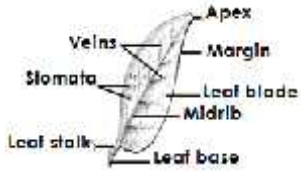
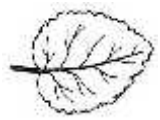
VICTORIOUS EDUCATION SERVICE

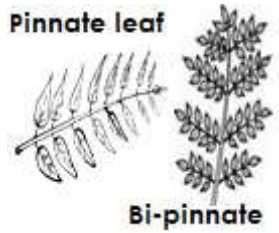
PRIMARY FOUR SCIENCE SCHEME OF WORK FOR TERM I, 2023

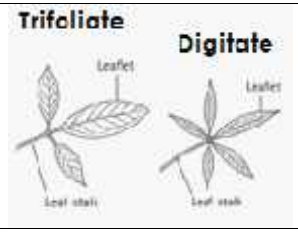
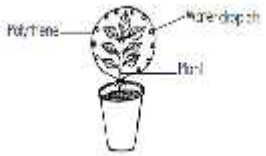
WK	PD	TOPIC	TOPIC	CONTENT	SUBJ. COMP'NCES	LANG. COMP'NCES	METHODS	ACTIVITIES	IND. OF L.S.V	INST. MAT.	REF.	REM.
1	1	**Plant life**	**Flowering plants**	**Flowering plants** - Flowering plants are plants that bear flowers. **Example of flowering plants** - Maize Plants - Bean Plants - Banana Plants - Tea plants - Coffee Plant **Characteristics of flowering plants** - Flowering plants bear flowers. - Most flowering plants reproduce by means of seeds. **Structure of a flowering plant** - Stem - The root system - The terminal bud - Axillary bud - Node and internode	The learner; 1. Defines flowering plants 2. Gives examples of flowering plants. 3. States the characteristics of flowering plants. The learner; 1. Draws the structure of a flowering plant. 2. names the parts of a flowering plant 3. Identifies the systems of a flowering plant. 4. Draws and names parts of a flowering plant	The learner; 1. Pronounces, spells, reads writes and demonstrates meaning of words related to flowering plants e.g. Bear, reproduce, and flower. 2. Reads, internalize and writes texts and questions related to flowering plants.	Guided discovery Discussion observation	Defining flowering plants Giving examples of flowering plants Drawing the structure of a flowering plant. Naming parts of a flowering plant.	Appreciation. Care Awareness Fluency Concern	Flowering plants	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	
1	2	**Plant life**	**Structure of a**	**Structure of a leaf**	The learner; 1. Draws the	The learner; 1. Pronounces,	Guided discovery	Drawing the	Appreciation.	Different types	Mk. Int.	

			leaf	 **Functions of parts of a leaf** **1. Leaf stalk** - Holds the leaf on the branch **2. Midrib** - Transports manufactured food and water. **3. Leaf blade** - Has stomata used for breathing/ gaseous exchange	structure of a leaf. 2. Names the parts of a leaf. 3. Mentions the functions of each part of a leaf.	spells, reads writes and demonstrates meaning of words related to flowering plants e.g. Bear, reproduce, and flower. 2. Reads, internalize and writes texts and questions related to flowering plants.	Discussion Observation	structure of a leaf Naming parts of a leaf. Mentioning the functions of parts of a leaf.	Care Awareness Fluency Concern	of leaves brought in the class.	sci. pbk 4 Int. sci. syllabus bk 4	
1	**3**	**Plant life**	**Leaf venation**	**Leaf venation** - Leaf venation is the arrangement of veins in a leaf. **Types of leaf venation** 1. Network leaf venation 2. Parallel leaf venation. **NET WORK LEAF VENATION** ⇒ The leaf has veins made like a net. **Illustration**	**The learner;** 1. Defines the term leaf venation. 2. Identifies the types of leaf venation. 3. Give examples of plants the network and parallel leaf venation.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to leaf venation e.g. network and parallel 2. Reads, internalize and writes texts and questions related to leaf venation.	Guided discovery Discussion Observation	Defining leaf venation Identifying types of leaf venation. Giving examples	Appreciation. Care Awareness Fluency Concern	Different types of leaves brought in the class	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

1				 ⇒ Network venation is found in leaves of dicotyledonous plants. **Example of plants with network leaf venation** Bean, Hibiscus, Flower, Peas **Parallel leaf venation** ⇒ The veins in a leaf run from the leaf stalk to the apex of the leaf in a parallel form.  ⇒ Parallel venation is found in leaves of monocotyledonous plants like; Maize, Millet, Sugarcane, Rice, Grass and wheat plants.	The learner; 1. Defines the term leaf venation. 2. Identifies the types of leaf venation. 3. Give examples of plants the network and parallel leaf venation.		Guided discovery Discussion observation	of leaf venation Defining leaf venation			Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	
1	**4**	**Plant**	**Types**	**TYPES OF LEAVES**	**The learner**	**The learner;**	Guided	Identifying	Appreciati-	Differen	Mk.	

		life	**of leaves**	1. Simple leaves 2. Compound leaves **SIMPLE LEAVES** A simple leaf is a leaf with one leaf blade and one leaf stalk. **Examples of simple leaves** - Simple serrated Simple lobed leaf - Simple entire Simple divided entire - Simple palmate **Simple serrated**  **Simple divided entire**  etc.	1. Indentifies the types of leaves. 2. Describes simple leaves. 3. Mentions examples of simple leaves. 4. Draws the different structures of simple leaves	1. Pronounces, spells, reads writes and demonstrates meaning of words related to leaf venation e.g. network and parallel 2. Reads, internalize and writes texts and questions related to simple leaves	discovery Discussion observation	the types of leaves. Describing simple leaves. Mentioning examples of simple leaves. Drawing the structure of simple leaves	on. Care Awareness Fluency Concern	t types of leaves brought in the class	Int. sci. pbk 4 Int. sci. syllabus bk 4	
1	***5***	**Plant life**	**Types of leaves**	**Compound leaves** **Types of leaves** **Compound leaves** ⇒ A compound leaf	**The learner** 1. Describes simple leaves. 2. Mentions	**The learner;** 1. Pronounces, spells, reads writes and demonstrates	Guided discovery	Describing comp. leaves.	Appreciati-on. Care	Differen t types of comp.	Mk. Int. sci. pbk 4	

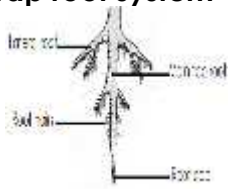
				is a leaf with many leaflets on one main leaf stalk. ⇒ The leaflets are divided at original leaf stalk. ⇒ Each leaflet has its own small stalk called ranchis **Examples of compound leaves** 1. Compound pinnate leaf 2. Compound bipinnate leaf 3. Compound trifoliate leaf 4. Compound digitate leaf **Illustration**  	examples of simple leaves. 3. Draws the different structures of compound leaves	meaning of words related to leaf venation e.g. pinnate, bi-pinnate and trifoliate 2. Reads, internalize and writes texts and questions related to compound leaves	Discussion observation	Mentioning examples of comp. leaves. Drawing the structure of simple leaves	Awareness Fluency Concern	leaves brought in the class	Int. sci. syllabus bk 4	

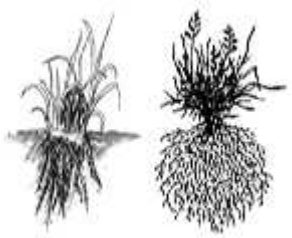
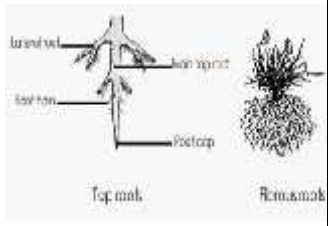
												
	6	**Plant life**	**Transpiration the rate of transpiration.**	**TRANSPIRATION** - Transpiration is the process by which plants lose water in form of water vapour to the atmosphere. **Importance of transpiration** **a) To a plant** 1. It cools the plant. 2. It enables plants to abosorb more water from the soil. **b) To the environment** ⇒ It helps in the formationn of rain fall.  **Factors which affect the rate of**	**The learner;** 1. Defines transpiration. 2. Gives the importance of transpiration to; i) Plants ii) Animals.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to transpiration 2. Reads, internalize and writes texts and questions related to transpiration.	Guided discovery Discussion observation	Defining transpiration. Giving the importance of transpiration to plants and the environment.	Appreciation. Care Awareness Fluency Concern	The local environment	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				transpiration 1. Temperature 2. Light intensity 3. Humidity 4. Wind 5. Surface area of a leaf							
1	**7**	**Plant life**	**Ways plants reduce the rate of transpi ration.**	**Ways in which plants reduce the rate of transpiration** ⇒ By shedding their leaves in the dry season to reduce the rate of transpiration. ⇒ Some plants develop a layer of wax on their leaves. ⇒ Some plants reduce the size of their leaves to thorny structures. ⇒ Some plants develop thick leaves to store water for the dry season. ⇒ Some plants modify their leaves into thorns e.g. cactus plants. **Dangers of**	**The learner** 1. Mentions ways in which plants reduce the rate of transpiration. 2. State the dangers of transpiration.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to transpiration 2. Reads, internalize and writes texts and questions related to transpiration	Guided discovery Discussion observatio n	Defining transpiratio n. Giving the importanc e of transpiratio n to plants and the environme nt.	Appreciati-on. Care Awareness Fluency Concern	The local environ ment	Mk. Int. sci. pbk 4 Int. sci. syllab us bk 4	

				transpiration ⇒ Excess transpiration leads to wilting of plants.								
2	**1**	**Plant life**		**PHOTOSYNTHESIS** ⇒ Photosynthesis is the process by which plants make their own food. **Requirements for photosynthesis** 1. Water 2. Carbon diuoxide 3. Sunlight 4. Chlorophyll **The raw materials for photosynthesis** 1. water 2. carbon dioxide. **Conditions necessary for Photosynthesis** 1. Chlorophyll 2. Sunlight **1. Importance of photosynthesi to people** 1. Due to photosynthesis, people get food. 2. People get oygen for respiration due to	**The learner;** 1. Defines the term photosynthesis. 2. Mentions the requirements for photosynthesis. 3. Describes the conditions, raw materials, product and by product for photosynthesis.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to photosynthesis e.g. chlorophyll, sunlight & water. 2. Reads, internalize and writes texts and questions related to Photosynthesis	Guided discovery Discussion Observation Brain storming Think pair and share	Defining photosynthesis. Mentioning the requirements for photosynthesis. Describing the conditions, raw product and bi products of photosynthesis.	Appreciation. Care Awareness Fluency Concern	The local environment	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				photosynthesis.								
2	**2**	**Plant life**	**Uses of leaves**	**Functions (uses) of leaves to plants** ⇒ Leaves make food for the plant. ⇒ Leaves help a plant to carry out transpiration. ⇒ Some leaves store food and water for the plant e.g. onions ⇒ Some leaves are used for plant propagation e.g. bryophyllum **Uses of leaves to people** ⇒ Some leaves are eaten as food e.g. Amaranthus. ⇒ Some leaves are used as herbal medicine. ⇒ Some leaves are used to thatch houses. ⇒ Plant leaves are used for researech and study purposes.	**The learner** 1. Gives the uses of leaves to people. 2. Mentions the importance of leaves to plants.	**The learner** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to uses of leaves. 2. Reads, internalize and writes texts and questions related to uses of leave	Guided discovery Discussion Observation Brain storming	Giving the uses of leaves to people. Mentioning the uses of leaves to plants.	Appreciation Care Awareness Fluency Concern	The local environment	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	
2	**3**	**Plant**	**roots**	**Root system**	**The learner;**	**The learner**	Guided	Naming	Appreciati-	Grass	Mk.	

		life		**ROOTS** ⇒ A true root system develops from the radicle of the embryo. **Types of root system** 1. Tap root system 2. Fibrous root system **a) Tap root system**  1. **Root hairs:** absorb water and mineral salts from the soil. 2. **Root cap:** Protects the growing tip of a root. **Examples of plants with tap root system** Mangoes, beans, **b) Fibrous root system** ⇒ This is the type of root system where there are many roots growing randomly from	1. Names the systems of roots. 2. Draws a well labelled structure of a tap root and fibrous root systems.	1. Pronounces, spells, reads writes and demonstrates meaning of words related to root systems. 2. Reads, internalize and writes texts and questions related to root systems.	discovery Discussion Observation Brain storming	types of root systems. Drawing a well labelled structure of root systems.	on. Care Awareness Fluency Concern	carrots	Int. sci. pbk 4 Int. sci. syllabus bk 4	

				the radicle of a seed **Illustration** 								
2	**4**	**Plant life**	**Types of root**	**TYPES OF ROOTS** 1. Primary roots 2. Secondary roots **a) Primary roots** ⇒ These are roots that develop from the radicle of a germinating seed. **Examples of primary roots** 1. Tap roots **2.** Fibrous roots  **b) Secondary roots (adventitious roots)**	**The learner;** 1. Identifies the types of roots. 2. Describes primary and secondary roots. 3. Mentions examples of primary and secondary roots. 4. Draws the structure of a prop root.	**The learner** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to types of roots 2. Reads, internalize and writes texts and questions related to types of roots.	Guided discovery Discussion Observation Brain storming	Identifying the types of roots. Describing primary and secondary roots. Mentioning examples of primary and secondary roots.	Appreciation. Care Awareness Fluency Concern	Cassava tubers, sweet potato tubers, carrots	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

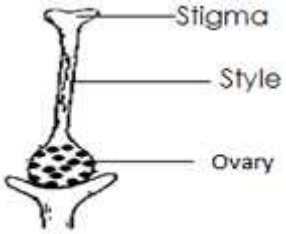
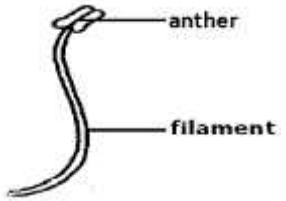
				⇒ These are roots that develop from any other part of the plant other than the radicle. **Examples of adventitious roots** 1. Prop root 2. Stilt roots 3. Buttress roots 4. Storage roots 5. Clasping roots **6.** Breathing roots								
2	**5**	**Plant life**	**Uses of roots**	**USES OF ROOTS TO PLANTS** ⇒ Roots fix the plant firmly in to the soil. ⇒ They absorb water from the soil. ⇒ Some roots store food for the plant. **Uses of roots to man** - Some roots act as food. - Some roots are used as herbal medicine. - Some roots	**The learner;** 1. states the uses of roots the plant, man and the soil/ environment **The learner;** 1. states the uses of roots the plant, man and the soil/ environment	**The learner** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to uses of roots 2. Reads, internalize and writes texts and questions related to uses of roots**.**	Guided discovery Discussion Observation Brain storming	Stating the uses of roots to plants, people and soil.	Appreciation. Care Awareness Fluency Concern	Cassava tubers, sweet potato tubers, carrots.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				provide fire wood to people when dry. - Some roots are sold for money. **Uses of roots to man** - Roots hold the soil particles together hence controlling soil erosion.								
2	**6**	**Plant life**	**Stems**	**Stems** **Types Of Stems** 1. Upright or erect stems 2. Underground stems 3. Weak stems. **1. Upright Or Erect stems.** ▪ They grow straight in space e.g. woody plants, **2. Underground or storage stems** ⇒ These are stems	**The learner;** 1. Names the types of stems 2. Gives the examples of the different types of stems. 3. Describes the categories of underground stems.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to stems. 2. Reads, internalize and writes texts and questions related to stems	Guided discovery Discussion Observation Brain	Naming the types of stems. Giving examples of the different types of stems. Describing the different	Appreciation. Care Awareness Fluency Concern	Different types of stems availed in class.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				which grow underground and store food e.g. Stem tubers, Bulbs & Rhizomes **Characteristics of underground STEMS** ⇒ They have scale leaves. **Categories of underground stems** **a) Stem tubers e.g.** white yams and Irish potatoes. **b) Corms** e.g. cocoyam, crocus and gladiolus. **c) Bulbs** e.g. onions, garlic and Spider lily **d) Rhizomes** e.g. ginger, turmeric, cannalilly and grass such as coach grass.			storming	categories of undergrou nd stems.				
2	**7**	**Plant life**	**Stems**	**Weak stems** ⇒ These are weak stems which	**The learner;** 1. Describes weak stems.	**The learner;** 1. Pronounces, spells, reads writes	Guided discovery	Describing plants with weak	Appreciati-on.	Differen t types of	Mk. Int. sci.	

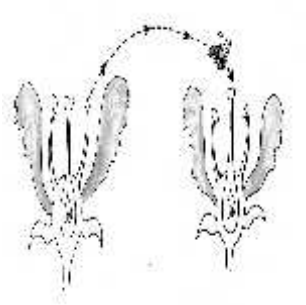
				cannot support themselves upright. ⇒ To get enough sunlight. **Groups of weak stems** 1. Climbing stems e.g. passion fruits, 2. Creeping stems **How weak stems climb others** **1. By using tendrils** ⇒ The lateral bud of a plant or the leaf tip develops into a tendril. **Examples of plants which use tendrils** Passion fruits, gourds, cowpeas, pumpkins, cucumber **2. B y using hooks** ⇒ Some plants have downward pointing thorns. **3. By twining or clasping**. ⇒ Plants clasp their stems around a support.	2. Gives examples of weak stems. 3. Mentions ways plants with weak stems use to climb others.	and demonstrates meaning of words related to stems e.g. erect, weak stems and underground stems. 2. Reads, internalize and writes texts and questions related to stems.	Discussion Observation Brain storming	stems. Giving examples of plants with weak stems. Mentioning ways used by weak stems to climb others.	Care Awareness Fluency Concern	stems availed in class.	pbk 4 Int. sci. syllabus bk 4	

3	**1**	**Plant life**	**Functions of stems**	**FUNCTIONS OF A STEM TO A PLANT** 1. They hold the leaves on a plant. 2. They hold the flowers for proper pollination. **USES OF STEMS TO ANIMALS** 1. Most stems are used for timber and firewood. 2. Some stems are used as herbal medicines. 3. Stems are used as food for animals. 4. People use stems as firewood.	**The learner;** 1. gives the uses of stems to ; a) plants b) people c) animals	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to stems e.g. erect, weak stems and underground stems. 2. Reads, internalize and writes texts and questions related to functions of stems	Guided discovery Discussion Observation Brain storming	Giving the uses of stems to plants, people and animals..	Appreciation. Care Awareness Fluency Concern	Weak stems collected from the environment.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	
3	**2**	**Plant life**	**flowers**	**FLOWERS** ⇒ A flower is a reproductive part of a flowering plant. **The external**	**The learner;** 1. Defines a flower. 2. Draws the internal parts of a flower. 3. Name parts of	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to parts of a flower.	Guided discovery Discussion	Defining a flower. Drawing and labeling	Appreciation. Care	Flowers from the environment.	Mk. Int. sci. pbk 4	

				structure of a flower - Sepals - petals **The internal structure of a flower** - pistil - stamen **a) Pistil**  **b). The Stamen** ⇒ The stamen is the male part of a flower. **Illustration**  	a flower.	2. Reads, internalize and writes texts and questions related to parts of a flower.	Observation Brain storming	the parts of a flower.	Awareness Fluency Concern		Int. sci. syllabus bk 4	
3	**3**	**Plant life**	**Functions of parts of a**	**FUNCTIONS OF EACH PART** **i) Petals** ⇒ Petals are	**The learner;** 1. States the function of each part of a flower.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates	Guided discovery	Sating the function of each part of a flower.	Appreciati-on. Care	The environment..	Mk. Int. sci. pbk 4	

			flower	brightly coloured to attract pollinators **Pistil or Carpel** ⇒ The pistil is the female part of a flower ⇒ It is made up of three main parts; namely Ovary, Stigma and Style **USES OF FLOWERS TO PEOPLE** ⇒ Flowers are used to get insecticides. ⇒ They are used for decoration on various functions. ⇒ They are used to get dye. ⇒ Flowers are used to make perfumes.		meaning of words related to parts of a flower. 2. Reads, internalize and writes texts and questions related to parts of a flower.	Discussion Observation Brain storming		Awareness Fluency Concern		Int. sci. syllabus bk 4	
3	**4**	**Plant life**	**Pollination**	**POLLINATION** ⇒ Pollination is the	**The learner** 1. Defines	**The learner;** 1. Pronounces,	Guided discovery	Defining pollination.	Appreciati-on.	Flowers from	Mk. Int.	

				transfer of pollen grains from the anthers to the stigma. **TYPES OF POLLINATION** 1. Self-pollination 2. Cross pollination **Self-pollination** ⇒ This is the transfer of pollen grains from the anthers of a flower to the stigma of the same flower or another flower on the same plant. **Illustration**  **HOW THE FLOWER IS ADAPTED (SUITED) FOR SELF POLLINATION** ⇒ The anthers and stigma mature at the same time e.g. the conifers. ⇒ The flower remains	pollination. 2. Names and describes the types of pollination. 3. States the adaptation of some flowers to self pollination.	spells, reads writes and demonstrates meaning of words related to pollination. 2. Reads, internalize and writes texts and questions related to pollination.	Discussion Observation Brain storming	Naming the types of pollination. Describing self pollination. Stating the adaptation of some flowers to self pollination.	Care Awareness Fluency Concern	the environment. A chart showing an illustration of self pollination.	sci. pbk 4 Int. sci. syllabus bk 4	

				closed until self-pollination has taken place e.g. the conifers								
3	**5**	**Plant life**	**Cross pollination**	**Cross pollination** ⇒ This is the transfer of pollen grains from the anthers of a flower to the stigma of another flower on another plant of the same species. **Illustration**  **HOW THE FLOWER IS ADOPTED (SUITED) FOR CROSS POLLINATION** ⇒ The male and female flowers occur on the same plant e.g. in maize ⇒ The male and	**The learner;** 1. Describes cross pollination. 2. States the adaptation f some flowers to cross pollination. 3. Identifies the agents of pollination.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to cross pollination. 2. Reads, internalize and writes texts and questions related to cross pollination.	Guided discovery Discussion Observation Brain storming	Describing cross pollination. Stating the adaptation of some flowers to cross pollination. Identifying the agents of pollination.	Appreciation. Care Awareness Fluency Concern	Flowers from the environment. A chart showing cross pollination	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

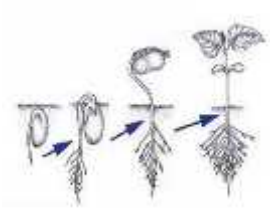
				female flowers occur on separate plants e.g. in papaws. **AGENTS OF POLLINATION** ⇒ Agents of pollination are things responsible for the transfer of pollen grains to the stigma. **Agents of pollination** 1. Insects 2. wind 3. water 4. Animals e.g. bats **5.** Birds								
3	**6**	**Plant life**	**CCCs of insect/ wind pollinated flowers**	**CHARACTERISTICS OF INSECT POLLINATED FLOWERS** ⇒ They are scented flowers. ⇒ They produce less sticky pollen. ⇒ They are have brightly coloured petals. ⇒ **CHARACTERISTICS OF WIND POLLINATED**	**The learner;** 1. Mentions the **CCCs** of wind and insect pollinated flowers. 2. States the importance of pollination.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to pollination. 2. Reads, internalize and writes texts and questions related to pollination.	Guided discovery Discussion Observation	Mentioning the CCCs of wind and insect pollinated flowers. Stating the importance of pollination.	Appreciation. Care Awareness Fluency Concern	Flowers from the environment. A chart showing cross pollination	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				FLOWERS. ⇒ The petals have dull colours. ⇒ The flowers do not produce nectar. ⇒ They produce a lot of pollen grains. **IMPORTANCE OF POLLINATION** ⇒ Pollination allows fertilization to take place in farmers' crops. ⇒ Pollination allows high yield in farmers' harvest.			Brain storming	Identifying the agents of pollination.				
3	**7**	**Plant life**	**SEEDS**	**SEEDS** A seed is a fertilized mature ovule. **Classification of seeds** a) Monocotyledonous seeds b) Dicotyledonous seeds **Monocotyledonous**	**The learner;** 1. Defines a seed. 2. Mentions types of seeds. 3. Describes monocotyledonous seeds. 4. States the CCCs of monocots with relevant	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to seeds like dicot and monocots. 2. Reads, internalize and writes texts and	Guided discovery Discussion	Defining a seed. Mentioning the types of seeds. Describing monocotyl	Appreciati-on. Care Awareness Fluency	Differen t grains such as maize, millet, sorghu m.	Mk. Int. sci. pbk 4 Int. sci.	

				⇒ Monocotyledonous seeds are seeds that have one cotyledon. **Examples of monocotyledonous seeds** 1. maize 2. millet 3. sorghum 4. barley 5. rice **A structure of maize grain**	examples.	questions related to seeds	Observation Brain storming	edonous seeds. Stating the CCCs of Monocots with relevant examples.	Concern		syllabus bk 4	
4	**1**	**Plant life**	**Dicotyledonous**	**Dicotyledonous seeds** ⇒ These are seeds that have two cotyledons. **Examples include** 1. beans 2. peas 3. soya 4. Ground nuts **A structure of a bean seed** **Functions of each part**	**The learner;** 1. Describes dicotyledonous seeds. 2. Gives examples of dicotyledonous seeds. 3. States the CCC of dicotyledonous seeds.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to dicotyledonous seeds. 2. Reads, internalize and writes texts and questions related to dicotyledonous seeds.	Guided discovery Discussion Observation	Describing dicotyledonous seeds. Giving examples of dicotyledonous seeds. Stating the **CCCs** of	Appreciation. Care Awareness Fluency Concern	Bean seeds, soya or ground nut seeds.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				1. **Plumule** – develops into shoot system 2. **Radicle** – develops into root system 3. **Testa**– protects the internal parts from damage. 4. **Cotyledon-** It stores food for the seed. 5. **Endosperm** stores food for the embryo			Brain storming	dicotyledonous seeds				
4	**2**	**Plant life**	**Seed Germination**	**Seed Germination** ⇒ Germination is the development of a seed embryo into a young plant. ⇒ A seedling is a young plant **Condition for germination** **Water** - Softens the testa for the radicle to come out. **Warmth** - for respiration **Oxygen** - provides the right temperature	**The learner;** 1. Defines the term germination. 2. Mentions the conditions for seed germination. 3. Describes the importance of each condition necessary for seed germination.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to seed germination 2. Reads, internalize and writes texts and questions related to Seed germination.	Guided discovery Discussion Observation Brain	Defining the term germination. Mentioning the conditions for seed germination. Describing the	Appreciation. Care Awareness Fluency Concern	Germinating seeds. A chart showing seed germination.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				for the germinating seed. **Steps under gone by a seed during germination** ⇒ The seed absorbs water through the micropyle and swells. ⇒ Testa softens swells and opens for the radicle to pass out. ⇒ The radicle comes out of the seed to form the root system. ⇒ The Plumule comes out to grow into the shoot system.			storming	importance of each condition of seed germination.				
4	**3**	**Plant life**	**Types of germination**	**Types of germination** - Epigeal germination - Hypogeal germination **Epigeal germination** - This is the type in which the cotyledon comes out of the ground. **A bean seed**	**The learner;** 1. The learner identifies the types of germination. 2. Describes each type of germination. 3. Illustrates to show the two types of germination. 4. Mentions	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to seed germination 2. Reads, internalize and writes texts and questions related to Seed germination.	Guided discovery Discussion Observati	Identifying the types of seed germination. Describing epigeal germination.	Appreciation. Care Awareness Fluency	A chart showing seed germination.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk	

				 **Examples of seeds that undergo epigeal germination** Beans Ground nuts **Hypogeal germination** - This is type of germinations in which a cotyledon remains under ground. **Illustration** **Examples of seeds that undergo hypogeal germination** Maize Rice	examples of seeds that undergo each type of germination.		on Brain storming	Illustrating the types of seed germinatio n. Mentioning examples of seeds that undergo each type of seed germinatio n.	Concern		4	
4	**4**	**Plant life**	**Seed viabilit y and seed dorma ncy**	**Seed viability and seed dormancy** - Seed viability is the ability of a seed to germinate given the necessary conditions. **Characteristics of**	**The learner;** 1. Defines seed viability. 2. States the **CCCs** of a viable seed. 3. Gives the meaning of	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words seed viability and seed dormancy germination	Guided discovery Discussion	Defining seed viability. Stating the **CCCs** of a viable	Appreciati-on. Care Awareness	A chart showin g an experim ent on seed viability seed vi	Mk. Int. sci. pbk 4	

				seed viability ⇒ They should be mature. ⇒ They should be free from pest damage. **Factors that make a seed fail to germinate** ⇒ When the seed has holes. ⇒ When the embryo is not mature. **Experiment on seed viability**	seed dormancy. 4. States the factors that may make a seed fail to germinate under normal conditions.	2. Reads, internalize and writes texts and questions related to seed viability and seed dormancy	Observation Brain storming	seed. Giving the meaning of seed dormancy. Stating the factors that may make a seed fail to germinate.	Fluency Concern		Int. sci. syllabus bk 4	
4	**5**	**Plant life**	**Uses of plants**	**Uses of plants to people** ⇒ Some plants are sources of food. ⇒ Some plants are used as herbal medicine. ⇒ Coniferous plants are used for decorating live fences. ⇒ Plants provide firewood and charcoal. ⇒ Some plants	**The learner;** 1. state the uses of plants to people	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related seed viability and seed dormancy germination 2. Reads, internalize and writes texts and questions related to seed viability and seed	Guided discovery Discussion Observation	Stating the uses of plants to people..	Appreciation. Care Awareness Fluency Concern	Environment	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				provide hard wood for timbers. ⇒ Plants provide oxygen to animals. **Uses of plants to animals** ⇒ Some plants provide food to animals. ⇒ Plants provide shelter to some animals. ⇒ Plants provide animals with oxygen for respiration. **Importance of plants to the environment** ⇒ Plants help in the formation of rainfall. ⇒ Plants help to purify air by absorbing carbon dioxide.		dormancy	Brain storming				
4	**6**	**Growing crops**	**crops**	⇒A crop is a plant that is grown and cared for a particular purpose. **Groups of crops (categories of**	**The learner;** 1. Names the examples of common crops. 2. Identifies the	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to crops.	Guided discovery	Naming examples of crops. Identifying	Appreciation. Care	Environment	Mk. Int. sci. pbk 4	

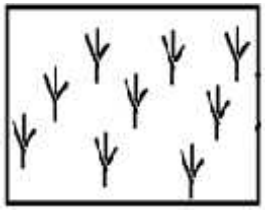
				crops) 1. Annual crops 2. perennial crops **a) Annual crops**: These are crops which mature and harvested within one year. **Examples of annual crops** Sun flower sorghum Beans Peas maize Ground nuts **Perennial crops:** These are crops that are harvested year after year. **Examples of perennial crops** Coffee crop tea crop banana crop.	groups of crops. 3. Mention examples of crops under each group.	2. Reads, internalize and writes texts and questions related to crops.	Discussion Observation Brain storming	the groups of crops. Mentioning examples of crops under each group.	Awareness Fluency Concern		Int. sci. syllabus bk 4	
4	**7**	**Crop growing**	**Garden tools**	**Garden tools** **Examples of garden tools.** - Hoe - Spade - Axe - Rake	**The learner;** 1. mentions the common tools Draws their structures and states their uses.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to garden tools	Guided discovery Discussion	Mentioning the common tools. Drawing	Appreciation. Care Awareness	Illustrations of different garden tools.	Mk. Int. sci. pbk 4	

				- Wheel barrow - Watering can - Slasher **Their structure and uses.**		2. Reads, internalize and writes texts and questions related to garden tools.	Observation Brain storming	the structure of different garden tools. Stating the uses of different garden tools.	Fluency Concern	Where possible, real garden tools brought to class.	Int. sci. syllabus bk 4	
5	**1**	**Crop growing**	**More garden tools**	**More Garden tools** **Examples of garden tools.** - Forked hoe - Watering can - Trowel - Garden fork - Pick axe **Their structure and uses.**	**The learner;** 1. mentions the common tools 2. Draws their structures and states their uses.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to garden tools 2. Reads, internalize and writes texts and questions related to garden tools.	Guided discovery Discussion Observation Brain storming	Mentioning the common tools. Drawing the structure of different garden tools. Stating the uses of different garden tools.	Appreciation. Care Awareness Fluency Concern	Illustrations of different garden tools. Where possible, real garden tools brought to class.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	
5	**2**	**Crop growin**	**More garde**	**More Garden tools** **Examples of garden**	**The learner;** 1. mentions the	**The learner;** 1. Pronounces,	Guided discovery	Mentioning the	Appreciation.	Illustrations of	Mk. Int.	

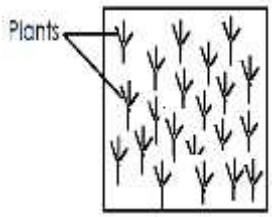
		g	**n tools**	**tools.** - More garden tools - Secateur - Pruning saw - Knives - Sickle **Their structure and uses.**	common tools 2. Draws their structures and states their uses.	spells, reads writes and demonstrates meaning of words related to garden tools 2. Reads, internalize and writes texts and questions related to garden tools.	Discussion Observation Brain storming	common tools. Drawing the structure of different garden tools. Stating the uses of different garden tools.	Care Awareness Fluency Concern	different garden tools. Where possible, real garden tools brought to class.	sci. pbk 4 Int. sci. syllabus bk 4	
5	**3**	**Crop growing**	**Caring for garden tools**	**Caring for garden tools** ⇒ By cleaning them after use. ⇒ By keeping them in a cool dry place. ⇒ By using the tools for their rightful purposes. **Rusting** ⇒ Rusting is a process by which iron combines with oxygen and moisture to form	**The learner;** 1. Mentions ways of caring for garden tools. 2. Describes the conditions for rusting. 3. Identifies the ways of preventing rusting.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to care for garden tools 2. Reads, internalize and writes texts and questions related to care for garden tools.	Guided discovery Discussion Observation	Mentioning the common tools. Drawing the structure of different garden tools. Stating the uses of	Appreciation. Care Awareness Fluency Concern	Lubricating oil and grease brought to class.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				a brown coloured substance called rust. **Conditions that favour rusting to take place** 1. Oxygen 2. Moisture **Dangers of rusting on metals** 1. Rusting makes tools weak and worn out. 2. Rusting makes some tools blunts thus leading to wearing due to increased friction. **Control of rusting** ⇒ By painting metallic garden tools. ⇒ By keeping tools in cool dry places. ⇒ By oiling or greasing some tools.			Brain storming	different garden tools.				
5	**4**	**Crop growing**	**Crop Growing Practic**	**Crop Growing Practices** ⇒Crop growing practices are	**The learner,** 1. Mentions the crop growing practices.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates	Guided discovery	Mentioning the crop growing practices.	Appreciati-on. Care	The environment	Mk. Int. sci. pbk 4	

			es	activities involved in the production of food e.g. 1. Land preparation 2. Selecting seeds for planting 3. Planting or sawing 4. Transplanting **Land preparation** - This is the first stage in a food path usually done in the dry season. **Activities involved during land preparation** ⇒ Cutting down trees using an axe or panga. ⇒ Controlled bush burning. **Ploughing land** ⇒ It is done using a tractor, ox-plough, hoes, and forked hoe. ⇒ Ploughing the land is done to make the soil loose and soft	2. Describes land preparation. 3. States the different activities done during land preparation.	meaning of words related to crop growing practices. 2. Reads, internalize and writes texts and questions related to crop growing practices.	Discussion Observation Brain storming	Describing land preparation Stating the different activities done during land prparation	Awareness Fluency Concern		Int. sci. syllabus bk 4	
5	**5**	**Crop growin**		**Planting** ⇒ This refers to	**The learner;** **1.** Describe the	**The learner;** 1. Pronounces,	Guided discovery	Describing the term	Appreciati-on.	The school	Mk. Int.	

		g		putting seeds in holes and covering with soil. **Example of planting materials** - Seeds, suckers, stem cuttings, bulbs **Qualities of good planting materials** ⇒ They should be mature and healthy. ⇒ The seeds should not be broken. ⇒ They should be of desired characteristics. **Methods of planting** 1. **Row planting.** This is the planting of seeds or crops in lines. 	term planting. 2. Mentions examples of planting materials. 3. Identifies the methods of planting.	spells, reads writes and demonstrates meaning of words related to planting 2. Reads, internalize and writes texts and questions related to planting.	Discussion Observation Brain storming	planting Mentioning examples of planting materials. Identifies the methods of planting.	Care Awareness Fluency Concern	dem. Garden.	sci. pbk 4 Int. sci. syllabus bk 4	
5	**6**	**Crop growing**	**Advantages of raw planting**	**Advantages of raw planting method** ⇒ It makes weeding easy. ⇒ It controls easy	**The learner;** 1. States the advantages and disadvantages	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words	Guided discovery	Stating the advantage and disadvantages of row	Appreciation. Care	The school dem. Garden.	Mk. Int. sci. pbk 4	

			method	spread of diseases and pests. ⇒ It makes harvesting easy. ⇒ It prevents wastage of seeds and other planting materials. ⇒ It allows proper spacing of crops. **Disadvantages of raw planting** ⇒ It needs a lot of labour. ⇒ It is allows proper spacing of crops. **Examples of crops planted by raw planting** 1. Maize 2. Pineapples 3. Beans 4. Potatoes **5.** Cassava	of raw planting. 2. Mentions examples of crops that can be planted in rows.	related to row planting 2. Reads, internalize and writes texts and questions related to row planting	Discussion Observation Brain storming	planting. Mentioning examples of crops that can be planted in rows.	Awareness Fluency Concern		Int. sci. syllabus bk 4	
5	**7**	**Crop growing**	**Broad casting**	**Broadcasting** - This is the planting of seeds by throwing them using the hand in a garden.	**The learner;** 1. The learner describes broadcasting method. 2. States the advantages	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to broadcasting	Guided discovery Discussion	Describing the advantage and disadvantages of broadcasti	Appreciation. Care Awareness	The school dem. Garden.	Mk. Int. sci. pbk 4	

				Illustration  **Crops planted by broadcasting method** 1. Simsim 2. Millet **Advantages of broadcasting method** ⇒ It saves time. ⇒ It does not need a lot of labour. **Disadvantages of broadcasting method** ⇒ It can lead to easy spread of diseases. ⇒ Many tines, crops do not yield as expected.	and disadvantages of broadcasting method. 3. Names the examples of crops that can be planted by broadcasting.	method. 2. Reads, internalize and writes texts and questions related to broadcasting method.	Observation Brain storming	ng method. Stating the advantage and disadvantages of broadcasting method. Naming examples crops that can be broadcasted.	Fluency Concern		Int. sci. syllabus bk 4	
6	**1**	**Crop growing**	**A nursery bed**	**A nursery bed** ⇒A nursery bed is a place where seedlings are raised.	1. Defines a nursery bed. 2. Mentions examples of crops that can	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words	Guided discovery	Defining a nursery bed.	Appreciation. Care	The school dem. Garden.	Mk. Int. sci. pbk 4	

				Crops that can be raised on a nursery bed Coffee, onions **Structure of a nursery bed** **Importance of a nursery bed** ⇒ It protects seedlings from too much direct sunshine. ⇒ It protects seedlings from too much wind and rainfall. **Transplanting** ⇒ Transplanting is the transfer of seedlings from a nursery bed to the main garden. ⇒ Transplanting is best done in the evening because there is little loss of water through transpiration.	be grown on a nursery bed. 3. States the importance of a nursery bed to the seedlings and the farmer.	related to a nursery bed. 2. Reads, internalize and writes texts and questions related to a nursery bed.	Discussion Observation Brain storming	Mentioning examples of crops that can be raised on a nursery bed. States the importance of a nursery bed.	Awareness Fluency Concern	A chart showing A nursery bed.	Int. sci. syllabus bk 4	
6	**2**	**Crop growing**	**Ways of caring**	**Ways of caring for plants** Weeding	**The learner;** 1. Mentions the different ways of	**The learner;** 1. Pronounces, spells, reads writes	Guided discovery	Mentioning different ways of	Appreciati-on.	The school dem.	Mk. Int. sci.	

			for plants	Staking Spraying Pruning Thinning **Staking** ⇒ Staking is the giving of extra support to the plants with stems. ⇒ Staking can be done on tomatoes.  **Examples of crops that can be staked** **1.** Coffee **2.** Tomatoes	caring for crops. 2. Describes the meaning of staking and propping, 4. Names examples of crops that can be staked or propped.	and demonstrates meaning of words related caring for crops. 2. Reads, internalize and writes texts and questions related to care for crops.	Discussion Observation Brain storming	caring for crops. Describing the meaning of staking. Naming examples of crops that can be staked.	Care Awareness Fluency Concern	Garden. A chart showing A nursery bed.	pbk 4 Int. sci. syllabus bk 4	
6	**3**	**Crop growing**	**Weeding**	**Weeding** a) Weeding is the removal of plants from an area where they are not wanted.	**The learner;** 1. Defines weeding. 2. Mentions examples of weeds.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to	Guided discovery	Mentioning different ways of caring for crops.	Appreciation. Care	The school dem. Garden.	Mk. Int. sci. pbk 4	

				Examples of weeds - nut grass - couch grass **Dangers of weeds** - They compete with crops for water and mineral salts - Weeds are hiding places for crop pests. **Uses of weeds** ⇒ For feeding some farm animals ⇒ For thatching houses **Ways of controlling weeds.** ⇒ By uprooting and burning them ⇒ By mulching **Gap filling** ⇒ Gap filling is the planting of seeds or seedlings in places where they did not germinate.	3. Identifies garden tools used foe weeding. 4. Mentions dangers of weeds.	weeding. 2. Reads, internalize and writes texts and questions related to weeding	Discussion Observation Brain storming	Describing the meaning of staking. Naming examples of crops that can be staked.	Awareness Fluency Concern	A chart showing A weeding tool.	Int. sci. syllabus bk 4	
6	**4**	**Crop growing**	**Thinning and pruning**	**Thinning and** ⇒ Thinning is the removal of excess seedlings in the garden. **Advantages of**	**The learner;** 1. Defines thinning and pruning. 2. States the advantages of thinning and	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to thinning	Guided discovery	Mentioning different ways of caring for crops.	Appreciation. Care	The school dem. Garden.	Mk. Int. sci. pbk 4	

				thinning crops ⇒ It creates space for crops to grow ⇒ It makes weeding easy **Commonly thinned crops** 1. Cotton 2. Sunflower **Pruning** ⇒ Pruning is the removal of unwanted parts of a plant. **Garden tools used for pruning** 1. secateurs 2. pruning saw **Reasons why crop farmers prune their crops** ⇒ To remove hiding places for crop pest **Plants which are pruned include** 1. orange plant **2.** banana plant	pruning.	and pruning 2. Reads, internalize and writes texts and questions related to thinning and pruning	Discussion Observation Brain storming	Describing the meaning of staking. Naming examples of crops that can be staked.	Awareness Fluency Concern		Int. sci. syllabus bk 4	
6	**5**	**Crop growing**	**Mulching**	**Mulching** ⇒Mulching is the covering of top soil with dry plant materials in the	**The learner;** 1. Defines mulching. 2. States the advantages	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words	Guided discovery	Defining mulching. Stating the advantage	Appreciation. Care	The school dem. Garden.	Mk. Int. sci. pbk 4	

				garden. **Examples of mulches** Dry banana leaves **Advantages of mulching** ⇒ Mulching keeps moisture in the soil ⇒ Mulching controls soil erosion **Disadvantages of mulching** ⇒ Mulches can easily catch fire and burn crops. ⇒ Mulches are hiding places for crop pests e.g. rats. **Manuring** ⇒ Manuring is the putting of fertilizers in soil to make it more fertile. ⇒ Or manuring is the act of adding fertilizers into the soil. **Importance of manure** 1. Manure makes the soli more fertile.	and disadvantages of mulches. 3. Describes manuring. 4. States the importance of manuring.	related to mulching and manuring 2. Reads, internalize and writes texts and questions related to mulching and manuring.	Discussion Observation Brain storming	and disadvantages of mulching. Describing manure. Stating the importance of manuring.	Awareness Fluency Concern		Int. sci. syllabus bk 4	

				2. Manure improves on the expected crop yields.								
6	**7**	**Crop growing**	**CROP HARVESTING**	**CROP HARVESTING** ⇒ Harvesting is the collection of mature crops from the garden **Methods of crop harvesting** ⇒ By uprooting using hands e.g. soya beans, beans, ground nuts **Storage** ⇒ This is the keeping of surplus food safely after harvesting ⇒ Seeds and cereals after sun drying them, should be stored properly **A storage facility (granary)** rat guards prevent rats from entering	**The learner;** 1. Defines harvesting. 2. Mentions garden tools for harvesting different crops. 3. Identifies ways /methods of harvesting	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to harvesting. 2. Reads, internalize and writes texts and questions related to care for crops.	Guided discovery Discussion Observation Brain storming	Defining the term harvesting. Mentioning garden tools for harvesting. Identifying ways/ methods of harvesting	Appreciation. Care Awareness Fluency Concern	The school dem. Garden.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				into the granary **Reasons for storing food** ⇒ To prevent wastage of food ⇒ To sell it when there is good market **Conditions for proper storage of food** ⇒ The seeds or grains should be stored when they are dry								
7	**1**	**Crop growing**		**Record keeping** ⇒ This is a practice where a farmer writes down all the activities done on the farm. ⇒ Farm records are written information about various activities carried out on a farm. **Types of farm records** ⇒ production records ⇒ inventory records **Reasons why crop**	**The learner;** 1. Defines record keeping. 2. States the common records kept on a crop farmer. 3. Gives the importance of keeping records.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to record keeping. 2. Reads, internalize and writes texts and questions related to record keeping.	Guided discovery Discussion Observation Brain	Defining the term harvesting. Mentioning garden tools for harvesting. Identifying ways/ methods of harvesting	Appreciation. Care Awareness Fluency Concern	The school dem. Garden.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				farmers keep records ⇒ They enable a crop farmer to calculate profits and losses ⇒ They enable a crop farmer to plan for his farm			storming					
7	**2**	**Crop growing**	**Crop pests**	**Crop pests** ⇒A crop pest is a living organism which destroys crops. ⇒They include: animals, birds, and insects. **Dangers of crop pests** ⇒They reduce crop yields ⇒They lower the quality of crop yields **Signs of pest damage on crops** ⇒Some leaves are partly eaten up or have holes ⇒Fruits develop dark spots ⇒Cut off buds ⇒Seeds with holes	**The learner;** 1. Defines crop pests. 2. States the Dangers of crop pests. 3. Mentions signs of crop pests in the garden	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to crop pests. 2. Reads, internalize and writes texts and questions related to crop pests.	Guided discovery Discussion Observation Brain storming	Defining crop pests. Stating the dangers of crop pests. Mentioning signs of crop pests in the garden.	Appreciation. Care Awareness Fluency Concern	The school dem. Garden.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				⇒Rotten tubers ⇒Stunted growth.								
7	**3**	**Crop Growing**	**Crop pests for differed crops.**	**Pests for different crop pests** **Legumes** **-** bean weevils - Cut worm - Bean fly - thrips - termites **tubers** - rats - mice - Caterpillars **Cereals** - locusts - monkeys - maize weevils **How to control crop pests** ⇒By spraying crops with pesticides ⇒By putting scare crows in the garden. **Crop diseases** - Rosette - Tomato blight - Maize streak	**The learner;** 1. Identifies crop pests for different crops. 2. States the ways of controls crop pests. 3. Mentions the different crop diseases.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to crop pests. 2. Reads, internalize and writes texts and questions related to crop pests.	Guided discovery Discussion Observation Brain storming	Identifying crop pests for different crops. Stating the ways of controlling crop pests. Mentions the different crop diseases.	Appreciation. Care Awareness Fluency Concern	The school dem. Garden.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	
7	**4**	**Weather chang**	**Types of weath**	**Weather,** **What is weather?** Weather is the state	**The learner;** 1. Give the meaning of	**The learner;** 1. Pronounces, spells, reads	Guided discovery	Giving the meaning of weather	Appreciation.	The school dem.	Mk. Int. sci.	

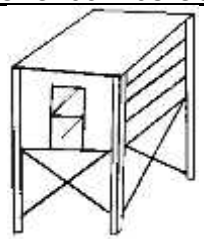
		es aroun d usp	**er**	of the atmosphere at a given time and place. **Types of weather.** **Elements / factors of weather.** - Sunshine - Rainfall - Cloud Cover - Wind - Humidity - Temperature **Rainfall** ⇒ Rainfall is water falling in separate drops from clouds. ⇒ Rainfall is the amount of rain water that falls in a certain area at a certain time.	weather. 2. Identifies the types of weather. 3. states the weather elements	writes and demonstrates meaning of words related to weather 2. Reads, internalize and writes texts and questions related to weather	Discussion Observati on Brain storming	Identifying the types of weather. Stating the elements of weather.	Care Awareness Fluency Concern	Garden .	pbk 4 Int. sci. syllab us bk 4	
7	***5***	**Weath er chang es aroun d us**	**The water cycle**	**WATER CYCLE (rain cycle)** **How rain is formed.** - The sun heats water in water bodies and plants to produce water vapour. - Water vapour rises into the atmosphere.	**The learner;** 1. Describes the water cycle. 2. Differentiates between rain and rainfall. 3. Draws the structure of the water cycle.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to weather 2. Reads, internalize and	Guided discovery Discussion	Describing the water cycle. Differentiati ng between a rain and rain fall.	Appreciati-on. Care Awareness	The school dem. Garden .	Mk. Int. sci. pbk 4 Int. sci. syllab	

				- Water vapour condenses to form clouds. - When the clouds become heavy, they form rain. **An illustration of a water cycle.** **Process** A – Transpiration B – Evaporation C – Condensation		writes texts and questions related to weather	Observation Brain storming	Drawing the structure of the water cycle.	Fluency Concern		us bk 4	
7	**6**	**Weather changes around us**	**The water cycle**	**An experiment to show water cycle.** **Things needed** - A kettle of water - Burning charcoal - Iced bottle	**The learner;** 1. Describes an experiment to show the water cycle. 2. Identifies the processes involved in the experiment.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to water cycle 2. Reads, internalize and writes texts and questions related to water cycle.	Guided discovery Discussion Observation Brain storming	Describing an experiment on the water cycle. Identifying the process involved in the water cycle.	Appreciation. Care Awareness Fluency Concern	A chart showing an illustration of the water cycle.	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	
7	**7**	**Weather**	**How to measu**	**How to measure rainfall.**	**The learners;** 1. Describes the	**The learner;** 1. Pronounces,	Guided discovery	Describing the way	Appreciation.	A chart showin	Mk. Int.	

		changes around us.	**re rainfall**	- Rainfall is measured by an instrument called a rain gauge. - Rainfall is measured in millimetres. **A DIAGRAM OF A RAIN GAUGE** **Importance of rainfall.** - Rainfall cools the temperature. - It provides water for seeds. **Dangers of too much rainfall.** - Heavy rainfall causes floods that can destroy the environment. - Floods carry rubbish and soil into lakes and rivers.	way in which rainfall is measured. 2. Draws the structure of the rain gauge. 3. Gives the importance of rain to people. 4. States the danger of rainfall.	spells, reads writes and demonstrates meaning of words related to water cycle 2. Reads, internalize and writes texts and questions related to water cycle.	Discussion Observation Brain storming	rainfall is formed. Drawing the diagram of the rain gauge. Giving the importance of rain. Stating the dangers of rainfall.	Care Awareness Fluency Concern	g an illustration of the water cycle.	sci. pbk 4 Int. sci. syllabus bk 4	
8	**1**	**Weather changes around us**	**Clouds**	**Clouds** - Clouds are a mass of condensed water vapour. **Types of clouds** **Cirrus** - furthest in the sky. **Cumulus**	**The learners;** 1. Gives the meaning of clouds. 2. Identifies the types of clouds. 3. Gives the	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to weather chart	Guided discovery Discussion	Giving the meaning of clouds. Identifying the types of clouds.	Appreciation. Care Awareness	A chart showing an illustration of the water cycle.	Mk. Int. sci. pbk 4 Int.	

				Stratus **Nimbus** - lowest clouds **Importance of clouds.** - They give us rain. - They modify weather (regulate temperature) **Temperature:** -Temperature is the degree of hotness or coldness of a body or a place. - The instrument used to measure temperature is called a thermometer. - **Types of thermometers.** - Clinical thermometer - six's thermometer - wall thermometer	importance of clouds. 4. Defines temperature. 5. Describes the types of thermometers.	2. Reads, internalize and writes texts and questions related to weather chart	Observation Brain storming	Giving the importance of clouds. Defining temperature. Describing the types of thermometers.	Fluency Concern		sci. syllabus bk 4	
8	**2**	**Weather changes around us**	**Wind**	**Wind** ⇒ Wind is moving air **Wind instruments:** **a). Wind vane** ⇒ It shows the direction where wind is blowing from. **b). Wind sock**	**The learner.** 1. Describes wind. 2. State the role of a wind vane. 3. Draws the structure of a wind vane, wind sock, and anemometer.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to wind 2. Reads,	Guided discovery Discussion	Giving the meaning of wind Stating the instrument use in windy weather.	Appreciation. Care Awareness	An illustration of a wind vane, wind sock and anemo	Mk. Int. sci. pbk 4 Int. sci.	

				⇒ A wind sock and weather cock can show the direction of wind. **c). Anemometer** ⇒ It is used to measure the speed of wind. ⇒ it has cups which trap wind and rotate as wind blows. **Uses of wind:** ⇒ Wind is used for winnowing: ⇒ Wind brings cold air in warm places **Disadvantages of wind:** ⇒ Strong wind leads to soil erosion. ⇒ Strong wind destroys property.	4. States the advantages and disadvantages of wind of wind.	internalize and writes texts and questions related to wind	Observation Brain storming	Drawing the structure of a wind vane, wind sock and anemometer Stating the advantage and disadvantages of wind.	Fluency Concern	meter.	syllabus bk 4	
8	**3**			**<u>WEATHER STATION</u>** ⇒ What is a weather station? ⇒ A weather station is a place where weather conditions are studied.	**The learner;** 1. Defines a weather station and weather forecast. 2. Draws a Stevenson screen	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to a weather	Guided discovery Discussion	Giving the meaning of a weather station and weather forecast.	Appreciation. Care Awareness	An illustration of a Stevenson screen	Mk. Int. sci. pbk 4 Int.	

				Weather forecast: ⇒ This is the prediction of future weather changes. **<u>The structure of a Stevenson screen</u>**  ❖ **NB**: The Stevenson screen is painted white so as to reflect heat. ❖ It is used to keep delicate weather instruments like: 1. Thermometers 2. Barometers 3. Hygrometers	3. Identifies the weather instrument kept in a Stevenson screen.	station 2. Reads, internalize and writes texts and questions related to weather forecast.	Observation Brain storming	Drawing the structure of a Stevenson screen Identifying the instruments kept in a Stevenson screen.	Fluency Concern		sci. syllabus bk 4	
8	**4**	**PERSONAL HYGIENE**	**PERSONAL HYGIENE**	**PERSONAL HYGIENE** ⇒ Personal hygiene is the general cleanliness of the body. ⇒ Or personal hygiene is the keeping of the	**The learner;** 1. Defines personal hygiene. 2. States ways of keeping the body clean. 3. Identifies the	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to Personal	Guided discovery Discussion	Defining personal hygiene. Stating ways of keeping the body	Appreciation. Care Awareness	Clean water A tooth brush	Mk. Int. sci. pbk 4 Int.	

				body clean. • **Ways of keeping the body clean** 1. Bathing daily. 2. Cutting finger nails short. 3. Washing hands after using a latrine/ toilet. 4. Washing clothes. 5. Combing hair. 6. Ironing clothes. **Items used in keeping our bodies clean** 1. Clean water 2. Tooth paste tooth brush 3. Bathing sponge **4.** Towel **5.** dental floss	items used to keep the body clean.	hygiene 2. Reads, internalize and writes texts and questions related to Personal hygiene	Observation Brain storming	clean. Identifying the items used to keep the body clean.	Fluency Concern	Tooth paste	sci. syllabus bk 4	
8	***5***	**Personal hygiene**	**Importance of keeping the body clean**	**Importance of keeping the body clean** ⇒ It helps to prevent skin diseases. ⇒ It helps to prevent bad smell caused by sweating. **Effects of poor personal hygiene** ⇒ It leads to bad body smell.	**The learner;** 1. States the importance of keeping our bodies clean. 2. States the dangers of poor personal hygiene.	**The learner;** 1. Pronounces, spells, reads writes and demonstrates meaning of words related to Personal hygiene 2. Reads, internalize and writes texts and	Guided discovery Discussion Observati	Stating the importance of keeping our bodies clean. Stating the dangers of poor personal	Appreciation. Care Awareness Fluency	Clean water A tooth brush Tooth paste	Mk. Int. sci. pbk 4 Int. sci. syllabus bk 4	

				⇒ It leads to skin diseases. **Keeping clothing and beddings clean** ⇒ Beddings should be washed regularly with clean water and soap. ⇒ Clothes need to be ironed after washing in order to kill parasites and germs. **Diagram of a child ironing** • **Importance of keeping beddings clean.** ⇒ It prevents bad smell. ⇒ It prevents parasites like lice, ticks and fleas.		questions related to Personal hygiene	on Brain storming	hygiene	Concern			