**SCHEME OF WORK FOR P.4 SCIENCE TERM I**

|  |  |  |  |  |  |  |  |  |  |  |
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| **WK** | **PD** | **THEME** | **SUB-THEME** | **CONTENT** | **COMPETENCES** | **METHODS**  | **ACTIVITY** | **LIFE SKILLS AND VALUES** | **INSTRUCTIONAL MATERIALS**  | **REF** |
| **1** | **1** | **WORLD OF LIVING THINGS** **WORLD OF LIVING THINGS** | **PLANT LIFE****PLANT LIFE** | **Types of plants*** Flowering plants
* Non flowering plants.

**Flowering plants*** Definition.
* Examples of flowering plants
* Parts of a flowering plant.
* Functions of each part.
* Systems of a flowering plant

**Main parts of a flowering plant**1. Leaves

- Structure- Uses of leaves.- Types of leaves.- Leaf venation**Process in leaves*** Photosynthesis
* Transpiration
1. **Stems**

- Types of stems.- Function of the stem.- Ways (methods) how weak stems  climb others.1. **Roots**

- Describe roots.- Functions of roots.- Types of roots.1. **Flowers**

- Definition**-** The structure- Functions of parts of a  flower.- Uses of a flower to man  and plants.**Pollination*** Definition.
* Types of pollination.
* Agents of pollination.
* Characteristics of wind and insect pollinated flowers.

**Fertilization*** Definition.
* Where it takes place in a flower.
* Reproductive parts of a flower.

\*Pistil\*stamen**Seeds*** Definition
* Structure of seeds
* Types / classes / groups of seeds.
* Functions of seeds.
* Difference between a seed and a fruit.

**Germination*** Definition
* Types of germination.
* Conditions necessary for germination.
 | **Language competence**The learner:* Spells the words correctly.
* Pronounce the given words correctly.

Subject competencesThe learner:* States the types of plants.
* Name the parts of a flowering plant.
* Discusses the functions of parts of a flowering plant.

**Subject competences**The learner:* States the type of stems
* Describes the functions of stems and roots.
* States the uses of flowers to man and plants to plants and man

**Language competence**The learner:-* Pronounces the words correctly.
* Spells the given words correctly.

**Subject competences**The learner:* Defines fertilization.
* Identifies the reproductive parts of a flower.
* Draws different structures of flowers
* Identifies the male and female parts of a flower
* Defines what a flower is

**Language competences**The learner:* Pronounces the given words correctly.
* Spells’ and writes the words correctly.
* Make correct sentences using the given words.
 | -Guided discovery-Discussion-Demonstration-Question and answer.-Explanation- Observation  | -Note taking-Drawing-Naming  | Critical thinking.Problem solving.Decision making.Effective communication Appreciation  | * Prepared chart.
* Leaves.
* flowers
 | Comp. Science Pupils book 4.MK integrated scie pupils bk 4Mk intergrated Pri Sci BK 4 Pg 7 - 8 |
|  |  | **WORLD OF LIVING THINGS** | **GROWING CROPS** | **Crops** * Definition
* Common crops grown

\*Maize\*Sorghum\*Peas, etc**Groups of crops*** Perennial crops.
* Annual crops.
* Definition and examples of the above groups of crops.

**Garden tools*** Examples
* Uses of each garden tool.
* Caring for the garden tools.

**Crop growing practices****Land preparation*** Tools used.
* Activities involved in land preparation.
* When land is prepared (season)

**Planting materials selection.*** Why it is done?
* Qualities of a good planting material (viable seeds)
* How different crops are planted (propagation)

**Planting*** Methods / ways of planting.
* Description of the methods.
* Advantages and disadvantages of each method.
 | **Subject competences**The learner:-* Identifies common crops grown.
* States the groups of crops and explains each.
* Identifies garden tools and their uses.

**Language competences.**The learner:* Spells, pronounce, reads and write given words correctly.

**Subject competences**The learner:-* Identifies tools used in land preparation.
* Describes how different crops are propagated or planted.
* Identifies methods of planting.

**Language competences**The learner:-* Pronounces, spells, reads, writes and makes sentences using the given words.
 | -Question and answer.-Discovery-InquiryDemonstrationObservation  | -Answering question-Writing-Demonstration  | -Awareness-Creative thinking-CareResponsibility  | * Real objects (plants)
* A chart with garden tools.
 |  |
|  |  | **WORLD OF LIVING THINGS** | **GROWING CROPS** | **Nursery bed*** Definition
* Crops first planted in a nursery bed.
* Define transplanting.
* Advantages and disadvantages of a nursery bed.
* Hardening off

**Caring for crops*** Weeding

\*Definition\*Examples of weeds\*Importance \*Dangers* Manure
* Watering

**Pruning*** Definition
* Tools
* Advantages and disadvantages.

**Thinning*** Definition
* Advantages.

**Mulching*** Definition
* Examples of mulches.
* Advantages and disadvantages of mulching.
* Plant training
* Transplanting
* Manuring
 | **Subject competences**The learner:* Defines a nursery bed.
* Identifies crops first planted in a nursery bed.
* Discusses ways of caring for crops.

**Language competences**The learner:-* Reads and writes the words.
* Makes correct sentences using the given words.
 | DiscussionQuestion and answer.Explanation |  |  |  |  |
|  |  | **WORLD OF LIVING THINGS** | **GROWING CROPS** | * Staking
* Gap fitting
* **Pests and disease control**
* Definition of pests.
* Examples of pests.
* Effects of pests and diseases.
* Diseases of some crops.
* Signs of diseases.
* Ways of controlling pests and diseases to plants
* **Harvesting**
* Definition
* When to harvest and why?
* Tools used in harvesting.
* **Food preservation**
* Definition
* Methods of preserving food.
* Reasons for preserving food
* **Storage**
* Examples of storage pests.
* Types of stores.
* Qualities of a good store.
 | **Subject competences**The learner:-* Defines a pest.
* Gives examples of pests.
* Discusses ways of controlling pests and disease.

**Language competences**The learner:* Pronounces, spells, reads the given words correctly.

**Subject competences**The learner:-* Identifies examples of storage pests.
* States the types of stores.
* States reason for preserving food.

**Language competences**The learner:-* Pronounces, spells the words correctly.
 | Discussion.Explanation. | Defining.Writing.Reading  | ResponsibilityConcern.Honesty.Care  |  |  |
|  |  | **OUR ENVIRONMENT** | **Weather changes around us.** | * Definition of weather and climate
* Types of weather.
* Elements of weather / factors
* Weather struments
* Structures of weather instruments.
 | **Subjects**The learner:-* Describes the changes in weather.
* Makes accurate measurements of rainfall.
* Uses thermometer to measure temperature.
 | -Group work.-Guided discovery.-Question and answer.-Guided discussion. | Answering both oral and written questions. | -Effective communication-Critical thinking-Creative thinking.-Problem solving. | Weather chart.Clinical thermometerA chart showing clinical thermometer. | Comprehensive book four pg.Mk.scie Bk 4Integrated Bk. 4. |
|  |  | **OUR ENVIRONMENT** | **Weather changes around us.** | .**Types of rainfall.*** Formation of rain/ water cycle
* Advantages of rain and disadvantages.

**Sunshine*** Advantages and dangers of sunshine.

**Cloud cover*** Types of clouds and their characteristics.
* Advantages of clouds.

**Wind*** Defnition.
* Instrument used to measure.
* Advantages of wind.

**Humidity:*** Definition.
* Instrument used to measure.
* Advantages of humidity.

**Atmosperic pressure*** Definition.
* Causes.
* Instrument used.

**Temperature*** Definition
* Instrument used
* Types of thermometer.
1. **Clinical thermoter**.

- Structure.- Liquid used and reasons - Advantages of using mercury - Normal human body temperature of celcious and Fahrenheight scale. both scales.1. Minimum and miximum **thermometer.**

- Structure. | * Draws a simple weather chart.
* Describes an experiment to show how rain is formed
* Names the parts of thermometer.

Languages.The learner:-* Explains orally the water cycle.
* Pronounce, spell and write parts of a clinical thermometer.
* Defines evaporation
* Defines condensation
* Defines transpiration
 |  |  | -Self awareness.-Prediction  |  |  |
|  | **3****4** | **HUMAN HEALTH** | **Personal Hygiene** | **Personal hygiene.*** Definition.
* Ways of keeping our body clean.
* Items used in keeping our bodies clean.
* Things used to keep our bodies clean. e.g
* Towels
* Soap
* Razorblade
* Water
* Comb
* Brushes
* Importance of keeping our bodies clean.

\* Remove germs.\* Remove dirt.\*Avoid bad smell.\* Keep health.\* Be smart. | **Subject:**The learner should be able to:-* Define personal hygiene.
* State ways of keeping our bodies clean.
* Give the importance of personal hygiene.
* Demonstrate clean body activities.

**Language.*** Spell the words correctly.
* Pronounce the words correctly.
* Write the words in correct spelling.
 | -Discussion.-Discovery-Demonstration-ObservationQuestion and answer. | -Combing hair.-Brushing teeth.-Washing the face.-Cutting finger nails short. | -Appreciation.-Caring.-Responsibility-Self esteem-AssertivenessConcern  |  - Comb- Water- Tooth paste.- Tooth brush.- Nail cutters. | MK. Intergrated primary Science Bk. |

**SCHEME OF WORK FOR P.4 SCIENCE TERM II**

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| **WK** | **PD** | **THEME** | **SUB-THEME** | **CONTENT** | **COMPETENCES** | **METHODS**  | **ACTIVITY** | **LIFE SKILLS AND VALUES** | **INSTRUCTIONAL MATERIALS**  | **REF** |
| **1** | **1** | **HUMAN HEALTH** | **OUR FOOD** | **OUR FOOD*** Definition:

\*Food\*Feeding\*Nutrition* **Sources of food**

\*Super markets\*Markets\*Shops\*GardensForest * Why we eat food.

(5Hs)* Uses of food in the body.
* Balanced diet.

\*Definition\*Components of balanced diet (classes of food)* Sources of food values.

Carbohydrates:VitaminsProteins **Deficiency disease etc.*** Definition
* Examples
* Causes
* Sign of symptoms of each disease.
* Prevention.
* Ways in which food gets contaminated, bad feeding habits.
* Prevention of food contamination.
* Preparation of simple dishes locally.
 | **Subject:*** Defines

\*Food\*Feeding\*Nutrition\*Balanced diet\*Deficiency diseases* States why we eat food?.
* Gives some sources of food.
* Mentions some of the components of balanced diet.

**Language*** Pronouncers, spell,s writes and reads words and sentences correctly.

**Language competence**The learner:-* Pronounces the words correctly.
* Spells the given words correctly.
 | -Guided discovery-Group discussion.-Think pair share. | - Note making.- Collecting food sources of food values.-Grouping them according to food values.-Drawing and painting different food stuffs.  | -Appreciation.-Care-Love Responsibility  | * Real objects (food stuffs)
 | Comp. Science bk 4. Pg.MK integrated scie pupils bk 4Pg. |
|  |  |  | **HUMAN BODY ORGAN** | **Major body organ*** Definition - Organ.
* Examples of major body organs.

\* Eyes\* Brain\* Ears\* Stomach\* Nose\* Bladder\* Heart\* Lungs\* Liver\* Tongue.Kidneyd* Structure showing location of each body organ.
* Structure of each part and function.
* Diseases and disorders.
* Care for each body organ.
 | **Subject:*** Identifies different body organs.
* Defines: Organ.
* States ways of caring for our body organs.
* Draws and labels body organs.

Language:* Reads, pronounces, spells and writes words correctly.
* Answers simple comprehension questions correctly.
 | -Discussion-Guided discovery.-Question and answer.-Demonstration. | * Singing a song.
* Note making.
* Drawing.
* Answering both oral and written questions.
 | -Selfawareness-ResponsibilityConfidence-Fluency.-Effective communication-Creative thinking-Critical thinking. | - Chart showing  body organs. |  |
|  |  | **HUMAN BODY** | **THE TEETH** | **TEETH*** Sets of teeth.
* Types of teeth and their uses.
* The tooth structure.
* Functions of the internal parts of the tooth.
* Regions of the tooth.
* Diseases and disorders of the teeth.
* How to care for the teeth.
 | **Subject**The learner:-* Identifies sets of teeth.
* Describes the different types of teeth and their functions.
* Draws different types of teeth with correct labeling.

**Languages*** Reads, writes, pronounces words and sentences correctly.
 | -Discussion.-Question and answer.-Group work.Guided discovery. | * Matching types of teeth to diagrams.
* Drawing and labeling teeth structures.
* Practicing brushing of teeth.
* Answering oral and written questions.
 | -Effective communication.-Self awareness.-Critical thinking.-Problem solving.-Decision making.- Confidence-Care-Acceptance  | -A chart showing different types of teeth. | Comprehensive scie Bk. 4 pg. 151 – 164.Intergrated scie. Bk. 4 pg. 112 – 118.Fountain scie. Bk. 4 pg 119 - 129 |
|  |  | **HUMAN HEALTH** | **SANITATION** | * **Definition**

- Its elements (activities)* Importance of good sanitation.
* Germs and diseases

- Definition- Where they are found.- Types of germs- How they are spread.- Dangers of germs.- The germ cycle (4Fs).* **Rotting**

- Definition- Importance of rotting- Causes of rotting.- Dangers of rotting.* Ways of protecting against germs and diseases in our environment.
 | **Subject** The learner:-* Identifies sanitation concerns.
* Draws diagrams on transmission of germs (germ path).
* Carries out activities of keeping the environment clean.
* Defines rotting

**Language*** Spells, write and pronounce words correctly.
 | -Discussion-Demonstration.-Question and answer.-Guided discovery. | -Drawing the germ path.-Answering oral and written questions.-Demonstrating way of keeping classroom clean.  | -Self esteem.Effective communication.-Critical thinking.-Problem solving.-Care-Love-Respect.appreciation  | * Brooms.
* Dustbin
* Water
* Plates
* Prepared chats.
 | Comp. scie BK. 4.Integrated Scie. Bk.4MK. Bk. 4 pupils scie. |

**SCHEME OF WORK FOR P.4 SCIENCE TERM III**

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| **WK** | **PD** | **THEME** | **SUB-THEME** | **CONTENT** | **COMPETENCES** | **METHODS**  | **ACTIVITY** | **LIFE SKILLS AND VALUES** | **INSTRUCTIONAL MATERIALS**  | **REF** |
|  |  | **COMMUNICABLE DISEASES AND WORM INFESTATION** | **Diarrheal diseases or faecal diseases**  | * Definition of Diarrhoea.
* Examples of diarrhoeal diseases.
* Causes
* The 4Fs
* Prevention.
* Dehydration (Definition)
* Its causes
* Signs
* (Use of ORS)
* Solutes
* Solvent
* Solution
* Rehydration (Definition)
* Preparation of ORS and SSS.
 | * Identifies diarrheal diseases.
* Describes the spread of the above diseases.
* Demonstrates the preparation of ORS and SSS.
* Draw the structure of a tape worm.
* Tell how tape worms enter our bodies.
* Defines dehydration
* Defines rehydration
 | -Demonstration-Discussion-Guided discovery-Question and answer | -Note making-Preparing ORS and SSS-Cleaning the toilet or latrines-Boiling water - Making SSS | -Critical thinking-Problem solving-Decision making-Self awareness | * Water
* Sugar
* Salt
* Spoons
* Chart showing the 4Fs
 | Mk integrated Pri Sci Bk 4 Pg 124Functional intergrated Pri Sci for Ug Pg 180 |
| **2** | **1** | **HUMAN HEALTH** | **VECTORS AND DISEASES** | **Common Vectors*** Definition of vectors
* Examples of common vectors
* Cockroaches
* Ticks
* Bedbugs
* House flies
* Mites
* Rats
* Lice
* Mosquitoes
* Tsetse flies

\* Life cycle of vectors\* **Diseases spread by each**  **vector*** Body structure
* Their habitat
* Their feeding habits
* Their life cycles
* How they protect them selves from enemies

**How vectors spread diseases.*** Through bites of infected anmals
* Through contaminated food
* Through contaminated air
* Through open wounds
* Through infected insect bites

**Prevention and control*** Proper hygiene
* Covering food.
* Spraying
* Biological control.
* Sleeping under a treated mosquito net.
 | The learners:-* Defines vectors
* Identifies some common disease vectors
* Describes characteristics of some disease vectors.
 | -Guided discovery-Question and answerDiscussion.Observation FieldStudy  | - Naming- Drawing- Answering questions Match  | - Awareness- CareResponsibility -Self awareness-Decision makingTaking Decision SharingAppreciation Effective communication  | * A chart with some vectors.
* Real vectors like cockroaches
 |  |
|  |  | **HUMAN HEALTH** | **Accidents poisoning and first Aid** | **Accidents*** Definition
* Types of accidents
* Causes of accidents
* Prevention of accidents

**First Aid*** Definition
* Reasons for giving first aid.
* Responsibilities of a first aider.
* Qualities of a first aider.
* First aid kit (box)
* How to use a first aid kit.
* Components of the first and kit and uses.
* Places where we find first aid box
 | The learner:-* Names common accidents and poisoning at home, on the way to, from and at school.
* States causes of accidents and poisoning.
* Demonstrates how to take care of one who has taken poison.

**Language*** Talks about common accidents.
* Reads and writes words, sentences and stories about accidents.
 | -Guided discussion-Group work.Demonstration. | * Collecting first aid items.
* Making a first aid box.
* Demonstrating how to give first aid.
 | -Critical thinking.-Problem solving-Coping with stress.-CareSympathy-Responsibility | -Real first aid materials.- Chart showing  common  accidents. | Mk intergrated Prim Sci Bk 4 Pg 154 |
|  |  | **WORLD** **OF** **LIVING** **THINGS** | **Animal life (Rabbits)** | **Definition of terms*** Rabbitary
* Rabbit keeping

**External parts of a rabbit****Breeds of rabbits*** Local
* - Exotic
* Examples of exotic breeds.

Importance / uses of rabbits.* Advantages of keeping rabbits over other animals.
* Housing in rabbits.
* Management practices.
* Diseases of rabbits and their control.
* Keeping farm records.
 | **Subject*** Defines new terms.
* Names external parts of a rabbit.
* Names breeds of rabbits.
* Lists examples of exotic breeds.
* Explains the uses of rabbits
* Describes the habitat for rabbits
* Demonstrates skills in keeping rabbits.
* Names diseases of rabbits and their control.
* Signs of a sick rabbit
* Requirements of starting a rabbitary farm
 | Guided discoveryDiscussionDemonstrationQuestion and answer.Group work field trip. | * Drawing.
* Note taking
* Answering oral and written questions.

. | -Effective communication. -Critical thinking.-Creative thinking.-Decision making-Problem solving.-Appreciation- Patience -Care-Fluency  | -Prepared chart | Mk Intergrated Prim Bk 4 Pg 180 |
|  |  | **HUMAN HEALTH** | **Road traffic accidents, sprains, strains, bruises** **wounds** | * Definition of road accidents.
* Causes of road traffic accidents.
* How to cross the road e.g. from zebra crossing.
* How to prevent road traffic accidents.

Injuries / Fractures**Types of injuries.*** Fractures (types and their first aid)
* Sprains and strains (their first aid).
* Dis location and its first aid.
* Bruises and their first aid.
* Blisters and their first aid.
* Wounds and their first aid.
 | **Subject competences** **The learner** * Names causes of road accidents
* Name road users
* Demonstrates how to cross a busy road.

**Language** * Talks about common injuries.
* Reads , poems , posters about accidents
 |  |  |  |  |  |
|  |  |  | **Accidents, poisoning and First Aid** | * Definition of
* Poison
* Poisoning
* Common poisons in our homes.
* Causes of poisoning.
* Signs of poisoning
* First aid
* How to prevent poisoning.
 |  |  |  |  |  |  |
|  |  |  | **Intestinal worms infestation**  | Definition:* Intestinal worms
* Parasites
* Examples of intestinal worm
1. Tape worms

- Structure- How it spreads- How it feeds- What it feeds on- Effect on body prevention  and control1. Hook worms
* Structure
* How they enter into the body.
* How they feed.
* Prevention and control.
1. Round worms (Nematodes)
* Structure.
* How they enter into the body.
* How they feed.
* Prevention and control.
1. Pin worms (thread worms)
* Their structure
* Feeding habits
* How they enter the body.
* Prevention and control
* Whip worms
* Structure
* How they enter our bodies.
* Their feeding habits
* Prevention and control
 | The learner:-* Describes the habits of pin worms.
* Describes the habits of whip worms
 |  |  |  |  |  |