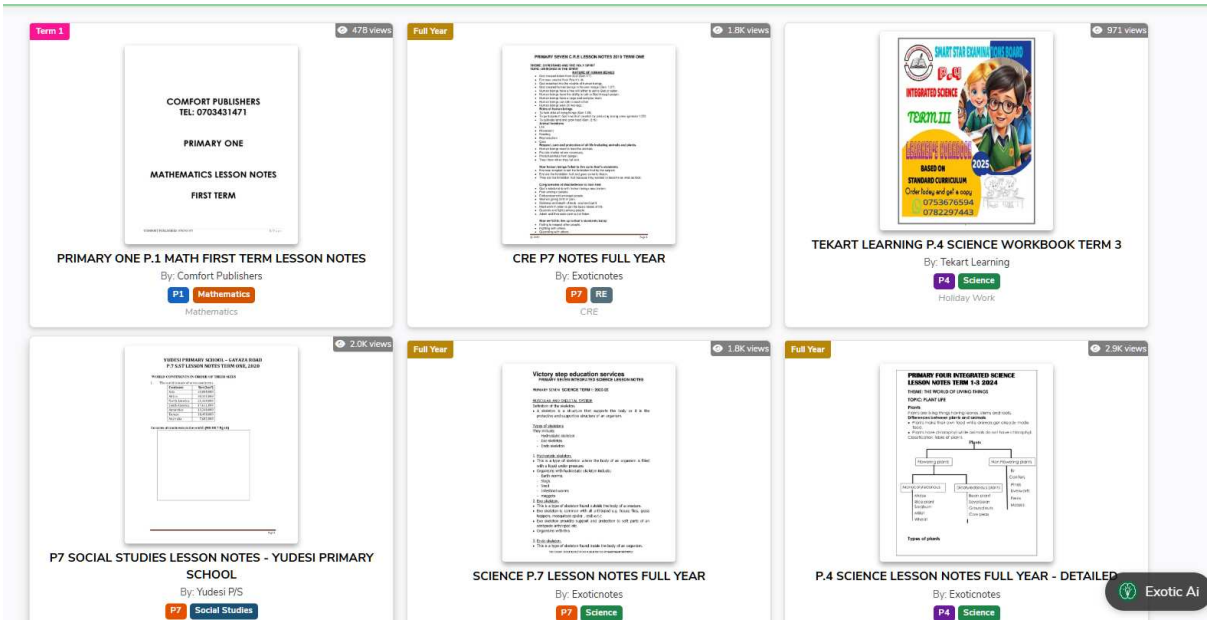
| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| The learner.<br>Names types of common sicknesses in a home and community<br>describes causes of common sicknesses in a home and community<br>states examples of anti-social behaviour and sexual deviations<br>discusses dangers of anti-social behaviour and sexual deviations<br>describes ways of avoiding sexual deviations<br>lists activities to address health concerns<br>demonstrates some of the activities to | ▪ Community health and social problems<br>▪ Types of common sickness in a home and their causes<br>▪ Controlling common sicknesses in a home and community *(merge this with types of sicknesses)*<br>▪ Community health and social problems among young people<br>▪ Anti-social behaviour<br>▪ Sexual deviations (bestiality, homosexuality, masturbation, oral sex, lesbians, incest)<br>▪ Ways of avoiding sexual deviations *(merge with sexual deviations)*<br>▪ Activities to address health concerns<br>▪ Health surveys<br>▪ Health education<br>▪ Collecting information/data on human population<br>▪ Demography on: | ▪ In groups of four members, learners name types of common sicknesses in a home and community and they describe causes of such sicknesses.<br>▪ Using brainstorming, state examples of anti-social behaviour and sexual deviations.<br>▪ Learners in groups, discuss the dangers of anti-social behaviour and sexual deviations and they describe ways of avoiding sexual deviations.<br>▪ Through think pair and share, learners list activities to address health concerns<br>▪ Individually, each learner collects vital statistics/ information/data on a human population and |

| COMPETENCES | CONTENT | Suggested Activities |
|---|---|---|
| address health concerns<br>collects information/data on a human population and health in a home and community<br>carries out demography (simple surveys) on housing information | Housing information, available health services<br>▪ Avoiding health and social problems<br>▪ Activities of health clubs | health in their homes and neighbourhood. |

**Assessment guidelines**

1. Assess each learner's ability to describe types of common sicknesses in a home and community and to describe causes of such sicknesses.
2. Assess each learner's ability to state common examples of anti-social behaviour and sexual deviations.
3. Assess each learner's ability to collects vital information/data on a human population and health in their homes and neighbourhood.

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